RECEIVED
MAY 06 2016
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Permit-to-Construct Initial Permit Application

Nashua Homes of Idaho, Inc.
dba Nashua Builders
Boise Facility

Stantec

Prepared for:
Nashua Homes of Idaho, Inc.
5200 S. Federal Way
Boise, ID 83716
Contact: Shain Zenor
Ph: 208-345-0222

Prepared by:
Stantec Consulting Services
7669 W. Riverside Drive, Suite 101
Boise, ID 83714
Contact: Eric Clark
Ph: 208-853-0883

May 6, 2016

Sign-off Sheet

This document entitled Permit-to-Construct Initial Permit Application was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Nashua Homes of Idaho, Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____

(signature)

Eric Clark

Reviewed by _____

(signature)

Daniel Heiser

Stantec

Table of Contents

1.0 INTRODUCTION 1.1

2.0 PROCESS DESCRIPTION 2.1
2.1 EMISSIONS SOURCES 2.1
2.1.1 Potential to Emit Totals 2.3
2.1.2 Proposed Usage Rates 2.4
2.2 STACK PARAMETERS 2.6
2.2.1 Parameter Details 2.6
2.2.2 Below Regulatory Concern Evaluation 2.7
2.2.3 Toxic Air Pollutants 2.8

3.0 REGULATORY APPLICABILITY 3.1
3.1 STATE REGULATORY APPLICABILITY 3.1
3.1.1 Certification of Documents 3.1
3.1.2 Excess Emissions 3.1
3.1.3 Ambient Air Quality Standards for Specific air Pollutants 3.2
3.1.4 Toxic Air Pollutants 3.2
3.1.5 New Source Performance Standards 3.2
3.1.6 National Emission Standards for Hazardous Air Pollutants 3.2
3.1.7 Open Burning 3.3
3.1.8 Visible Emissions 3.3
3.1.9 Rules for Control of Fugitive Dust 3.3
3.1.10 Fuel Burning Equipment - Particulate Matter 3.4
3.1.11 Particulate Matter - Process Weight Limitations 3.4
3.1.12 Odors 3.4
3.2 FEDERAL REGULATORY APPLICABILITY 3.4
3.2.1 National Ambient Air Quality Standards (NAAQS) 3.5
3.2.2 Title V (Part 70) Operating Permit 3.5
3.2.3 National Emission Standards for Hazardous Air Pollutants (NESHAPs) 3.5
3.2.4 New Source Review (NSR) Requirements 3.5
3.2.5 New Source Performance Standards (NSPS) 3.6
3.2.6 Acid Rain Requirements 3.6
3.2.7 Risk Management Programs for Chemical Accidental Release Prevention 3.6

LIST OF TABLES

Table 2-1 PTE Emission Estimates 2.4
Table 2-2 Actual Emission Estimates 2.5
Table 2-3 Stack Parameters 2.6
Table 2-4 Below Regulatory Concern Evaluation (tpy) 2.8
Table 2-5 Modeled Toxic Air Pollutants 2.8
Table 3-1 State Regulatory Applicability Summary 3.1

Table 3-2 Federal Regulatory Applicability Summary 3.4

LIST OF APPENDICES

APPENDIX A SITE SELECTION MAP A.1

APPENDIX B DEQ PTC FORMS AND CHECKLISTS B.1

APPENDIX C EMISSION INVENTORY C.1

APPENDIX D AMBIENT AIR ANALYSIS D.1

APPENDIX E SAFETY DATA SHEETS E.2

APPENDIX F MANUFACTURER DATA F.3

1.0 INTRODUCTION

Nashua Homes of Idaho, Inc. dba Nashua Builders (Nashua) is proposing to acquire an initial Permit to Construct (PTC) for an existing facility. Nashua manufactures mobile homes and smaller dwellings called "man camps". The facility is located at 5200 South Federal Way Boise, Idaho. The facility has been operating at this location since 1989. While Nashua has not obtained a permit in the past, they have reviewed all of the potential emissions and determined that a permit is required. The facility is taking a proactive approach to rectify this oversight.

Nashua has the maximum potential to construct up to six units per day. A work week consists of five, ten hour days. Nashua operates 50 weeks per year. This application assumes that there is a multitude of processes occurring simultaneously. However, many of said processes will not or cannot operate simultaneously. In addition, the usage rates of products described in Section 2.1.1 are extremely high and a 10% cushion has been included. Typical operation is less than 50% of the proposed rates and often between 10-20%. Therefore, the total emissions assumed in this application are extremely conservative.

2.0 PROCESS DESCRIPTION

The dwellings are constructed in a somewhat assembly line fashion from start to finish. Most of the raw wood is precut prior to arriving at the facility. Others are delivered to the mill and cut to size. Appropriate cuts are sent to various locations throughout the plant for use. In addition, the hardwoods department places cut woods through a plainer; it is sanded and cut again for face frames, cabinet doors etc.

The Floors Department frames a wood floor which is secured to a metal frame and insulated. Appropriate ducting and plumbing is installed into the floor. Plywood decking is installed via wood glue products. Linoleum and or carpets are installed only upon request. All walls are constructed with pre-cut lumber, white glue and gypsum. Roofing material also utilizes pre-cut wood and pre-manufactured trusses. Gypsum is installed with a two-part foam adhesive.

Electrical wiring is installed. Interior and exterior walls are prepped, textured and painted where necessary. All interior usage of paints, glues and adhesives are performed with the units fully enclosed with the plant and covered in plastic. Only exterior painting occurs without the plastic covering.

Following the completion of a unit, electrical and water checks are performed. The electrical checks require the use of a diesel generator on occasion. The unit is expected to never operate more than 15 minutes at any one time and a maximum of 1.5 hours/day. Annual usage is expected to never exceed 500 total hours. Lastly, all units are cleaned, prepped for shipping and moved into the yard via a tractor.

2.1 EMISSIONS SOURCES

Emissions sources at the facility will include the following:

- Adhesives and Glues
- Caulking
- Paints and Cleaners
- Lacquer and Thinners
- Welding
- Natural Gas Heaters
- Generators
- Dust Collection (baghouse and cyclone)

<u>Adhesives and Glues</u>

The Nashua facility utilizes a number of adhesives and glues throughout the construction process. All emissions are based on daily usage rates and applicable Safety Data Sheets (SDS), environmental data sheet information. All usage rates are based on the assumption that maximum production rates are met along with a 10% buffer.

Caulking

Similar to adhesives, all caulking emissions are derived from applicable daily usage and SDS (or EDS or MSDS) information. Again, a 10% buffer on top of maximum production was assumed. Annual usage assumes 10 hour work days, 5 day work week and 50 week per year. This is consistent for all material.

Paints and Cleaners; Lacquers and Thinners

All interior paints are utilized within the units with plastic covering to capture nearly all potential overspray. Only exterior paints do not implement the use of plastic covering, but all painting is conducted within the plant. In addition, some lacquers and thinners are applied within the painting booth at the plant. The filtration system assumes 98.81% control efficiency as defined by manufacturer specifications. As all other material, emissions are determined via daily usage and applicable SDS information.

Welding

Nashua periodically performs some welding onsite. A Shielded Metal Arc Welding process and an E6011electrode are utilized. Total usage is not expected to exceed 11lb/day. In addition, there are some welding gases that are utilized during the process. Applicable usage rates and SDS are used to establish emission estimates.

Natural Gas Heaters and Generator

Nashua owns a 36 horsepower MQ Power diesel generator that is used sparingly during electrical testing. AP-42 Section 3.3 emission factors were applied to determine total emissions. As stated earlier, the generator will not be used more than 15 minutes at any one time. In addition, the maximum number of usages constructed during a day would be six. Thus, the total daily usage of the generator would not exceed 1.5 hours. Total annual operation will not exceed 500 hours.

Nashua operates 29 natural gas heaters for comfort throughout the colder months of the year. The sizes of the units range from 0.13 to 0.3 MMBtu/hr. It is assumed that they operate a maximum of six months per year with a daily maximum of 24 hours. Emission factors from AP-42 Section 1.4 were utilized to establish emission estimates.

Dust Collection

The dust collection system at Nashua is used to clear saw dust from wood cutting throughout the plant as well as gypsum dust. All board cutting is routed to the cyclone dust collector. The unit is older and there is no documentation in support of specific control efficiency. Therefore, EPA Fact Sheet Cyclone information was applied. Efficiencies suggest being up to 90% for PM_{10} and 40% for $PM_{2.5}$. The efficiencies range from 30 to 90% and 0 to 40% for PM_{10} and $PM_{2.5}$, respectively. All emission rate calculations use estimates of 45% and 30% control for PM_{10} and $PM_{2.5}$, respectively.

The total amount of saw dust was determined estimating total amount of volume of dust (cubic inches) cut each day. A gallon of saw dust weighs 1.5 pounds and one gallon equates to 231 cubic inches. Five work days per week and 50 weeks per year were used as the maximum estimated time for annual saw dust throughput.

Gypsum dust is routed to the Murphy Rodgers MRA-22 Baghouse. For conservatism, it is assumed that 150 lb/day of gypsum dust is accumulated and routed to the baghouse. The bags are cleaned and replaced regularly to maintain as high efficiency as possible. Older units typically have efficiencies in the range of 95-99.9%. It was assumed that the MRA-22 baghouse is 98% control.

The California Emission Inventory Development and Reporting System data was utilized for sawdust particle distribution. It was determined that PM_{10} comprises 40% of total PM and $PM_{2.5}$ is 28.3% of PM. (70.8% of PM_{10}).

2.1.1 Potential to Emit Totals

All emissions were established by obtaining data through a records review at the facility, multiple site visits, interviews and applicable EPA data. Paints, lacquers, caulks etc. emissions are based on Safety Data Sheets (SDS) information and usage rates (please refer to Appendix E for SDS). The dust daily accumulation was determined from the types of saws used, blade length, and width of cut and thickness of the boards. The total volume of sawdust was then calculated as the basis for the total particulate emissions.

Potential to Emit (PTC) emissions were calculated assuming continuous operations of all sources. All emissions were assessed using daily usage rates adjusted to hourly rates and multiplied by 8,760 hours per year. The table below illustrates the maximum potential tons per year for all criteria pollutants and hazardous air pollutants

Table 2-1 PTE Emission Estimates

PTE tons per year Emissions							
Process	**PM_{10}**	**$PM_{2.5}$**	**NO_x**	**SO_2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.20	0.20	--	--	--	0.20	8.80
Caulkings	1.85E-05	1.85E-05	--	--	--	1.40	0.34
Paints_Cleaners	1.62	1.62	--	--	--	88.70	27.67
Lacquers_Thinners	0.12	0.12	--	--	--	47.09	0.66
Welding Gases	--	--	--	--	--	9.21	--
Generator	0.019	0.019	0.454	0.169	0.081	0.097	4.18E-03
NG Heaters	0.229	0.229	3.019	2.536	0.018	0.166	5.71E-02
Dust Collection	0.39	0.32	--	--	--	--	--
Welding	0.123	0.123	--	--	--	--	0.049
Miscellaneous	0.01	0.01	--	--	--	1.26E-02	--
Total	**2.71**	**2.65**	**3.47**	**2.70**	**0.10**	**146.88**	**37.58**

2.1.2 Proposed Usage Rates

Nashua utilizes a variety of products during the home building process. The emissions determined for this application are based on usage rates that equate to the construction of six units per day. For flexibility purposes, Nashua is proposing those rates plus 10%. Please refer to the Material List identified in the emission inventory (Appendix C). All emission calculations are based on those daily rates.

2.1.2.1 Actual Emission Totals

The table below illustrates the actual proposed annual emissions based on desired usage rates.

Table 2-2 Actual Emission Estimates

Actual tons per year Emissions							
Process	**PM10**	**PM2.5**	**NOx**	**SO2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.01	0.01	--	--	--	2.30	0.66
Caulkings	0.00	5.27E-06	--	--	--	0.40	0.10
Paints_Cleaners	0.47	0.47	--	--	--	25.33	7.90
Lacquers_Thinners	0.03	0.03	--	--	--	13.44	0.19
Welding Gases	--	--	--	--	--	2.63	--
Generator	0.001	0.001	0.026	0.010	0.005	0.006	2.39E-04
NG Heaters	0.115	0.115	1.509	1.268	0.009	0.083	2.85E-02
Dust Collection	0.39	0.32	--	--	--	--	--
Welding	0.035	0.035	--	--	--	--	0.014
Miscellaneous	0.00	4.12E-03	--	--	--	3.61E-03	--
Total	**1.06**	**0.99**	**1.54**	**1.28**	**0.01**	**44.19**	**8.88**

The following assumptions were applied to obtain the estimates shown above.

- Adhesives, caulks, paints lacquers, welding gases
  - 10 hr/day usage, 5 day/week, 50 week/year
    - Exception: 3 hr/day, 2 day/week
      - AlphaSeal A&B; Spray Foam A&B
  - Applicable SDS, EDS, MSDS
  - Simultaneous operation
    - Exception: AlphaSeal A&B; Spray Foam A&B
      - Worst-case emissions assumed – will not be used simultaneously.
  - Transfer Efficiency
    - Trowel usage, caulking gun or rolled on = 95%
    - Assisted airless gun = 55%
  - MDI volatility rate = 15%. IDEQ states that typically 85% solidifies
  - 99.5% control of $PM_{2.5}/PM_{10}$ when applying materials on the interior of units. (Units is covered entirely in plastic)
  - Spray Booth filtration is 98.81%; only certain lacquers
- Diesel Engine – 1.5 hr/day, 500 hr/yr
  - AP-42 Section 3.3 or Manufacturer Specs
- Heaters – 4,380 hr/yr
  - AP-42 Section 1.4
- Welding – 11 lb/day; 5 day/week; 50 weeks/yr
  - E6011 Electrode; AP-42 Table 12.19-1

2.2 STACK PARAMETERS

There are two buildings within the facility where emissions of various types are generated (Plant #1 and Plant #2). All emission points are considered point sources. There are 17 natural gas heaters of various sizing on the roof of Plant#1. Plant #2 contains 12 natural gas heaters. All heaters at Plant #1 have a vertical orientation, while Plant #2 heaters are horizontal. There are also 8 exhaust fan points where emissions not associated with the heaters, control devices or spray booths exit the building. Similarly, there are two exhaust fan points associated with Plant #2. Plant #1 also contains two spray booth stacks and point sources for the baghouse and cyclone. As a result, there are 10 total fan exhaust points, 29 heaters, two spray booth stacks and two control device points creating 43 total point sources.

2.2.1 Parameter Details

All stack parameters are either derived from manufacturer specifications or direct measurements taken by the facility. The table below shows the parameters of each stack.

Table 2-3 Stack Parameters

Stack	Stack Height (ft)	Temperature (°F)[1]	Stack Diameter (inches)	Exit Flowrate (acfm)
PL1_FAN1	31	0	32	138.3
PL1_FAN2	31	0	32	138.3
PL1_FAN3	31	0	32	138.3
PL1_FAN4	31	0	32	138.3
PL1_FAN5	31	0	32	138.3
PL1_FAN6	31	0	32	138.3
PL1_FAN7	31	0	32	138.3
PL1_FAN8	31	0	32	138.3
PL_HEAT1	33.25	68.3	10	17.59
PL_HEAT2	33.25	68.3	10	17.59
PL_HEAT3	33.25	68.3	10	17.59
PL_HEAT4	33.25	68.3	10	17.59
PL_HEAT5	33.25	68.3	10	17.59
PL_HEAT6	33.25	68.3	10	17.59
PL_HEAT7	33.25	68.3	10	17.59
PL_HEAT8	33.25	68.3	10	17.59
PL_HEAT9	33.25	68.3	10	17.59
PL_HEAT10	33.25	68.3	10	17.59
PL_HEAT11	33.25	68.3	10	17.59
PL_HEAT12	33.25	68.3	10	17.59
PL_HEAT13	33.25	68.3	10	17.59
PL_HEAT14	33.25	68.3	10	17.59
PL_HEAT15	33.25	68.3	10	17.59
PL_HEAT16	33.25	68.3	10	17.59

Stack	Stack Height (ft)	Temperature (°F)[1]	Stack Diameter (inches)	Exit Flowrate (acfm)
PL_HEAT17	33.25	68.3	10	17.59
PL2_FAN1	30	0	32	135.7
PL2_FAN2	30	0	32	135.7
PL2_HEAT1	28	68.3	10	17.59
PL2_HEAT2	28	68.3	10	17.59
PL2_HEAT3	28	68.3	10	17.59
PL2_HEAT4	28	68.3	10	17.59
PL2_HEAT5	28	68.3	10	17.59
PL2_HEAT6	28	68.3	10	17.59
PL2_HEAT7	28	68.3	10	17.59
PL2_HEAT8	28	68.3	10	17.59
PL2_HEAT9	28	68.3	10	17.59
PL2_HEAT10	28	68.3	10	17.59
PL2_HEAT11	28	68.3	10	17.59
PL2_HEAT12	28	68.3	10	17.59
SPRAY1	34.1667	0	34	74.26
SPRAY2	34.0833	0	50	74.26
CYCLONE	18.5	0	44	209.3
BAGHOUSE	25.833	0	22	11086
GEN1	6	1058	6	144

1. Where the temperature is identified as 0 equates to ambient temperature. These values are identified as 0 Kelvin within AERMOD. Met data temperatures will be used as representative of ambient conditions.

2.2.2 Below Regulatory Concern Evaluation

The Idaho Department of Environmentally Quality (DEQ) Air Quality Rules identify a threshold known as Below Regulatory Concern (BRC). It is defined as less than 10% of significant as defined by section 006 of the Rules. BRC typically applies only for exception determinations outlined in Sections 220-223 of IDAPA 58.01.01. However, DEQ has instituted a policy whereby facilities can demonstrate to BRC status for specific criteria pollutants and not be required to conduct an ambient air quality analysis for said pollutants.

The table below illustrates the comparison to actual emissions and BRC thresholds. As a result, only volatile organic compounds (VOC) exceed BRC. Therefore, the proposed VOC emissions require Nashua to obtain a permit. However, no ambient air quality analysis is required for any criteria pollutants as VOCs as a whole do not have a national standard. Individual VOCs may be considered a toxic air pollutant (TAP) as defined by DEQ and require evaluation, which is outlined in Section 2.3.

Table 2-4 Below Regulatory Concern Evaluation (tpy)

Threshold	PM_{10}	$PM_{2.5}$	NO_x	SO_2	CO	VOC
Significance Level	15	10	40	40	100	40
BRC (10% of Significance)	1.5	1.0	4	4	10	4
Proposed Emissions	1.06	0.99	1.54	1.28	0.01	44.19

2.2.3 Toxic Air Pollutants

Due to the use of numerous paints, adhesives, lacquers etc. there are several TAPs that exceed the applicable emission screening level. As a result, those pollutants were modeled to demonstrate compliance with either the Acceptable Ambient Concentration (AAC) or the Acceptable Ambient Concentration for a Carcinogen (AACC). The table below identifies those pollutants and whether they are applicable to IDAPA 58.01.01.585 or 586. Please refer to Appendix D, Ambient Air Analysis, for details.

Table 2-5 Modeled Toxic Air Pollutants

TAP	585/586[1]	Emission Estimate (lb/hr)	EL (lb/hr)
Formaldehyde	586	8.15E-03	5.10E-04
Cadmium	586	3.79E-06	3.70E-06
MDI	585	1.19E-01	0.003
Kaolin	585	3.47E-01	0.133
Quartz	585	1.06E-01	0.0067
Ethylene Glycol	585	1.86	0.846
Tetrachloroethylene	586	1.73E-01	1.30E-02

1. Note that 585 is a 24-hr lb/hr average and 586 is an annual lb/hr average.

3.0 REGULATORY APPLICABILITY

A review of applicable State and Federal Rules for each emissions unit is provided in Sections 3.1 and 3.2 below.

3.1 STATE REGULATORY APPLICABILITY

A review of applicable requirements of the Rules for the Control of Air Pollution in Idaho is provided in Table 3-1. Each regulation is described in the sections following the table.

Table 3-1 State Regulatory Applicability Summary

Section	Description	Regulatory Citation	Applicable?
3.1.1	Certification of Documents	IDAPA 58.01.01.123	Yes
3.1.2	Excess Emissions	IDAPA 58.01.01.130-136	Yes
3.1.3	Ambient Air Quality Standards for Specific Air Pollutants	IDAPA 58.01.01.577	Yes
3.1.4	Toxic Air Pollutants	IDAPA 58.01.01.585 and 586	Yes
3.1.5	New Source Performance Standards	IDAPA 58.01.01.590	Yes
3.1.6	National Emissions Standards for Hazardous Air Pollutants	IDAPA 58.01.01.591	Yes
3.1.7	Open Burning	IDAPA 58.01.01.600-616	Yes
3.1.8	Visible Emissions	IDAPA 58.01.01.625	Yes
3.1.9	Rules for Control of Fugitive Dust	IDAPA 58.01.01.650	Yes
3.1.10	Fuel Burning Equipment – Particulate Matter	IDAPA 58.01.01.675-681	No
3.1.11	Particulate Matter – Process Weight Limitations	IDAPA 58.01.01.701	No
3.1.12	Odors	IDAPA 58.01.01.775-776	Yes

3.1.1 Certification of Documents

IDAPA 58.01.01.123 requires all documents including application forms for permits to construct, records, and monitoring reports submitted to DEQ shall contain a certification by a responsible official. Nashua will comply with this requirement and the appropriate certifications by a responsible official are being submitted with this application.

3.1.2 Excess Emissions

IDAPA 58.01.01.130-136 requires that any episode of excess emissions be reported to DEQ where appropriate. Nashua will abide by all excess emission requirements.

3.1.3 Ambient Air Quality Standards for Specific air Pollutants

IDAPA 58.01.01.577 establishes ambient air quality standards for specific air pollutants including $PM_{2.5/10}$, Sulfur Dioxide, Ozone, Nitrogen Oxide, Carbon Monoxide, and Lead. Facility-wide modeling was not conducted for criteria pollutants as described in Section 2.2.2. Additionally, seven screening levels of toxics were exceeded. Specific details regarding the analysis and documentation of compliance is included in Appendix D of this application.

3.1.4 Toxic Air Pollutants

IDAPA 58.01.01.585 and 586 establishes requirements for compliance with toxic air pollutants. Nashua evaluated all toxic pollutants associated with the increase and have demonstrated compliance with the standards or appropriate modeling was conducted. Please refer to Appendix D of this document for details.

3.1.5 New Source Performance Standards

New Source Performance Standards (NSPS) in 40 CFR Part 60 are applicable to new, modified, or reconstructed stationary sources that meet or exceed specified applicability thresholds. Subpart III of the NSPS, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to the proposed 36 hp engine because the construction date follows April 1, 2006. Pre-2007 model year engines are required to meet emission standards outlined in Table 1 of the subpart. The engine is EPA Tier 2 certified meaning it is equivalent or meets all applicable standards. The engine is subject to the applicable recordkeeping requirements identified in NSPS Subpart III Part 60.4211.

3.1.6 National Emission Standards for Hazardous Air Pollutants

Two sets of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) may potentially apply to the Nashua facility. The first NESHAP regulations were developed under the auspices of the original Clean Air Act. These standards are codified in 40 CFR Part 61, and address a limited number of pollutants and industries. The Nashua facility does not fall under any of the industries or have the potential to emit any of the pollutants listed in 40 CFR Part 61, and therefore, 40 CFR Part 61 regulations do not apply to this facility.

Newer regulations are codified in 40 CFR Part 63 under the authority of the 1990 Clean Air Act Amendments (CAAA). These standards regulate HAP emissions from specific source categories. Part 63 regulations are frequently called Maximum Achievable Control Technology (MACT) standards. The engine is also applicable to subpart ZZZZ as Nashua is considered an area source of HAPs. However, 63.6590(c) states that if an engine is applicable to 40 CFR 60 subpart IIII, the unit is meeting all requirements of ZZZZ, by complying with IIII.

Nashua is also subject to subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, because spraying coating is performed on mobile equipment. The

subpart defines mobile equipment as any device that may be drawn and/or driven on a roadway. However, Nashua plans to petition the Administrator in accordance with 63.11170(a)(2) because none of the spray coating contain any of the "target" HAPs.

3.1.7 Open Burning

IDAPA 58.01.01.600 and 616 establishes requirements for open burning. Nashua does not expect to conduct open burning at the facility; however, Nashua will comply with the requirements under Section 600-616 if any allowable burning is to be conducted at the facility.

3.1.8 Visible Emissions

IDAPA 58.01.01.625 restricts discharge of air pollutants into the atmosphere which is greater than 20% opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period. Nashua will comply with this rule by conducting monthly facility-wide inspections of potential sources of visible emissions, during daylight hours and under normal operating conditions. The inspection will consist of a see/no see evaluation for each potential source. If any visible emissions are observed Nashua will take corrective action or perform a Method 9 or Method 22 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. Nashua will keep records onsite documenting the monthly visible emission inspection or Method 9/22 test conducted. However, it should be noted that during the winter months, the opacity may seem a bit higher. That is not due to anything more than water vapor being emitted from the stacks.

3.1.9 Rules for Control of Fugitive Dust

IDAPA 58.01.01.625 restricts discharge of air pollutants into the atmosphere which is greater than 20% opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period. Nashua will comply with this rule by conducting monthly facility-wide inspections of potential sources of visible emissions, during daylight hours and under normal operating conditions. The inspection will consist of a see/no see evaluation for each potential source. If any visible emissions are observed, Nashua will take corrective action or perform a Method 9/22 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. Nashua will keep records onsite documenting the monthly visible emission inspection and Method 9 test conducted. However, it should be noted that during the winter months, the opacity may seem a bit higher. That is not due to anything more than water vapor being emitted from the stacks.

IDAPA 58.01.01.650 requires that all reasonable precautions be taken to prevent the generation of fugitive dust. Nashua will comply with fugitive particulate matter regulations.

3.1.10 Fuel Burning Equipment - Particulate Matter

IDAPA 58.01.01.676 restricts any fuel burning source of greater than 10 MMBtu to limit the PM released from combustion to 0.015 gr/dscf for gas fuel. However, none of Nashua's heaters reach above 0.3 MMBtu/hr. Therefore, the rule does not apply.

3.1.11 Particulate Matter - Process Weight Limitations

IDAPA 58.01.01.701 promulgates restrictions on PM for the entire facility based on process weight. Fuel burning equipment at the facility is not subject to this requirement. There are no applicable sources that require process weight calculations.

3.1.12 Odors

IDAPA 58.01.01.775-776 requires no emissions of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution. Nashua will comply with this requirement by keeping records of any odor complaints received and will take appropriate action for each complaint which has merit.

3.2 FEDERAL REGULATORY APPLICABILITY

A review of applicable Federal Rules is provided in Table 3-4. Included in Appendix B is the completed federal regulatory applicability FRA form.

Table 3-2 Federal Regulatory Applicability Summary

Section	Description	Regulatory Citation	Applicable?
3.2.1	National Ambient Air Quality Standards (NAAQS)- (dispersion modeling)	40 CFR Part 50	No
3.2.2	Title V Operating Permit	40 CFR Part 70	No
3.2.3	Air Pollutants (NESHAPs)	40 CFR Parts 61, 63	Yes
3.2.4	New Source Review (NSR)	40 CFR Part 52	No
3.2.5	New Source Performance Standards (NSPS)	40 CFR Part 60	Yes
3.2.6	Acid Rain Requirements	40 CFR Parts 72–78	No
3.2.7	Risk Management Programs For Chemical Accidental Release Prevention	40 CFR Part 68	No

3.2.1 National Ambient Air Quality Standards (NAAQS)

Primary National Ambient Air Quality Standards (NAAQS) are identified in 40 CFR Part 50 and define levels of air quality, which the United States Environmental Protection Agency (USEPA) deems necessary to protect the public health. Secondary NAAQS define levels of air quality, which the USEPA judges necessary to protect public welfare from any known, or anticipated adverse effects of a pollutant. Examples of public welfare include protecting wildlife, buildings, national monuments, vegetation, visibility, and property values from degradation due to excessive emissions of criteria pollutants.

Specific standards for the following pollutants have been promulgated by USEPA: $PM_{2.5}$, PM_{10}, SO_2, NO_x, CO, ozone, and lead. The Nashua facility will emit $PM_{2.5}$, PM_{10}, SO_2, NO_x, CO, and VOCs, a precursor to ozone. No criteria pollutants exceed BRC, thus a modeling demonstration was not required to demonstrate NAAQS compliance. Note that modeling was conducted on the state-regulated TAPs (see Appendix D).

3.2.2 Title V (Part 70) Operating Permit

Title V of the Clean Air Act (CAA) created the federal operating permit program. These permitting requirements are codified in 40 CFR Part 70. These permits are required for major sources with a PTE (considering federally enforceable limitations) greater than 100 tpy for any criteria pollutant, 25 tpy for all hazardous air pollutants (HAPs) in aggregate, or 10 tpy of any single HAP. Nashua is a minor source because the potential to emit of any criteria pollutant is less than 100 tons per year, the potential to emit of all HAPs in aggregate is less than 25 tpy, and the potential to emit of any single HAP is less than 10 tpy.

3.2.3 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

National Emission Standards for Hazardous Air Pollutants are discussed in Section 3.1.7 above.

3.2.4 New Source Review (NSR) Requirements

Ada County is designated as an attainment area for all criteria pollutants. Therefore, the prevention of significant deterioration (PSD) regulations codified in 40 CFR Part 52 could potentially apply to the proposed facility. The PSD rule applies to: (1) a new major source that has the potential to emit 100 tons per year or more for any criteria pollutant for a facility that is one of the 28 industrial source categories listed in 40 CFR § 52.21(b)(1)(i)(a); or (2) a new major source that has the potential to emit 250 tons per year or more of a regulated pollutant if the facility is not on the list of industrial source categories; or (3) a modification to an existing major source that results in a net emission increase greater than a PSD significant emission rate as specified in 40 CFR § 52.21 (b)(23)(i); or (4) a modification to an existing minor source that is major in itself. The Nashua facility does not fall under one of the 28 industrial source categories, nor will the PTE exceed 250 tpy for any regulated pollutant. Therefore, Nashua is not subject to PSD regulations.

3.2.5 New Source Performance Standards (NSPS)

New Source Performance Standards are discussed in Section 3.1.6 above.

3.2.6 Acid Rain Requirements

The acid rain requirements codified in 40 CFR Parts 72-78 apply only to utilities and other facilities that combust fossil fuel and generate electricity for wholesale or retail sale. The proposed facility will not produce electrical power for sale. Therefore, the facility is not subject to the acid rain provisions and will not require an acid rain permit.

3.2.7 Risk Management Programs for Chemical Accidental Release Prevention

The facility is not subject to the Chemical Accidental Release Prevention Program and will not be required to develop a Risk Management Plan (RMP). Facilities that produce, process, store, or use any regulated toxic or flammable substance in excess of the thresholds listed in 40 CFR Part 68 must develop a RMP. The facility does not store any regulated toxic or flammable substances in excess of the applicable thresholds. A RMP is not necessary for this facility.

APPENDICES

Appendix A SITE SELECTION MAP

Nashua Homes

Facility Layout

Appendix B DEQ PTC FORMS AND CHECKLISTS

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline: 1-877-5PERMIT

RECEIVED
MAY 06 2016
By Jim Holler

General Information **Form GI**
Revision 7
6/29/12

Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

Identification

1. Facility name: Nashua Homes of Idaho (dba) Nashua Builders

2. Existing facility identification number: REC-11381

☐ **Check if new facility (not yet operating)**

3. Brief project description: PERMIT-TO-CONSTRUCT INITIAL PERMIT APPLICATION

Facility Information

4. Primary facility permitting contact name: Shain Zenor
Contact type: Responsible official
Telephone number: (208) 345-0222
E-mail: szenor@nashuabuildes.com

5. Alternate facility permitting contact name: Vicky Hoyt
Alternate contact type: Responsible official
Telephone number: (208) 345-0222
E-mail: vhoyt@nashuabuilders.com

6. Mailing address where permit will be sent (street/city/county/state/zip code): P.O.Box 170008 Boise Idaho 83717-0008

7. Physical address of permitted facility (if different than mailing address) (street/ city/county/state/zip code): 5200 S. Federal Way Boise Idaho 83717-0008

8. Is the equipment portable? ☐ **Yes*** ☒ **No** ***If yes, complete and attach PERF; see instructions.**

9. NAICS codes: Primary NAICS: 236115 **Secondary NAICS**: 236116

10. Brief business description and principal product produced: Construction of Modular Buildings

11. Identify any adjacent or contiguous facility this company owns and/or operates: N/A

12. Specify type of application ☒ **Permit to construct (PTC); application fee of $1,000 required. See instructions.**

☐ **Tier I permit** ☐ **Tier II permit** ☐ **Tier II/Permit to construct**

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

☐ **Co-process Tier I modification and PTC** ☐ **Incorporate PTC at the time of Tier I renewal** ☐ **Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)**

Certification

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name: Shain Zenor
Official's title: General Manager
Official's address: 5200 S. Federal Way Boise Idaho 83717-0008
Telephone number: (208) 345-0222
E-mail: szenor@nashuabuilders.com
Official's signature:
Date: May 2, 2016

☒ **14. Check here to indicate that you want to review the draft permit before final issuance.**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Cover Sheet for Air Permit Application – Permit to Construct **Form CSPTC**

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Nashua Builders		
2. Facility Name	Nashua Builders	3. Facility ID No.	N/A
4. Brief Project Description - One sentence or less	Initial PTC of currently operating facility that builds manufactured homes		

PERMIT APPLICATION TYPE

5. ☐ New Source ☐ New Source at Existing Facility ☐ PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c
☒ Unpermitted Existing Source ☐ Facility Emissions Cap ☐ Modify Existing Source: Permit No.:_____ Date Issued:_____
☐ Required by Enforcement Action: Case No.:_____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms		DEQ Verify
☒	☐	Form CSPTC – Cover Sheet		☐
☒	☐	Form GI – Facility Information		☐
☒	☐	Form EU0 – Emissions Units General		☐
☒	☐	Form EU1– Industrial Engine Information	Please specify number of EU1s attached: 1	☐
☐	☐	Form EU2– Nonmetallic Mineral Processing Plants	Please specify number of EU2s attached: _____	☐
☒	☐	Form EU3– Spray Paint Booth Information	Please specify number of EU3s attached: 1	☐
☐	☐	Form EU4– Cooling Tower Information	Please specify number of EU3s attached: _____	☐
☐	☐	Form EU5 – Boiler Information	Please specify number of EU4s attached: _____	☐
☐	☐	Form CBP– Concrete Batch Plant	Please specify number of CBPs attached: _____	☐
☐	☐	Form HMAP – Hot Mix Asphalt Plant	Please specify number of HMAPs attached: _____	☐
☐	☐	PERF – Portable Equipment Relocation Form		☐
☐	☐	Form AO – Afterburner/Oxidizer		☐
☐	☐	Form CA – Carbon Adsorber		☐
☐	☐	Form CYS – Cyclone Separator		☐
☐	☐	Form ESP – Electrostatic Precipitator		☐
☐	☐	Form BCE– Baghouses Control Equipment		☐
☐	☐	Form SCE– Scrubbers Control Equipment		☐
☐	☐	Form VSCE – Venturi Scrubber Control Equipment		☐
☐	☐	Form CAM – Compliance Assurance Monitoring		☐
☒	☐	Forms EI-– Emissions Inventory		☐
☒	☐	PP – Plot Plan		☐
☒	☐	Forms MI1 – MI4 – Modeling	(Excel workbook, all 4 worksheets)	☐
☒	☐	Form FRA – Federal Regulation Applicability		☐

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Preapplication Meeting Information Form FRA (Federal Requirements Applicability) - Regulatory Review

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name: Nashua Homes	2. Facility Name: Nashua Homes
3. Brief Project Description:	

APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not. Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s): IIII List of all non-applicable subpart(s) which may appear to apply but do not: ☐ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR part 61 and 40 CFR part 63). List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference EPA's webpage on NESHAPs for more information.	List of all applicable subpart(s): ZZZZ, HHHHHH List of all non-applicable subpart(s) which may appear to apply but do not: ☐ Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages. **Note** - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	☑ A detailed regulatory review is provided (Follow instructions and example). ☐ DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

40 CFR 60, Subpart IIII

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

The 36 hp engine was manufactured in April 2006. It is assumed that was after the first of the month. Therefore, the subpart is applicable to Nashua Builders.

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

Table 1 identifies the NMHC + NOx, CO and PM. It should also be noted that the engine meets Tier 2 EPA standards. All manufacturer standards are either equivalent or an improvement to those outlined in Table 1.

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

Nashua Builders will comply will all standards during the life of the engine.

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

Nashua Builders already comply with 40 CFR 80.510(b) and uses ultra-low sulfur diesel fuel (15 ppm).

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

Nashua Builders operates an EPA tier 2 certified engine.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

Nashua Builders will keep all necessary records in support of compliance with any standards.

40 CFR 63, Subpart ZZZZ

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

Nashua Builders does operate a RICE and is an area source of HAPs. Therefore, the facility is subject to the subpart.

§63.6590 What parts of my plant does this subpart cover?

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

Nashua Builders is applicable to 40 CFR Part 60, Subpart IIII. Therefore, by complying with that subpart, the facility is complying with ZZZZ.

40 CFR 63, Subpart HHHHHH

§63.11170 Am I subject to this subpart?

(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:

(1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.

(2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.

Nashua Builders is applicable to the subpart as the housing units that they spray coat are fixed to a trailer and can be mobile. However, none of the coating used at the facility contain any target HAPs. Therefore, Nashua will petition the administrator in accordance with 63.11175 and 63.11180.

§63.11175 What notifications must I submit?

(a) Initial Notification. If you are the owner or operator of a paint stripping operation using paint strippers containing MeCl and/or a surface coating operation subject to this subpart, you must submit the initial notification required by §63.9(b). For a new affected source, you must submit the Initial Notification no later than 180 days after initial startup or July 7, 2008, whichever is later. For an existing affected source, you must submit the initial notification no later than January 11, 2010. The initial notification must provide the information specified in paragraphs (a)(1) through (8) of this section.

(1) The company name, if applicable.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

(3) The street address (physical location) of the affected source and the street address where compliance records are maintained, if different. If the source is a motor vehicle or mobile equipment surface coating operation that repairs vehicles at the customer's location, rather than at a fixed location, such as a collision repair shop, the notification should state this and indicate the physical location where records are kept to demonstrate compliance;

(4) An identification of the relevant standard (i.e., this subpart, 40 CFR part 63, subpart HHHHHH);

(5) A brief description of the type of operation as specified in paragraph (a)(5)(i) or (ii) of this section.

(i) For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

(ii) For paint stripping operations, identify the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

Nashua Builders will submit an initial notification within the allowed timeframe identified in the PTC.

§63.11180 What definitions do I need to know?

Target HAP are compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

Target HAP containing coating means a spray-applied coating that contains any individual target HAP that is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual target HAP compound. For the purpose of determining whether materials you use contain the target HAP compounds, you may rely on formulation data provided by the manufacturer or supplier, such as the material safety data sheet (MSDS), as long as it represents each target HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other target HAP compounds

As stated above, the target HAPs are chromium, lead, manganese, nickel and cadmium. No coatings contain those metals and therefore the facility may require an exemption.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Units Industrial IC Engine Information - **Form EU1**
Revision 9
10/23/13

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name:
Nashua Builders	Nashua Builders

3. Brief Project Description:	Manufacturer of homes The engine is only used sparingly for eletrical testing of a completed unit.

IC ENGINE DESCRIPTION AND SPECIFICATIONS

4. Type of unit:
- ☐ New unit ☒ Unpermitted existing unit ☐ Modification to an existing permitted unit? Permit number: _____
- ☒ Full-time operation (non-emergency standby use)?
- ☐ Emergency standby use only (operation limited to 100 hrs/yr for maintenance and testing and emergency use only)?
- ☐ Emergency fire pump use only?
- ☐ Stationary test cell/stand operation only (as defined in NSPS Subpart ZZZZ)?
- ☐ National security operation only (as defined in NSPS Subpart ZZZZ)?
- ☐ Institutional emergency standby IC engine (as defined in NSPS Subpart ZZZZ)?

IC ENGINE SPECIFICATIONS

Questions 5 through 15 apply to **all IC engines**.

5. IC Engine Manufacturer: Isuzu 6. Model: AA-4LE2 7. Date manufactured: 2006 8. Model year: 2006
9. Date of installation (if an existing IC engine): 2012 10. IC Engine cylinder displacement: 2.18 liters per cylinder
11. Maximum rated horsepower (per the data plate/manufacturer specifications): 36 bhp
12. EPA Certification: Tier certification number 2 or ☐ None/not tier certified
13. Ignition type: ☐ Spark ☒ Compression
14. Fuel combusted in the IC engine? ☒ Distillate fuel oil ☐ Natural gas/LNG ☐ LPG/propane
    If distillate fuel oil (#1, #2, or a mixture) is used, what is the maximum sulfur content? ☒ 15 ppm (0.0015% by weight) ☐ 500 ppm (0.05% by weight)
15. IC engine exhaust stack parameters: Diameter 6 inches Height 6 feet Temperature 1058 ºF Flow rate 144 acfm

IC ENGINE EMISSIONS PARAMETERS

Questions 16 through 27 apply to **full-time** non-Tier certified IC engines or Tier certified IC engines manufactured prior to July 11, 2005. If you are proposing a Tier certified IC engine manufactured on and after July 11, 2005 or an emergency standby IC engine do not answer questions 17 through 27.

16. Testing schedule (for emergency standby IC engines only): _____ hrs/day _____ hrs/mon _____ hrs/qtr _____ hrs/yr
17. Maximum daily operation: _____ hrs/day 18. Maximum annual operation: _____ hrs/yr **Note:** These operational limits will be placed in the permit.
19. Will CO emissions be limited to a specific ppmvd (i.e. 49 or 23 ppmvd)? ☐ Yes ☐ No 20. What will the CO emissions limit be? _____ ppmvd
21. Will CO emissions be reduced by 70% or more? ☐ Yes ☐ No
22. Will a CEMS (Continuous Emissions Monitoring System) be used to measure pollutants in the IC engine exhaust stream? ☐ Yes ☐ No
23. Will a CPMS (Continuous Parameters Monitoring System) be used to measure parameters of the IC engine exhaust stream? ☐ Yes ☐ No
24. Will the IC engine be equipped with an oxidation catalyst? ☐ Yes ☐ No
25. If applicable, will the oxidation catalyst be equipped with a temperature measurement system to ensure it is operating properly? ☐ Yes ☐ No
26. Will the IC engine be equipped with a diesel particulate filter? ☐ Yes ☐ No
27. If applicable, will the diesel particulate filter be equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached? ☐ Yes ☐ No

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL__HEAT11 THROUGH PL_HEAT12 (2 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	DAYTON
9.	Model:	3E234A
10..	Maximum Capacity:	0.2 MMBTU/HR
11.	Date of Construction:	1977
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL__HEAT11 THROUGH PL_HEAT12 (2 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	DAYTON
9.	Model:	3E234A
10..	Maximum Capacity:	0.2 MMBTU/HR
11.	Date of Construction:	1977
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL2__HEAT1 THROUGH PL2_HEAT6 (6 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	LENNOX
9.	Model:	LF24-250A1
10..	Maximum Capacity:	0.25 MMBTU/HR
11.	Date of Construction:	2011
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL__HEAT1 THROUGH PL_HEAT10 (10 units)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	MODINE
9.	Model:	PAE300AC
10..	Maximum Capacity:	0.3 MMBTU/HR
11.	Date of Construction:	1977
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:		
15. Date of Installation:	16. Date of Modification (if any):	
17. Manufacturer and Model Number:		
18. ID(s) of Emission Unit Controlled:		
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No	
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)	

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL__HEAT13 THROUGH PL_HEAT15 ((3 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	MODINE
9.	Model:	PD250AAO111
10..	Maximum Capacity:	0.25 MMBTU/HR
11.	Date of Construction:	1985
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL__HEAT16 THROUGH PL_HEAT17 (2 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	MODINE
9.	Model:	PA300A
10..	Maximum Capacity:	0.3 MMBTU/HR
11.	Date of Construction:	1985
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Builders	Nashua Builders	N/A

4. Brief Project Description:	Builder of manufactured homes

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	PL2__HEAT7 THROUGH PL2_HEAT12 (6 UNITS)
6.	EU ID Number:	
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	SPACE RAY
9.	Model:	LTU, S130-NS1
10..	Maximum Capacity:	0.13 MMBTU/HR
11.	Date of Construction:	2011
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	
18. ID(s) of Emission Unit Controlled:	
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	4380 HR/YR
23.	Maximum Operation:	8760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	4380 HR/YR
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	HEATERS ARE ONLY USED DURING 6 MONTHS OUT OF THE YEAR

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Units - Spray Paint Booth Information **Form EU3**
Revision 5
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Nashua Homes	Nashua Homes	N/A

4. Brief Project Description:

BOOTH INFORMATION

5. Booth Type: ☐ New Booth ☒ Unpermitted Existing Booth
☐ Modification to a Permitted Booth, Permit #: , Date Issued:

6. Construction Date:

SPRAY GUN DESCRIPTION AND SPECIFICATIONS

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	GRECO	RACX 625	Asissted Airless	55	
2					
3					
4					

Number of guns to be used simultaneously: 1

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSDS (Y/N)
Lacquer	Wood	16	4.48	4.76	Yes

REQUEST FOR PERMIT LIMITATIONS

18. Are you requesting any permit limits? ☐ No ☒ Yes. If Yes, check all that apply below and fill in requested limit(s)

☐ Operation Hour Limits:
☐ Production Limits:
☒ Material Usage Limits: 16
☐ Other:

19. Rationale for Requesting the Limit(s): The usage rate is based on the assumption that 6 units are built in a day (max)

EMISSION CONTROL DEVICE (FILTER[b]) DESCRIPTION AND SPECIFICATIONS

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%)[a]	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Air Flow Technology Inc.	15 Gram Paint Arrestor	98.81	
Stack 2	Air Flow Technology Inc.	15 Gram Paint Arrestor	98.81	
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.
b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)

24. Actual Operation: 10 hr/day; 2500 hr/yr	25. Maximum Operation:

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name:
Nashua Builders	Nashua Builders

3. Brief Project Description: Builder of manufactured homes

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: Murphy-Rogers	5. Baghouse Model: MRA-22	6. Baghouse Equipment ID:

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	11086 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***if it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	_____ % PM control _____ % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline: 1-877-5PERMIT

Cyclone Separator - **Form CYS**
Revision 2
08/28/08

Please see instructions on page 3 before filling out the form.

IDENTIFICATION

1. Company Name: Nashua Builders	2. Facility Name: Nashua Builders	3. Facility ID No.: RCE-11381
4. Brief Project Description: Builder of manufactured homes		

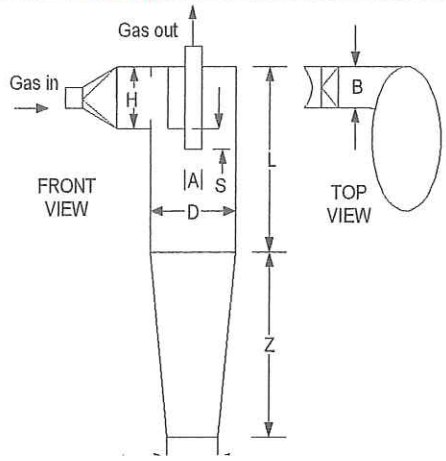
CYCLONE SEPARATOR INFORMATION

Equipment Description

5. Manufacturer: Unknown TORIT

6. Model Number: Unknown

7. Dimensions



Give dimensions of cyclone. (See sample diagram above.)

1. B: N/A	in.	5. Z: 64"	in.
2. H: 28"	in.	6. D: 44"	in.
3. S: NA	in.	7. A: 15"	in.
4. L: 57"	in.	8. J: NA	in.

8. Particulate Size Distribution Data

Micron range	Particle size distribution weight %	Manufacturer's guaranteed removal efficiency for each micron range
0.5-1.0		
1.0-5.0		
5-10		
10-20		
Over 20		

9. Type of Cyclone: ☐ Wet ☒ Dry

10. Type of Cyclone Unit: ☒ Single ☐ Quadruple ☐ Dual ☐ Multiclone

11. Blower
Blower horsepower: 40 hp
Design flow rate: scfm
Draft: ☒ Forced ☐ Induced

12. Design Criteria: Cyclone configuration: ☐ Positive pressure ☒ Negative pressure

13. Pre-Treatment Device: ☒ Cyclone ☐ Knock-out chamber ☐ Precooler ☐ None ☐ Preheater

14. Post-Treatment Device: ☐ Baghouse/Cartridge ☐ HEPA ☐ Other:

Appendix C EMISSION INVENTORY

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 1, August 2010

Facility Wide Potential to Emit Emission Inventory

Application Template and Instructions

For new stationary sources provide the facility's potential to emit for all NSR Regulated Air Pollutants. The potential to emit provided here must match the emissions rates which are requested to be permitted.

For modifications to existing facilities (including the addition of new emissions units), if the existing facility classification is in question an existing facility wide potential to emit emission inventory will be required to be submitted[1]. Contact DEQ to determine if a facility wide emission inventory for the existing facility is required.

All emissions inventories must be submitted with thorough documentation. The emission inventories will be subjected to technical review. Therefore, prepare your application with sufficient documentation so that the public and DEQ can verify the validity of the emission estimates. **Applications submitted without sufficient documentation are incomplete. Follow the instructions provided on page 2; do not proceed until you have read the instructions.**

Applicants must use the Potential to Emit Summary table provided below.

Table 1. POTENTIAL TO EMIT FOR NSR REGULATED POLLUTANTS

Emissions Unit	PM_{10}[a]	$PM_{2.5}$[a]	CO[a]	NO_x[a]	SO_2[a]	VOC[a]	GHG[a]
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr	mT/yr
	Point Sources						
Adhesives_Glues	0.20	0.20	--	--	--	0.20	--
Caulkings	1.85E-05	1.85E-05	--	--	--	1.40	--
Paints_Cleaners	1.62	1.62	--	--	--	88.70	--
Lacquers_Thinners	0.12	0.12	--	--	--	47.09	--
Welding Gases	--	--	--	--	--	9.21	--
Generator	0.019	0.019	0.081	0.454	0.169	0.097	9.3
NG Heaters	0.229	0.229	0.018	3.019	2.536	0.166	6,628
Dust Collection	0.39	0.32	--	--	--	--	--
Welding	0.123	0.123	--	--	--	0.049	--
Miscellaneous	0.01	0.01	--	--	--	--	--
Totals	**2.71**	**2.65**	**0.10**	**3.47**	**2.70**	**146.88**	**6,637**

a) NSR Regulated air Pollutants are defined[2] as: Particulate Matter (PM, PM-10, PM-2.5), Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone (VOC), Sulfur Dioxide, CO_2e[3], Green House Gases (GHG) mass, all pollutants regulated by NSPS (40 CFR 60)(i.e. TRS, fluoride, sulfuric acid mist) & Class I & Class II Ozone Depleting Substances (40 CFR 82)(i.e. CFC, HCFC, Halon, etc.)

---

[1] The applicant must determine if the existing facility is a major facility. If the facility is an existing PSD major facility and changes are being made to the facility the major modification test must be conducted.

[2] 40 CFR 52.21(b)(50), as incorporated by reference at IDAPA 58.01.01.107.03.d

[3] Multiply each greenhouse gas (GHG) by the global warming potential (GWP) listed at 40 CFR 98, Table A- 1 of Subpart A then sum all values to determine CO_2e (GHGs are carbon dioxide, nitrous oxide, methane, hydrofluorcarbons, perfluorcarbons, sulfur hexafluoride). Be sure to show all calculations as described in the instructions.

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application. **Emission Inventory Instructions:**

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).

2. The application must **show in detail all calculations** used to develop the PTE summary and include:

   - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
   - Documentation of all calculations conducted by hand (i.e. show all calculations).
   - Clear statements on all assumptions relied upon in estimating emissions.
   - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
   - Copies of manufacturer guarantees upon which emission inventories are based.
   - The best available emission information (see DEQ's Guidance on Emission Data Hierarchy).
   - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

3. Fugitive emissions of NSR regulated air pollutants from the source categories listed below must be included in the emission inventory.

Listed Source Categories for Inclusion of Fugitive Emissions

- Coal cleaning plants (with thermal dryers)
- Kraft pulp mills
- Portland cement plants
- Primary zinc smelters
- Iron and steel mills
- Primary aluminum ore reduction plants
- Primary copper smelters
- Municipal incinerators -250 T/day of refuse
- Hydrofluoric, sulfuric, or nitric acid plants
- Petroleum refineries
- Lime plants
- Phosphate rock processing plants
- Coke oven batteries
- Sulfur recovery plants
- Carbon black plants (furnace process)
- Primary lead smelters
- Fuel conversion plants
- Sintering plants
- Secondary metal production plants
- Chemical process plants (excluding ethanol plants by natural fermentation).
- Fossil-fuel fired boilers totaling more than 250 MMBtu/hr
- Petroleum storage and transfer units with total capacity of 300,000 barrels
- Taconite ore processing plants
- Glass fiber processing plants
- Charcoal production plants
- Fossil fuel-fired steam electric plants greater than 250 MMBtu/hr)
- Categories regulated by NSPS or NESHAP prior to 8/7/80

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 1, August 2010

Toxic Air Pollutant Emissions Inventory

Application Template and Instructions

Applicants must demonstrate preconstruction compliance with toxic air pollutant (TAP) standards contained in IDAPA 58.01.01.210 (*Rules for the Control of Air Pollution in Idaho*). DEQ has developed a TAP completeness checklist in order to assist applicants. DEQ strongly recommends that applicants complete and submit this checklist as part of the application. **Applications which do not follow one of the available methods for demonstrating compliance described in the checklist will be determined incomplete or denied.** Follow this link to the checklist: Toxic Air Pollutant Application Completeness Checklist. Be sure to calculate emissions correctly for the averaging periods as described in the checklist and in the instructions on page 3.

The type of TAP emissions inventory required depends upon which method is used to demonstrate compliance (see the Toxic Air Pollutant Application Completeness Checklist). **All TAP emissions inventories must be summarized using the emissions inventory summary tables provided below** (Table 1 and Table 2).

The applicant must **document all emission calculations as described in the instructions provided on the following page. Applications without sufficient documentation are incomplete; do not proceed until you have read the instructions.**

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.

Table 1. PRE- AND POST PROJECT NON-CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Toluene	**0.00E-03**	**1.85E-01**	**1.85E-01**	**25**	**No**
Xylene	**0.00E-03**	**2.54E-01**	**2.54E-01**	**29**	**No**
Acrolein	**0.00E-03**	**1.46E-06**	**1.46E-06**	**0.017**	**No**
Barium	**0.00E-03**	**1.45E-05**	**1.45E-05**	**0.033**	**No**
Chromium	**0.00E-03**	**3.26E-05**	**3.26E-05**	**0.033**	**No**
Cobalt	**0.00E-03**	**5.16E-06**	**5.16E-06**	**0.0033**	**No**
Copper	**0.00E-03**	**5.51E-03**	**5.51E-03**	**0.067**	**No**
Manganese	**0.00E-03**	**4.58E-03**	**4.58E-03**	**0.333**	**No**
Molybdenum	**0.00E-03**	**7.58E-06**	**7.58E-06**	**0.333**	**No**

Selenium	0.00E-03	1.65E-07	1.65E-07	0.013	No
Vanadium	0.00E-03	1.59E-05	1.59E-05	0.003	No
Zinc	0.00E-03	2.00E-04	2.00E-04	0.667	No
Hexane	0.00E-03	1.46E-01	1.46E-01	12	No
Pentane	0.00E-03	1.79E-02	1.79E-02	118	No
Napthalene	0.00E-03	4.20E-06	4.20E-06	3.33	No
Acetone	0.00E-03	9.89E-01	9.89E-01	119	No
4,4-methylenediphenyl Diisocyanate	0.00E-03	1.19E-01	1.19E-01	0.003	Yes
Kaolin	0.00E-03	3.47E-01	3.47E-01	0.133	Yes
Quartz	0.00E-03	1.06E-02	1.06E-02	0.0067	Yes
Tetrahydrofuran	0.00E-03	2.68E-01	2.68E-01	39.3	No
Methyl Ethyl Ketone	0.00E-03	3.46E-01	3.46E-01	39.3	No
Cyclohexanone	0.00E-03	8.16E-02	8.16E-02	6.67	No
Diacetone	0.00E-03	6.41E-02	6.41E-02	16	No
Methyl Acetate	0.00E-03	1.66E-02	1.66E-02	40.7	No
Soddard Solvent	0.00E-03	2.86E-02	2.86E-02	35	No
Carbon Black	0.00E-03	2.40E-04	2.40E-04	0.23	No
Calcium Oxide	0.00E-03	9.45E-08	9.45E-08	0.133	No
Ethylene Glycol	0.00E-03	1.86E+00	1.86E+00	0.846	Yes
Ammonia	0.00E-03	5.39E-03	5.39E-03	1.2	No
Methanol	0.00E-03	2.69E-02	2.69E-02	17.3	No
Amorphous Silica	0.00E-03	1.30E-01	1.30E-01	0.667	No
Aluminum	0.00E-03	6.51E-03	6.51E-03	0.667	No
Iron Oxide	0.00E-03	4.34E-03	4.34E-03	0.333	No
Cristobalite	0.00E-03	1.89E-03	1.89E-03	0.0033	No
Ethylbenzene	0.00E-03	4.30E-02	4.30E-02	29	No
Cumene	0.00E-03	1.08E-01	1.08E-01	16.3	No
Dipropylene Glycol Methyl Ether	0.00E-03	4.68E-02	4.68E-02	40	No
Methyl Isobutyl Ketone	0.00E-03	6.15E-04	6.15E-04	13.7	No
Potassium Hydroxide	0.00E-03	4.17E-03	4.17E-03	0.133	No
Trichloroethylene	0.00E-03	8.40E-02	8.40E-02	17.93	No
1,2-epoxybutane	0.00E-03	2.80E-03	2.80E-03	0.8	No
2 Butoxyethanol	0.00E-03	1.75E-02	1.75E-02	8	No
n-Butyl Acetate	0.00E-03	1.82E+00	1.82E+00	47.3	No
2-Methyl-1-propanol	0.00E-03	4.43E-01	4.43E-01	10	No
Ethanol	0.00E-03	4.11E-01	4.11E-01	125	No
2-Propanol	0.00E-03	2.75E-01	2.75E-01	65.3	No

VM&P Naphtha	0.00E-03	4.62E-02	4.62E-02	91.3	No
Methyl n-Amyl Ketone	0.00E-03	4.47E-03	4.47E-03	15.7	No
Isobuytl Acetate	0.00E-03	2.09E-02	2.09E-02	46.7	No
Zinc Chloride	0.00E-03	5.06E-03	5.06E-03	0.067	No
Aluminum Chloride	0.00E-03	5.06E-03	5.06E-03	0.667	No
Tin (dust)	0.00E-03	2.67E-03	2.67E-03	0.133	No
Silver	0.00E-03	2.75E-05	2.75E-05	0.007	No

Table 2. PRE- AND POST PROJECT CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Benzene	0.00E-03	2.07E-05	2.07E-05	8.00E-04	No
Formaldehyde	0.00E-03	8.15E-03	8.15E-03	5.10E-04	Yes
1,3-Butadiene	0.00E-03	5.62E-07	5.62E-07	2.40E-05	No
Acetaldehyde	0.00E-03	1.10E-05	1.10E-05	3.00E-03	No
Naphthalene	0.00E-03	3.32E-06	3.32E-06	9.10E-05	No
POM[a]	0.00E-03	3.93E-08	3.93E-08	2.00E-06	No
2-Methylnapthalene	0.00E-03	8.27E-08	8.27E-08	9.10E-05	No
3-Methylchloranthrene	0.00E-03	6.20E-09	6.20E-09	9.10E-05	No
Acenaphthene	0.00E-03	6.20E-09	6.20E-09	9.10E-05	No
Acenaphthylene	0.00E-03	6.20E-09	6.20E-09	9.10E-05	No
Anthracene	0.00E-03	8.27E-09	8.27E-09	9.10E-05	No
Benzo(g,h,i)perylene	0.00E-03	4.14E-09	4.14E-09	9.10E-05	No
Dichlorobenzene	0.00E-03	4.14E-06	4.14E-06	9.10E-05	No
Fluoranthene	0.00E-03	1.03E-08	1.03E-08	9.10E-05	No
Fluorene	0.00E-03	9.65E-09	9.65E-09	9.10E-05	No
Phenanathrene	0.00E-03	5.86E-08	5.86E-08	9.10E-05	No
Pyrene	0.00E-03	1.72E-08	1.72E-08	9.10E-05	No
Arsenic	0.00E-03	6.89E-07	6.89E-07	1.50E-06	No
Beryllium	0.00E-03	4.14E-08	4.14E-08	2.80E-05	No
Cadmium	0.00E-03	3.79E-06	3.79E-06	3.70E-06	Yes
Nickel	0.00E-03	2.29E-05	2.29E-05	2.70E-05	No
Tetrachloroethylene	0.00E-03	1.73E-01	1.73E-01	1.30E-02	Yes

a) *{If you have POM include the following footnote.}* Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

Emission Inventory Instructions:

1. The averaging period for the emission rate depends upon whether the TAP is non-carcinogenic or carcinogenic. Non-carcinogenic TAP emissions are averaged over 24 hours, carcinogenic TAP emissions are averaged over 8760 hours.

   For more explanation on averaging periods, see the Toxic Air Pollutant Application Completeness Checklist.

2. **Pre**-project average emissions are the existing allowable emission rates.

   Post-project average emissions are the new proposed emission rates.

3. Use the same emission unit name/designation throughout the application (i.e. air pollution control equipment forms and modeling forms).

4. The emission inventories will be subjected to technical review; prepare your application with sufficient documentation so that the public and DEQ can verify the validity of the emission estimates. The application must **show in detail all emission calculations** used to develop the emission inventory summary and must include the following:

   - **Clear documentation of any emissions averaging that was used.** For instance if a source only operates 8 hours during any day and the emissions during that 8 hour period are averaged over 24 hours then this must be clearly described in the application. The emissions averaging calculations must also be shown.
   - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
   - Documentation of all calculations conducted by hand (i.e. show all calculations).
   - Clear statements on all assumptions relied upon in estimating emissions.
   - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
   - Copies of manufacturer guarantees upon which emission inventories are based.
   - The best available emission information (see DEQ's Guidance on Emissions Data Hierarchy).
   - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source test data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

Material	Type	Daily Usage	Units	SDS Sheet	
AC50 Adhesive	Glue/Adhesive	2	cans	AC50 SDSINTERTAPE AC50 SPRAY ADHSV.pdf	
AlphaSeal A&B	Glue/Adhesive	30	gallons	ALPHA System 5200A SDS.pdf; ALPHA System 5200B SDS.pdf	
Black Jack 2172 Tubes	Caulking	5	Tubes	Black Jack 2172-9-66(sds8-2014).pdf	
Firestone W-56-358	Caulking	6	Tubes	Firestone W56-358-703A lap-sealant-hs-SDS.pdf	
General Purpose Silicone	Caulking	6	Tubes	PROJECT 1 GENERAL PURPOSE SILICONE ADHESIVE 6005-12 Clear SDS.pdf	
Lighthouse Caulk	Caulking	71	Tubes	Lighthouse Caulk SDS.pdf	
Sound Caulk	Caulking	10	Tubes	1OSI SC 175 EN(1).pdf	
Fire Caulk	Caulking	5	Tubes	Metacaulk MC 150+ SDS.docx	No ingredients defined; not included in calculations
Duct Mastic Seal 321	Caulking	1	gallons	DuctSeal_321_SDS.pdf	
Color Caulking for Tiles	Caulking	5	Tubes	Color Flex II MSDS.pdf	
Pro Glaze White	Caulking	15	Tubes	Tremco PROGLAZE WHITE 942806_323_U(1).pdf	
Translucent Caulking	Caulking	3	Tubes	Innerbond GP70S SDS Translucent colors.pdf	
Firestone WBA3781	Glue/Adhesive	5	gallons	FirestoneWBA-3781modular-water-based-bonding-adhesive-wba-3781-pdf-2(2).pdf	
Spray Foam	Glue/Adhesive	1	55 lb	Touch n Seal cp-750-fr-icc-part-A-3500.pdf And part B	
White Glue	Glue/Adhesive	5	gallons	Tite Bond White Glue.pdf	No ingredients defined; not included in calculations
Panel Adhesive	Glue/Adhesive	30	Tubes	OSI QB300 SDS.pdf	
Aerosol Spray Paint - Black	Paint	2	cans	Valspar Spray Paint Gloss Black.pdf	
Exterior Latex Paint	Paint	9	gallons	DuraCraft Ext Flat _SDS_English.pdf	
Interior Paint Spray	Paint	120	gallons	SherScrub® Supreme Interior Latex FlatSDS_English.pdf	
Texture Spray	Paint	40	Boxes	Ready Mix Texture SDS - HDP .pdf	
Primer Spray	Paint	40	gallons	Moisture Vapor Barrier Primer_Finish_SDS_English.pdf	
Fire Retardant Paint Rolled	Paint	1	quart	Slate Gray_SDS_English sherwill.pdf	
Black Paint Rolled	Paint	30	gallons	SHER-KEM™ JetBlack Semi-Gloss Metal Finishing Enamel_SDS_English.pdf	
Floor Sealer	Paint	1	gallons	Specialty 1400 SDS~OTEY0JI001F.pdf	
Gun Cleaner	Paint	1	quart	Alpha System cleaner 5983 MSDS.docx	
Spray Cleaner	Paint	1	can	Touch n Seal No Warp Gun Foam.pdf	
Acrylic Satin	Paint	1	quart	A-100 Exterior Acrylic Latex Flat_SDS_English.pdf	
Industrial Enamel Safety Yellow	Paint	0.2	gallons	Industrial EnamelSafety Yellow_SDS_English(1).pdf	
Industrial Enamel Black	Paint	0.2	gallons	SherWilliams Industrial Enamel Black SDS.pdf	
Industrial Enamel Safety Red	Paint	0.03	gallons	Safety Red_SDS_English Sherwin Williams.pdf	
ABS Glue	Glue/Adhesive	3	quart	Either Weld on-O771LoVoc_10-13.pdf or Weld on-O714LoVoc_10-13.pdf	
PVC Glue	Glue/Adhesive	2	quart	IPEX 636 CLR Low VOC Primer for PVC and CPVC Plastic Pipe SDS.pdf	
Pipe Dope	Glue/Adhesive	1	can	Rector Seal 5_SDS.docx	
Contact Cement Water Base	Glue/Adhesive	2	gallons	ESW10_Everstrong MSDS.pdf	No ingredients defined; not included in calculations
Lino Glue	Glue/Adhesive	30	gallons	2091_combo_07-14-11.pdf	No ingredients defined; not included in calculations
Wood Glue	Glue/Adhesive	0.4	gallons	Specialty Adhesives 1038 SDS Glue.docx	
Carpet Glue	Glue/Adhesive	48	buckets	Taylor 9680.tif	
Ceramic Tile Glue	Glue/Adhesive	3.5	gallons	TA9601 adhesive.pdf	
Mirror Construction Adhesive	Glue/Adhesive	1	Tubes	LOCTITE PL520 MIRROR Adhesive.pdf	
Cove Base Adhesive	Glue/Adhesive	12	Tubes	9640 Cove Base Adhesive SDS.pdf	
Spray Carpet Cleaner	Cleaners	0.5	can	x_out II SDS.pdf	
Liquid Wax	Cleaners	1	gallon	Carefree Floor Finish SDS.pdf	
Trap Shoot	Cleaners	1	quart	SUNRISE_SDS,_TRAPSHOOT.pdf	
Twin Power	Cleaners	1	quart	SUNRISE_SDS,_TWIN_POWER.pdf	
Blow In Insulation	Miscellaneous	300	bags	Green Fiber Blow in Insulation SDS.pdf	No HAPs or TAPs, Also, SDS sheet identifies any PM as negligible
Hi density Setting	Miscellaneous	43	bags	Hamilton Drywall Products Setting Compounds SDS -.pdf	
Super Set Setting	Miscellaneous	35	bags	Hamilton Drywall Products Setting Compounds SDS -.pdf	
Celite	Miscellaneous	3	lbs	DIATOMACEOUS EARTH SDS 2303.pdf	
Neo Solutions	Miscellaneous	3.5	oz	Neo Solultions.tif	
Lacquer Spray	Lacquers/Thinners	16	gallons	SherWood Lacquer Medium Rubbed Effect_SDS_English.pdf	
Stain	Lacquers/Thinners	2	gallons	SHER-WOOD® Wiping Stain_SDS_English.pdf	
Lacquer Thinner	Lacquers/Thinners	0.5	gallons	LACQUER THINNER.pdf	
Velspar Spray Lacquer	Lacquers/Thinners	3	cans	VAL65064 PREM LACQUER CLEAR 6UC SDS.pdf	
Mapp Gases	Welding Gases	5	cans	map-pro-premium-hand-torch-fuel SDS.pdf	
Flux	Welding Gases	1	can	Nokorode Regular Paste Flux SDS.docx	
Solder	Welding Gases	3	rolls	Lead-Free-Acid-Core-Solder MSDS-.pdf	
Wire Welding	Welding Gases	1	lbs	Ozarc Fleetweld rods SDS.pdf SMAW	
Rod Welding	Welding Gases	10	lbs	Ozarc Fleetweld rods SDS.pdf SMAW	
Wood Dust	Dust	8.74	lbs		
Gypsum Dust	Dust	150	lbs		

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	1.84	2.30	1.84	8.07
PM	0.05	0.01	0.05	0.20
HAPs	2.01	0.66	2.01	8.80

Product Name: AC50 Adhesive

	Actual	PTE
Max Hourly lbs (lb/hr):*	0.165	0.165
Max Hourly lbs (T/yr):**	0.206	0.723

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Acetone	67-64-1	0.4	0.07	0.083	0.07	0.29		X
Propane	74-98-6	0.4	0.07	0.083	0.07	0.29		
Dimethyl Ether	115-10-6	0.2	0.03	0.041	0.03	0.14		
n-Hexane	110-54-3	0.2	0.03	0.041	0.03	0.14	X	X
2-Methylpentane	107-83-5	0.1	0.02	0.021	0.02	0.07		
3-Methylpentane	96-14-0	0.025	#########	0.005	0.004	0.02		

* Assumes 2 cans used per day at 12 ounces per can and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Firestone WBA3781

	Actual	PTE			
Max Hourly lbs (lb/hr):*	4.17	4.17	**Product Density:**	8.34	lb/gal
Max Hourly lbs (T/yr):**	5.213	18.265	**Specific Gravity:**	1	
			VOC Content:	17	g/l
			Solids Content:	49	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Butadiene Styrene Copolymer	Unknown	0.5	2.09	2.61	2.09	9.13		
1,2-Propanediol	57-55-6	0.01	0.04	0.05	0.04	0.18		
VOC		0.02	0.07	0.09	0.07	0.31		
PM***		0.0001225	5.11E-04	6.39E-04	5.11E-04	2.24E-03		

* Assumes 5 gallons per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** The application of the adhesive is via trowel; transfer efficiency assumed to be 95% as it is similar to brushing. Also, control of 99.5% as all usage is enclosed within housing unit and enclosure plastic is thrown out when completed.

Product Name: Spray Foam A&B have a 50/50 ratio

	Actual	PTE			
			Product Density:	1.115	g/cm^3
Max Hourly lbs (lb/hr):*	20.17	20.17			
Max Hourly lbs (T/yr):**	3.03	88.33			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Diphenylmethanediisocyanate***	9016-87-9	0.5	0.76	0.11	0.76	3.31		
4,4-methylenediphenyl Diisocyanate***	101-68-8	0.5	0.76	0.11	0.76	3.31	X	X
Norflurane part A	811-97-2	0.25	5.04	0.76	5.04	22.08		
Norflurane part B	811-97-2	0.25	5.04	0.76	5.04	22.08		
Halogenated aliphatic polyether	68441-62-3	0.25	2.52	0.76	2.52	22.08		
1,1,3,3-Pentafluoropropane	460-73-1	0.1	1.01	0.30	1.01	8.83		

* Assumes 4 55 lb buckets per day (2 of each part A & B) and 3 hours per day of operation. 10% added for growth

**Actual assumes 2 days per week, 3 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** DEQ assumes 85% control for diisocyanate compounds (see DEQ automotive coating spreadsheet). Only 15% is assumed to volatilize

*** Also, the diisocyanates are only within part A; thus emissions are reduced by 50%

Product Name: Panel Adhesive

	Actual	PTE			
			Product Density:	11.42	lb/gal
Max Hourly lbs (lb/hr):*	5.78	5.78	**VOC Content:**	20	%
Max Hourly lbs (T/yr):**	7.22	25.29			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Limestone	1317-65-3	0.03	0.17	0.22	0.17	0.76		
Naphtha, petroleum hydrotreated light	proprietary	0.3	1.73	2.17	1.73	7.59		
Pentaerythritol ester of rosin	proprietary	0.3	1.73	2.17	1.73	7.59		
Kaolin	1332-58-7	0.1	0.58	0.72	0.58	2.53		X
CP Stryrene, butadiene, divinylbenzene	proprietary	0.1	0.58	0.72	0.58	2.53		
Hexane	110-54-3	0.05	0.29	0.36	0.29	1.26	X	X
Quartz***	14808-60-7	0.0000025	5.04E-05	1.80E-05	5.04E-05	6.32E-05		X
VOC		0.2	1.16	1.44	1.16	5.06		

* Assumes 30 28 oz tubes per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% control on particulate as the chaulking gun transfer "over spray" is essentially equivalent to brush or roll-on. 99.5% control as all usage is within enclosed unit and enclosure plastic is thrown out when completed.

Product Name: ABS Glue Either Weld-On 714 or Wild-On 771

	714 Actual	771 Actual				714 PTE	771 PTE
			Product Density:	8.30	lb/gal		
Max Hourly lbs (lb/hr):*	0.68	0.61		7.39	lb/gal	0.68	0.61
Max Hourly lbs (T/yr):**	0.86	0.76	**VOC Content:**	4.08	lb/gal	3.00	2.67
			VOC Content:	2.71	lb/gal		

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Tetrahydrofuran***	109-99-9	0.6	0.41	0.51	0.41	1.80		X
Methyl Ethyl Ketone (max 771)	78-93-3	0.5	0.30	0.38	0.30	1.34		X
Cyclohexanone***	108-94-1	0.2	0.14	0.17	0.14	0.60		X
Acetone****	67-64-1	0.2	0.12	0.15	0.12	0.53		X
VOC		0.49	0.34	0.42	0.34	1.48		

* Assumes 3 quarts per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Only in Weld-On 714

**** Only in Weld-On 771

Product Name: PVC Glue

	Actual	PTE			
			Product Density:	7.16	lb/gal
Max Hourly lbs (lb/hr):*	0.39	0.39	**VOC Content:**	4.58	lb/gal
Max Hourly lbs (T/yr):**	0.49	1.72			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Tetrahydrofuran***	109-99-9	0.59	0.23	0.29	0.23	1.02		X
Methyl Ethyl Ketone (max 771)	78-93-3	0.29	0.11	0.14	0.11	0.50		X
Cyclohexanone***	108-94-1	0.15	0.06	0.07	0.06	0.26		X
Acetone****	67-64-1	0.2	0.08	0.10	0.08	0.34		X
VOC		0.64	0.25	0.32	0.25	1.10		

* Assumes 2 quarts per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Pipe Dope

	Actual	PTE			
			Product Density:	11.51	lb/gal
Max Hourly lbs (lb/hr):*	0.11	0.11	**VOC Content:**	23.00	%
Max Hourly lbs (T/yr):**	0.14	0.48			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Diacetone	123-42-2	0.59	0.06	0.08	0.06	0.28		X
VOC		0.23	0.03	0.03	0.03	0.11		

* Assumes 1 can per day (16 oz/ 1 lb) and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Carpet Glue

	Actual	PTE			
			Product Density:	9.90	lb/gal
Max Hourly lbs (lb/hr):*	209.09	209.09	**VOC Content:**		
Max Hourly lbs (T/yr):**	261.36	915.81			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Kaolin Clay***	1332-58-7	0.0000625	0.01	0.02	0.01	0.06		X

* Assumes 48 bucket (4 gal each) per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Troweled on (95% transfer efficiency); 99% controlled as it is all enclosed and enclosure plastic is thrown out when completed.

Product Name: AlphaSeal A&B 50/50 Part A and Part B

	Actual	PTE			
			Product Density A:	10.30	lb/gal
Max Hourly lbs (lb/hr):*	27.61	27.61	**Product Density B:**	8.11	lb/gal
Max Hourly lbs (T/yr):**	4.14	120.94	**Solids Content A:**	100.00	%
			Solids Content B:	34.80	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Diphenylmethanediisocyanate***	9016-87-9	0.045	1.24	0.19	1.24	5.44		
4-4-Methylenediphenyl Diisocyanate***	101-68-8	0.03375	0.93	0.14	0.93	4.08	X	X
o-p(-isocyanatobenzyl)phenyl Isocyanate***	5873-54-1	0.000375	0.01	0.00	0.01	0.05		
Cyclohexyldimethylamine	98-94-2	0.01	0.28	0.04	0.28	1.21		
PM ****		0.0015165	0.04	0.01	0.04	0.18		

* Assumes 1 can per day (16 oz/ 1 lb) and 10 hours per day of operation. 10% added for growth

**Actual assumes 2 days per week, 3 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** DEQ assumes 85% control for diisocyanate compounds (see DEQ automotive coating spreadsheet). Only 15% is assumed to volatilize

*** All diisocyanate are contained within Part A and the other consistuent is within Part B

**** Assumes 55% transfer efficency and an average solids content between Parts A&B; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Ceramic Tile Glue

	Actual	PTE			
			Product Density:	13.68	lb/gal
Max Hourly lbs (lb/hr):*	5.27	5.27	**VOC Content:**		
Max Hourly lbs (T/yr):**	6.58	23.07			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Calcium Carbonate***	1357-85-3	0.03	0.16	0.20	0.16	0.69		
Mineral Spirits	64742-47-8	0.02	0.11	0.13	0.11	0.46		

* Assumes 3.5 gallona per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Troweled on; 95% transfer efficiency

Product Name: Mirror Construction Adhesive

	Actual	PTE			
			Product Density:	11.59	lb/gal
Max Hourly lbs (lb/hr):*	0.80	0.80	**VOC Content:**	0.25	%
Max Hourly lbs (T/yr):**	1.00	3.49			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Limestone	1317-65-3	0.6	0.48	0.60	0.48	2.09		
Acetone	67-64-1	0.3	0.24	0.30	0.24	1.05		X
Kaolin	1332-58-7	0.3	0.24	0.30	0.24	1.05		X
Methyl Acetate	79-20-9	0.05	0.04	0.05	0.04	0.17		X
Titanium Dioxide	13463-67-7	0.01	0.01	0.01	0.01	0.03		
Quartz***	14808-60-7	0.0000025	1.99E-06	2.49E-06	1.99E-06	8.73E-06		X
VOC		0.0025	1.99E-03	2.49E-03	1.99E-03	8.73E-03		

* Assumes 1 tube (10 oz per tube) per day and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Chaulking gun; 95% transfer efficiency; 99% controlled as it is all enclosed when used and enclosure plastic is thrown out when completed.

Product Name: Cove Base Adhesive

	Actual	PTE			
			Product Density:	11.50	lb/gal
Max Hourly lbs (lb/hr):*	28.46	28.46	**VOC Content:**		
Max Hourly lbs (T/yr):**	35.58	124.67			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Quartz/Silica***	14808-60-7	0.000125	3.56E-03	4.45E-03	3.56E-03	0.02		X
Kaolin***	1332-58-7	0.000075	2.13E-03	2.67E-03	2.13E-03	0.01		X
PM***		0.000125	3.56E-03	4.45E-03	3.56E-03	0.02		

* Assumes 12 tubes per day, 30 oz per tube and 10 hours per day of operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Chaulking gun; 95% transfer efficiency; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Wood Glue

	Actual	PTE			
			Product Density:	9.09	lb/gal
Max Hourly lbs (lb/hr):*	0.400	0.400	VOC Content	0.3	%
Max Hourly lbs (T/yr):**	0.500	1.752	Solid Content	50	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
PM***		0.0001	5.00E-05	0.000	5.00E-05	0.00		
VOC		0.003	1.20E-03	0.001	1.20E-03	0.01		

* Assumes 2 gallon used per week; 5 days per week and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 95% transfer efficiency rolled on; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	0.32	0.40	0.32	1.40
PM	4.22E-06	0.00	4.22E-06	0.00
HAPs	0.08	0.10	0.08	0.34

Product Name: Black Jack 2172 Tubes

	Actual	PTE
Max Hourly lbs (lb/hr):*	0.344	0.344
Max Hourly lbs (T/yr):**	0.430	1.506

Product Density:	8.71	lb/gal
Specific Gravity:	1.046	
% Volatiles:	60	
% Non-volatile	40	

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Asphalt	8052-42-4	0.5	0.17	0.215	0.17	0.75		
Mineral Spirits	8052-41-3	0.2	0.07	0.086	0.07	0.30		X
Cellulose	9004-34-6	0.06	0.02	0.026	0.02	0.09		
Bentonite	1302-78-9	0.25	0.09	0.107	0.09	0.38		
1,2,4-Trimethylbenzene	95-63-6	0.01	0.003	0.004	0.00	0.02		
Benzene, 1,3,5-trimethyl	108-67-8	0.01	0.003	0.004	0.003	0.02		
Surfactant	30113-45-2	0.005	0.002	0.002	0.002	0.01		
VOC		0.6	#########	0.258	0.206	0.90		

(stoddard solvent)

* Assumes 5 tutbes used per day at 10 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Firestone W-56-358

	Actual	PTE
Max Hourly lbs (lb/hr):*	0.454	0.454
Max Hourly lbs (T/yr):**	0.567	1.987

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Limestone	1317-65-3	1	0.45	0.567	0.45	1.99		
Light Aliphatic Solvent	64742-89-8	0.2	0.09	0.113	0.09	0.40		
Naphthenic Distillates	64742-52-5	0.1	0.05	0.057	0.05	0.20		
Quaternary Ammonium	65953-58-2	0.025	0.01	0.014	0.01	0.05		
Carbon Black	1333-86-4	6.25E-06	2.84E-06	3.54E-06	2.84E-06	1.24E-05		X
Stearic Acid	57-11-4	0.01	0.005	0.006	0.005	0.02		
Calcium Oxide	1305-78-8	5.00E-07	2.27E-07	2.84E-07	2.27E-07	9.94E-07		X
Quartz	14808-60-7	2.50E-07	1.13E-07	1.42E-07	1.13E-07	4.97E-07		X
PM***		7E-06	3.18E-06	3.97E-06	3.18E-06	1.39E-05		

* Assumes 6 tubes used per day at 11 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Chaulking gun; 95% transfer efficiency; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: General Purpose Silicone

	Actual	PTE
Max Hourly lbs (lb/hr):*	0.417	0.417
Max Hourly lbs (T/yr):**	0.521	1.825

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Distillates (petroleum)	64742-46-7	0.3	0.12	0.156	0.12	0.55		
Silicon Dioxide	7631-86-9	0.1	0.04	0.052	0.04	0.18		
Titanium Dioxide	13463-67-7	0.01	0.004	0.005	0.004	0.02		
Carbon Black***	133-86-4	2.50E-06	1.04E-06	1.30E-06	1.04E-06	4.56E-06		X

* Assumes 6 tubes used per day at 10.1 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 52 weeks per year. PTE assumes 8760 hours usage

*** Chaulking gun; 95% transfer efficiency; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Lighthouse Caulk

	Actual	PTE
Max Hourly lbs (lb/hr):*	4.930	4.930
Max Hourly lbs (T/yr):**	6.163	21.594

VOC Content	36.98	g/l
	0.35	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Plasticizer Polymer	Trade secret	0.1	0.49	0.616	0.49	2.16		
VOC		0.0035	0.017	0.022	0.017	0.08		

* Assumes 71 tubes used per day at 10.1 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 52 weeks per year. PTE assumes 8760 hours usage

Product Name: Duct Mastic Seal 321

	Actual	PTE			
Max Hourly lbs (lb/hr):*	1.294	1.294	**Specific Gravity**	1.41	
Max Hourly lbs (T/yr):**	1.617	5.666	**VOC Content**	92	g/l
			Product Density	11.76	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
De-foaming Agent	Trade secret	0.01	0.01	0.016	0.01	0.06		
Polyethylene Glycol Ether	Trade secret	0.01	0.01	0.016	0.01	0.06		
Ethylene Glycol	107-21-1	0.01	0.01	0.016	0.01	0.06	X	X
Ammonia	7664-41-7	0.01	0.01	0.016	0.01	0.06		X
Limestone	1317-65-3	0.4	0.52	0.647	0.52	2.27		
Clay Compound	Trade secret	0.05	0.06	0.081	0.06	0.28		
Methanol	67-56-1	0.05	0.06	0.081	0.06	0.28	X	X
VOC		0.07	0.084	0.105	0.084	0.37		

* Assumes 1 gallon used per day at and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Color Caulking for Tiles

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.344	0.344	**Specific Gravity**	1.05	
Max Hourly lbs (T/yr):**	0.430	1.506	**Product Density**	8.76	lb/gal
			VOC Content:	34	g/l

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Texanol	25265-77-4	0.02	0.01	0.009	0.01	0.03		
VOC		0.03	0.01	0.014	0.01	0.05		

* Assumes 5 tubes used per day at 10 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Pro Glaze White

	Actual	PTE			
Max Hourly lbs (lb/hr):*	1.042	1.042	**Specific Gravity**	1.04	
Max Hourly lbs (T/yr):**	1.302	4.562	**Product Density**	8.67	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Amorphous Silica	7631-83-9	0.3	0.31	0.391	0.31	1.37		X
Ethyltriacetoxysilane	17689-77-9	0.05	0.05	0.065	0.05	0.23		
Titanium Dioxide	13463-67-7	0.05	0.05	0.065	0.05	0.23		
Aluminum	7429-90-5	0.015	0.02	0.020	0.02	0.07		X
Mineral Oil	8012-95-1	0.01	0.01	0.013	0.01	0.05		
Iron Oxide	1309-37-1	0.01	0.01	0.013	0.01	0.05		X
Dibutyltin Diacetate	1067-33-0	0.01	0.01	0.013	0.01	0.05		

* Assumes 15 tubes used per day at 10.1 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Translucent Caulking

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.206	0.206	**Specific Gravity**	1.007	
Max Hourly lbs (T/yr):**	0.258	0.903	**Product Density**	8.40	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Ethytriacetoxysilane	17689-77-9	0.05	0.01	0.013	0.01	0.05		
Methyltriacetoxysilane	4253-34-3	0.05	0.01	0.013	0.01	0.05		

* Assumes 3 tubes used per day at 10 ounces per tube and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	20.26	25.33	20.26	88.70
PM	0.37	0.47	0.37	1.62
HAPs	6.32	7.90	6.32	27.67

Product Name: Aerosol Spray Paint - Black

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.138	0.138	Product Density:	5.76	lb/gal
Max Hourly lbs (T/yr):**	0.172	0.602	Specific Gravity:	0.69	

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Acetone	67-64-1	0.5	0.07	0.086	0.07	0.30		X
Solvent Naphtha	64742-89-8	0.25	0.03	0.043	0.03	0.15		
Naphtha	64742-49-0	0.3	0.04	0.052	0.04	0.18		
Carbon Black***	1333-86-4	5.00E-05	6.88E-06	8.59E-06	6.88E-06	3.01E-05		X

* Assumes 2 can used per day at 10 ounces per can and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Considered particulate matter; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Exterior Latex Paint

	Actual	PTE			
Max Hourly lbs (lb/hr):*	10.712	10.712	Product Density:	10.82	lb/gal
Max Hourly lbs (T/yr):**	13.390	46.918	Specific Gravity:	1.19	
			VOC Content:	0.42	lb/gal
			Solids Content:	49	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Cristobalite***	14464-46-1	0.0005	0.01	0.007	0.01	0.02		X
VOC		0.039	0.42	0.520	0.42	1.82		
PM***		0.0245	0.26	0.328	0.26	1.15		

* Assumes 10 total gallons used per day 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

***Assumes 95% transfer efficiency rolled on

Product Name: Interior Paint Spray

	Actual	PTE			
Max Hourly lbs (lb/hr):*	148.368	148.368	Product Density:	11.24	lb/gal
Max Hourly lbs (T/yr):**	185.460	649.852	Specific Gravity:	1.35	
			VOC Content:	0.27	lb/gal
			Solids Content:	54	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Titanium Dioxide	13463-67-7	0.1	14.84	18.546	14.84	64.99		
Quartz***	14808-60-7	7.50E-05	0.01	0.014	0.01	0.02		X
Cristobalite***	14464-46-1	2.25E-05	3.34E-03	0.004	3.34E-03	0.01		X
Ethylene Glycol	107-21-1	0.03	4.45	5.564	4.45	19.50	X	X
VOC		0.02	3.56	4.455	3.56	15.61		
PM***		4.050E-04	0.06	0.075	0.06	0.26		

* Assumes 120 total gallons used per day 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Considered particulate matter; Transfer efficiency assumed to be 85% (average between various types of sprayer, brush, roller); 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Texture Spray

	Actual	PTE			
Max Hourly lbs (lb/hr):*	211.200	211.200	Product Density:	15.01	lb/gal
Max Hourly lbs (T/yr):**	264.000	925.056	Specific Gravity:	1.8	
			VOC	3	g/l
				0.025	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Quartz***	14808-60-7	0.00004	0.01	0.011	0.01	0.01		X
VOC		0.0017	0.35	0.440	0.35	1.54		

* Assumes 40 total boxes at 48 lbs/box used per day 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Considered particulate matter; Transfer efficiency assumed to be 60% (based on machine sprayer); 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Primer Spray

	Actual	PTE			
Max Hourly lbs (lb/hr):*	45.136	45.136	Product Density:	10.26	lb/gal
Max Hourly lbs (T/yr):**	56.420	197.696	Specific Gravity:	1.23	
			VOC Content:	0.16	lb/gal
			Solid Content:	42	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Titanium Dioxide	13463-67-7	0.1	4.51	5.642	4.51	19.77		
Styrene-Butadiene polymer	9003-55-8	0.03	1.35	1.693	1.35	5.93		
Cristobalite	14464-46-1	0.00001	0.00	0.001	0.00	0.00		X
VOC		0.016	0.70	0.880	0.70	3.08		
PM***		0.001	0.04	0.053	0.04	0.19		

* Assumes 60 gallons used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

***Assumes 55% transfer efficiency assist airless gun; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Fire Retardant Paint Rolled

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.239	0.239	Product Density:	8.67	lb/gal
Max Hourly lbs (T/yr):**	0.298	1.045	Specific Gravity:	1.04	
			VOC Content:	3.74	lb/gal
			Solid Content:	60	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Hydrocarbon Solvent	64742-88-7	0.418	0.10	0.125	0.10	0.44		
Titanium Dioxide	13463-67-7	0.097	0.02	0.029	0.02	0.10		
Calcium carbonate	471-34-1	0.092	0.02	0.027	0.02	0.10		
Methyl Ethyl Ketoxime	96-29-7	0.003	7.16E-04	0.001	0.00	0.00		
Ethylbenzene	100-41-4	0.001	2.39E-04	0.000	0.00	0.00	X	X
VOC		0.431	0.103	0.129	0.10	0.45		
PM***		0.0002	3.58E-05	4.47E-05	3.58E-05	1.57E-04		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

***Assumes 95% transfer efficiency rolled on; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Black Paint Rolled

	Actual	PTE			
Max Hourly lbs (lb/hr):*	25.871	25.871	Product Density:	7.84	lb/gal
Max Hourly lbs (T/yr):**	32.338	113.314	Specific Gravity:	0.94	
			VOC content:	4.2	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Hydrocarbon Solvent	64742-88-7	0.5	12.94	16.169	12.94	56.66		
1,2,4-trimethylbenzene	95-63-6	0.03	0.78	0.970	0.78	3.40		
Xylene	1330-20-7	0.020	0.52	0.647	0.52	2.27	X	X
Light Aromatic Hydrocarbons	64742-95-6	0.020	0.52	0.647	0.52	2.27		
Toluene	108-88-3	0.016	0.41	0.517	0.41	1.81	X	X
Carbon Black***	1333-86-4	0.00001	1.94E-05	2.43E-05	1.94E-05	8.50E-05		X
Methyl Ethyl Ketoxime	96-29-7	0.010	0.26	0.323	0.26	1.13		
Cumene	98-82-8	0.010	0.26	0.323	0.26	1.13		X
Pentamethyliperidyl Sebacate	41556-26-7	0.010	0.26	0.323	0.26	1.13		
Ethylbenzene	100-41-4	0.003	0.08	0.097	0.08	0.34	X	X
Cobalt 2-Ethylhexanoate	136-52-7	0.003	0.08	0.097	0.08	0.34		
2-(2-Methoxyethoxy)-ethanol	111-77-3	0.003	0.08	0.097	0.08	0.34		
VOC		0.536	13.86	17.325	13.86	60.71		
PM***		0.0001	2.65E-04	3.31E-04	2.65E-04	1.16E-03		

* Assumes 30 gallons used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Considered particulate matter; Transfer efficiency assumed to be 95% (roller); 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Floor Sealer

	Actual	PTE			
Max Hourly lbs (lb/hr):*	1.000	1.000	Product Density:	9.09	lb/gal
Max Hourly lbs (T/yr):**	1.250	4.380	VOC Content****	60	%
			Solid Content	40	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
PM***		0.0001	1.00E-04	1.25E-04	1.00E-04	4.38E-04		
VOC		0.600	0.60	0.75	0.60	2.63		

* Assumes 1 gallon used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 95% transfer efficiency rolled on; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

**** Assumes 60% as a worse case scenario; actual percentage is likely to be much less

Product Name: Gun Cleaner

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.225	0.225	Product Density:	8.17	lb/gal
Max Hourly lbs (T/yr):**	0.281	0.984	VOC Content	8.17	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Dipropylene Glycol Methyl Ether	34590-94-8	0.5	0.11	0.140	0.11	0.49		X
1-Methyl-2-Pyrrolidone	26872-50-4	0.5	0.11	0.140	0.11	0.49		
VOC		1.000	0.22	0.281	0.22	0.98		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Industrial Enamel Safety Yellow

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.189	0.189	Product Density:	8.59	lb/gal
Max Hourly lbs (T/yr):**	0.236	0.828	VOC Content	3.75	lb/gal
			Solids	60.00	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Hydrocarbon Solvent	64742-88-7	0.5	0.09	0.118	0.09	0.41		
Titanium Dioxide	13463-67-7	0.25	0.05	0.059	0.05	0.21		
Methyl Ethyl Ketoxime	96-29-7	0.010	1.89E-03	0.002	0.00	0.01		
Methyl Isobutyl Ketone	108-10-1	0.003	5.67E-04	7.09E-04	5.67E-04	2.48E-03	X	X
Ethylbenzene	100-41-4	0.003	5.67E-04	7.09E-04	5.67E-04	2.48E-03	X	X
2-(2-Methoxyethony)-ethanol	111-77-3	0.003	5.67E-04	7.09E-04	5.67E-04	2.48E-03		
VOC		0.437	0.08	0.103	0.08	0.36		
PM***		0.00015	2.83E-05	3.54E-05	2.83E-05	1.24E-04		

* Assumes 1 gallon used per week (0.2 gallons/day) and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer efficiency for rolled on paints; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: SherWilliams Industrial Enamel Black SDS.pdf

	Actual	PTE			
			Product Density:	7.67	lb/gal
Max Hourly lbs (lb/hr):*	0.169	0.169	VOC Content	4.75	lb/gal
Max Hourly lbs (T/yr):**	0.211	0.739	Solids	59.00	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Hydrocarbon Solvent	64742-89-8	0.265	0.05	0.063	0.05	0.22		
Diacetone Alcohol	123-42-2	0.099	0.02	0.023	0.02	0.08		
2-Methyl-1-propanol	78-83-1	0.095	0.02	0.022	0.02	0.08		
Toluene	108-88-3	0.064	1.21E-02	1.51E-02	1.21E-02	5.30E-02	X	X
Xylene	1330-20-7	0.058	1.10E-02	1.37E-02	1.10E-02	4.80E-02	X	X
Med. Aliphatic Hydrocarbon Solvent	64742-88-7	0.020	3.78E-03	4.72E-03	3.78E-03	1.66E-02		
Carbon Black***	1333-86-4	5.500E-06	1.04E-06	1.30E-06	1.04E-06	4.55E-06		X
Ethylbenzene	100-41-4	0.010	1.89E-03	2.36E-03	1.89E-03	8.28E-03	X	X
Cobalt 2-Ethylhexanoate	136-52-7	0.002	3.78E-04	4.72E-04	3.78E-04	1.66E-03		
Manganese 2-Ethylhexanoate	15956-58-8	0.001	1.89E-04	2.36E-04	1.89E-04	8.28E-04		
VOC		0.619	0.12	0.146	0.12	0.51		
PM***		0.0001475	2.79E-05	3.48E-05	2.79E-05	1.22E-04		

* Assumes 1 gallon used per week (0.2 gallons/day) and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer efficiency for rolled on paints; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Industrial Enamel Safety Red

	Actual	PTE			
			Product Density:	8.26	lb/gal
Max Hourly lbs (lb/hr):*	0.030	0.030	VOC Content	3.62	lb/gal
Max Hourly lbs (T/yr):**	0.038	0.133	Solids	60.00	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Hydrocarbon Solvent	64742-88-7	0.422	1.28E-02	1.60E-02	1.28E-02	5.60E-02		
Titanium Dioxide	13463-67-7	0.066	2.00E-03	2.50E-03	2.00E-03	8.75E-03		
Methyl Ethyl Ketoxime	96-29-7	0.030	9.08E-04	1.14E-03	9.08E-04	3.98E-03		
Methyl Isobutyl Ketone	108-10-1	0.030	9.08E-04	1.14E-03	9.08E-04	3.98E-03	X	X
Ethylbenzene	100-41-4	0.020	6.05E-04	7.57E-04	6.05E-04	2.65E-03	X	X
2-(2-Methoxyethony)-ethanol	111-77-3	0.010	3.03E-04	3.78E-04	3.03E-04	1.33E-03		
VOC		0.438	1.33E-02	1.66E-02	1.33E-02	5.81E-02		
PM***		0.00015	4.54E-06	5.68E-06	4.54E-06	1.99E-05		

* Assumes 1 gallon used per week (0.2 gallons/day) and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer efficiency for rolled on paints; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Spray Cleaner

	Actual	PTE				
			Product Density:	8.43	lb/gal	equivalent to 1.01 g/cm3
Max Hourly lbs (lb/hr):*	1.159	1.159	VOC Content	1.14	lb/gal	
Max Hourly lbs (T/yr):**	1.449	5.077				

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
4,4-methylenediphenyl diisocyanate***	101-68-8	0.075	0.02	0.021	0.02	0.07	X	X
Dimethyl Ether	26447-40-5	0.1	0.02	0.028	0.02	0.10		
Isobutane	75-28-5	0.050	0.01	0.014	0.01	0.05		
propane	74-98-6	0.050	0.01	0.014	0.01	0.05		
VOC		0.135	0.03	0.038	0.03	0.13		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** DEQ assumes 85% control for diisocyanate compounds (see DEQ automotive coating spreadsheet). Only 15% is assumed to volatilize

Product Name: Acrylic Satin

	Actual	PTE			
			Product Density:	9.88	lb/gal
Max Hourly lbs (lb/hr):*	0.272	0.272	VOC Content	0.09	lb/gal
Max Hourly lbs (T/yr):**	0.340	1.190			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Cristobalite***	14464-46-1	0.00000275	7.47E-07	9.34E-07	7.47E-07	3.27E-06		X
VOC		0.009	2.48E-03	3.09E-03	2.48E-03	1.08E-02		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer efficiency for rolled on paints; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Liquid Wax

	Actual	PTE			
			Product Density:	8.58	lb/gal
Max Hourly lbs (lb/hr):*	0.944	0.944	VOC Content	0.06	%
Max Hourly lbs (T/yr):**	1.180	4.134			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Diethylene Glycol monoethyl	111-90-0	0.05	0.05	0.062	0.05	0.22		
Ethylene Glycol 2-ethylhexyl	1559-35-9	0.03	0.03	0.037	0.03	0.13		
Potassium Hydroxide	1310-58-3	0.010	0.01	0.012	0.01	0.04		X
VOC		0.001	6.00E-04	7.50E-04	6.00E-04	2.63E-03		

* Assumes 1 gallon used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Spray Carpet Cleaner

	Actual	PTE		
			Product Density:	13.03 lb/gal
Max Hourly lbs (lb/hr):*	0.672	0.672		
Max Hourly lbs (T/yr):**	0.840	2.944		

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Tetrachloroethylene	127-18-4	0.9	0.60	0.76	0.60	2.65	X	X
Trichloroethylene	79-01-6	0.3	0.20	0.25	0.20	0.88	X	X
Carbon Dioxide	124-38-9	0.050	0.03	0.04	0.03	0.15		
1,2-epoxybutane	106-88-7	0.010	0.01	0.01	0.01	0.03	X	X

* Assumes 1/2 can (15 oz) used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Trap Shoot

	Actual	PTE		
			Product Density:	6.88 lb/gal
Max Hourly lbs (lb/hr):*	0.189	0.189	VOC Content	95 %
Max Hourly lbs (T/yr):**	0.237	0.829		

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Aliphatic Solvent	64742-47-8		0.00	0.00	0.00	0.00		
Organic Solvent	68647-72-3		0.00	0.00	0.00	0.00		
Isopropylamine***	75-31-0		0.00	0.00	0.00	0.00		X
VOC		0.950	0.18	0.22	0.18	0.79		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** According to manufacturer no longer in product

Product Name: Twin Power

	Actual	PTE		
			Product Density:	8.42 lb/gal
Max Hourly lbs (lb/hr):*	0.232	0.232	VOC Content	5.4 %
Max Hourly lbs (T/yr):**	0.290	1.015		

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
2 Butoxyethanol	111-76-2	0.15	0.03	0.04	0.03	0.03		X
Diethylene Gycol Monoethyl Ether	111-90-0	0.11	0.03	0.03	0.03	0.03		
Nonylphenol Polyethylene Gycol Ether	127087-87-0	0.150	0.03	0.04	0.03	0.03		
VOC		0.054	0.01	0.02	0.01	0.01		

* Assumes 1 quart used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	10.75	13.44	10.75	47.09
PM	0.03	0.03	0.03	0.12
HAPs	0.15	0.19	0.15	0.66

Product Name: Lacquer Spray

	Actual	PTE			
Max Hourly lbs (lb/hr):*	13.798	13.798	Product Density:	7.84	lb/gal
Max Hourly lbs (T/yr):**	17.247	60.434	VOC Content	4.76	lb/gal
			Solid Content	35	%

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
n-Butyl Acetate	123-86-4	0.316	4.36	5.45	4.36	19.10		X
2-Methyl-1-propanol	78-83-1	0.077	1.06	1.33	1.06	4.65		X
Ethanol	64-17-5	0.07	0.97	1.21	0.97	4.23		X
Acetone	67-64-1	0.067	0.92	1.16	0.92	4.05		X
1-Butanol	73-36-3	0.041	0.57	0.71	0.57	2.48		
2-Propanol	67-63-0	0.04	0.55	0.69	0.55	2.42		X
Isobutylated Urea	68002-18-6	0.024	0.33	0.41	0.33	1.45		
Formaldehyde	50-00-0	0.002	0.03	0.03	0.03	0.12	X	X
VOC		0.607	8.38	10.47	8.38	36.69		
PM***		0.002	0.03	0.03	0.03	0.11		

* Assumes 16 gallons used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 55% transfer efficiency airless gun; 98.81% filter booth

Product Name: Stain

	Actual	PTE			
Max Hourly lbs (lb/hr):*	1.560	1.560	Product Density:	7.09	lb/gal
Max Hourly lbs (T/yr):**	1.949	6.831	VOC Content	5.68	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Med. Aliphatic Hydrocarbon Solvent	64742-88-7	0.164	0.26	0.32	0.26	1.12		
Mineral Spirits	64742-88-7	0.413	0.64	0.81	0.64	2.82		
Diacetone Alcohol	123-42-2	0.057	0.09	0.11	0.09	0.39		X
Xylene	1330-20-7	0.022	0.03	0.04	0.03	0.15	X	X
Lt. Aliphatic Hydrocarbon Solvent	64742-89-8	0.016	0.02	0.03	0.02	0.11		
Ethanol	64-17-5	0.013	0.02	0.03	0.02	0.09		X
Sulfonated Hydrocarbon Surfactant	577-11-7	0.011	0.02	0.02	0.02	0.08		
Quartz***	14808-60-7	0.001	7.80E-04	9.75E-04	7.80E-04	3.42E-03		X
Carbon Black***	1333-86-4	0.000	5.46E-04	6.82E-04	5.46E-04	2.39E-03		X
Methyl Ethyl Ketoxime	96-29-7	0.004	0.01	0.01	0.01	0.03		
Ethylbenzene	100-41-4	0.004	0.01	0.01	0.01	0.03	X	X
Cobalt 2-Ethylhexanoate	136-52-7	0.001	1.56E-03	1.95E-03	1.56E-03	6.83E-03		
Managanese 2-Ethylhexanoate	15956-58-8	0.001	1.56E-03	1.95E-03	1.56E-03	6.83E-03		
VOC		0.801	1.25	1.56	1.25	5.47		
PM***		0.001	1.33E-03	1.66E-03	1.33E-03	5.81E-03		

* Assumes 2 gallons used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 95% transfer efficiency; brushed on

Product Name: Lacquer Thinner

	Actual	PTE			
Max Hourly lbs (lb/hr):*	0.358	0.358	Product Density:	6.51	lb/gal
Max Hourly lbs (T/yr):**	0.447	1.567	VOC Content	5.92	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Lt. Aliphatic Hydrocarbon Solvent	64742-89-8	0.12	0.04	0.05	0.04	0.19		
VM&P Naphtha	8032-32-4	0.31	0.11	0.14	0.11	0.49		X
Toluene	108-88-3	0.050	0.02	0.02	0.02	0.08	X	X
2-Propanol	67-63-0	0.170	0.06	0.08	0.06	0.27		X
2-Butoxyethanol	111-76-2	0.020	0.01	0.01	0.01	0.03		X
Acetone	67-64-1	0.090	0.03	0.04	0.03	0.14		X
Methyl Ethyl Ketone	78-93-3	0.030	0.01	0.01	0.01	0.05		X
Methyl n-Amyl Ketone	110-43-0	0.030	0.01	0.01	0.01	0.05		X
Isobuytl Acetate	110-19-0	0.140	0.05	0.06	0.05	0.22		X
Isobuytl Isobutyrate	98-85-8	0.040	0.01	0.02	0.01	0.06		
VOC		0.910	0.33	0.41	0.33	1.43		

* Assumes 1/2 gallons used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Velspar Spray Lacquer

	Actual	PTE			
Max Hourly lbs (lb/hr):*	1.599	1.599	Product Density:	6.46	lb/gal
Max Hourly lbs (T/yr):**	1.999	7.003	VOC Content	3.23	lb/gal

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Acetone	67-64-1	0.5	0.80	1.00	0.80	3.50		X
Methyl Ethyl Ketone	78-93-3	0.25	0.40	0.50	0.40	1.75		X
Xylene	1330-20-7	0.030	0.05	0.06	0.05	0.21	X	X
Isopropyl Alcohol	67-63-0	0.030	0.05	0.06	0.05	0.21		X
Ethylbenzene	100-41-4	0.010	0.02	0.02	0.02	0.07	X	X
VOC***		0.500	0.80	1.00	0.80	3.50		

* Assumes 3 12 oz cans used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumed to be 50% because acetone was eliminated from VOC emitted in the lacquer thinner above

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	2.10	2.63	2.10	9.21

Product Name: Mapp Gases

	Actual	PTE			
			Product Density:	4.34	lb/gal
Max Hourly lbs (lb/hr):*	2.102	2.102	VOC Content	4.34	lb/gal
Max Hourly lbs (T/yr):**	2.627	9.207			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Propylene	115-07-1	1	2.10	2.63	2.10	9.21		
Propane	74-98-6	0.005	0.01	0.01	0.01	0.05		
VOC		1.000	2.10	2.63	2.10	9.21		

* Assumes 5 can (14.1 oz) used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

Product Name: Flux

	Actual	PTE			
			Product Density:	8.84	lb/gal
Max Hourly lbs (lb/hr):*	0.972	0.972	VOC Content	0.00	lb/gal
Max Hourly lbs (T/yr):**	1.216	4.259			

Component	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Zinc Chloride***	7646-85-7	0.0125	0.01	0.02	0.01	0.05		X
Ammonium Chloride***	12125-02-9	0.0125	0.01	0.02	0.01	0.05		X
Petrolatum	8009-03-8	0.900	0.88	1.09	0.88	3.83		

* Assumes 1 can (16 oz) used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumed solid; 95% transfer effiency as it is brushed on

Product Name: Solder

	Actual	PTE			
			Product Density:	8.84	lb/gal
Max Hourly lbs (lb/hr):*	0.330	0.330	VOC Content	0.00	lb/gal
Max Hourly lbs (T/yr):**	0.413	1.445			

Component***	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Tin (dust)	7440-31-5	0.0194	0.01	0.01	0.01	0.03		X
Copper (fume)	7440-50-8	0.04	0.01	0.02	0.01	0.06		X
Silver	7440-22-4	0.0002	6.60E-05	8.25E-05	6.60E-05	2.89E-04		X
Urea	57-13-6	0.026	0.01	0.01	0.01	0.04		

* Assumes 3 rolls (1 lb per roll) used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 98% of solder remains on the material (need to confirm)

	Actual		PTE	
	lb/hr	T/yr	lb/hr	T/yr
VOC	2.89E-03	3.61E-03	2.89E-03	1.26E-02
PM	3.29E-03	4.12E-03	3.29E-03	1.44E-02

Product Name: Celite

	Actual	PTE			
			Product Density:	19.18	lb/gal
Max Hourly lbs (lb/hr):*	0.330	0.330	VOC Content	0	%
Max Hourly lbs (T/yr):**	0.413	1.445	Solid Content	100	%

Component***	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Cristobalite	14464-46-1	0.002	0.00	0.001	0.00	0.00		X
Quartz	14808-60-7	0.00002	4.95E-06	6.19E-06	4.95E-06	2.17E-05		X
PM		2.5E-04	8.25E-05	1.03E-04	8.25E-05	3.61E-04		

* Assumes 3 lb used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** 95% transfer efficiency rolled on; 99% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Neo Solutions

	Actual	PTE			
			Product Density:	7.09	lb/gal
Max Hourly lbs (lb/hr):*	0.024	0.024	VOC Content	12	%
Max Hourly lbs (T/yr):**	0.030	0.105			

Component***	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
VOC***		0.120	2.89E-03	3.61E-03	2.89E-03	1.26E-02		

* Assumes 3.5 oz used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assume all volatile content are organic compounds

Product Name: Hi density Setting

	Actual	PTE			
				16.68	lb/gal
Max Hourly lbs (lb/hr):*	118.250	118.250	VOC Content	0	%
Max Hourly lbs (T/yr):**	147.813	517.935			

Component***	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Crystalline Silica	14808-60-7	1.25E-05	1.48E-03	1.85E-03	1.48E-03	6.47E-03		X

* Assumes 43 (25 lb) bags used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer effiency due to trowel on application; 99.5% controlled as all usage is enclosed and enclosure plastic is thrown out when completed.

Product Name: Super Set Setting

	Actual	PTE			
			Product Density:	16.68	lb/gal
Max Hourly lbs (lb/hr):*	69.300	69.300	VOC Content	0	%
Max Hourly lbs (T/yr):**	86.625	303.534			

Component***	CAS number	Max Fraction	Emissions (lb/hr)	Emissions (T/yr)	PTE (lb/hr)	PTE (T/yr)	HAP	TAP
Crystalline Silica	14808-60-7	0.00003	1.73E-03	2.17E-03	1.73E-03	7.59E-03		X

* Assumes 35 (18 lb) bags used per day and 10 hours per day operation. 10% added for growth

**Actual assumes 5 days per week, 10 hours per day for 50 weeks per year. PTE assumes 8760 hours usage

*** Assumes 95% transfer effiency due to trowel on application

			lb/1000lb electrode*					
Unit #	Welding Process	Electrode Type	PM	Cr	Mn	Ni	Co	lb/day
1	SMAW	E6011	25.6	0.05	9.98	0.05	0.01	11

*AP-42 Table 12.19-1

	PM2.5/PM10	Cr	Mn	Ni	Co
lb/hr	0.028	5.50E-05	0.011	5.50E-05	1.10E-05
Actual ton/yr	0.035	6.88E-05	0.014	6.88E-05	1.38E-05
PTE ton/yr	0.123	2.41E-04	0.048	2.41E-04	4.82E-05

Unit #	Manufacturer & Model Number	Manuafcture Date	Control Efficiency*	Hourly Throughput PM (lbs)	Annual Throughput PM (tons)	PM2.5 lb/hr	PM2.5 tpy	PM10 lb/hr	PM10 tpy
DUST1	Murphy Rodgers MRA-22	Feb-1992	98	15	18.75	0.08	0.106	0.12	0.15
DUST2	Unknown Cyclone	Unknown	30/45	0.874	1.09	0.17	0.22	0.19	0.240
						0.26	**0.32**	**0.31**	**0.39**

* Based on EPA fact sheet stating that older baghouses typically have an efficiency rating of 95-99% http://www3.epa.gov/ttnchie1/mkb/documents/ff-pulse.pdf

* Based on EPA fact sheet stating that conventional cyclones typically have an efficiency rating of 30-90% and 0 to 40% for PM10 and PM2.5 respectively. https://www3.epa.gov/ttncatc1/dir1/fcyclon.pdf

PM2.5 particulate distribution of PM from sawing is 28.3% as stated by CEIDARS

		millmeters	Inches				
	# of Boards or cuts	blade length	Length	Width	Thickness	Total Volume	
Ripper	45	3.2	0.125	4	0.25	5.63	cubic inches
table saw	360	4	0.15748	4	0.5	113.39	cubic inches
Molder/Table Saw	240	4	0.15748	1	3	113.39	cubic inches
Robo Saw Paneling*	184	4	0.15748	48	0.25	347.72	cubic inches
Panel Saw Paneling*	176	4	0.15748	48	0.25	332.60	cubic inches
Robo Saw Plywood**	16	4	0.15748	48	0.5	60.47	cubic inches
Panel Saw Plywood**	16	4	0.15748	48	0.5	60.47	cubic inches
Robo Saw Chip Board***	24	4	0.15748	48	0.625	113.39	cubic inches
Panel Saw Chip Board***	24	4	0.15748	48	0.625	113.39	cubic inches
Chop Saw	35	2.4	0.0944	4	2	26.43	cubic inches
Whirlwind Saw	100	5	0.19685	4	0.75	59.06	cubic inches
						1345.91	**cubic inches**

* Assumes 5 sheets to Robo saw and 4 sheets to panel saw. Each sheet is cut 8 times; Another 12 sheets per saw cut 12 times each.
** Assumes 8 sheets of plywood going to each saw; 2 cuts per sheet
***Assumes 4 sheets of chip board going to each saw; 6 cuts per sheet

1.5	lb/gal		
231	in^3/gal		
8.74	lb/day	PM	
40	%	PM10	California Emissions Invntory Decvelopment and Reporting System
70.8	%	PM2.5 of PM10	California Emissions Invntory Decvelopment and Reporting System
3.50	lb/day	PM10	
2.48	lb/day	PM2.5	

Unit #	Manufacturer & Model Number	Manuafcture Date	Max Rating (hp)	Primary Fuel Type	Applicable Standard	Maximum Daily hours	Maximum Annual hours	PTE Hours
GEN	MQ Power - DCA25SSIU	Jan-2006	36	Diesel Fuel	40 CFR Part 63 Subpart ZZZZ	1.5	500	8760

Criteria Emission Factors		
Diesel Fuel	lb/hp-hr*	lb/hp-hr**
NO2		1.15E-02
CO		4.28E-03
PM10		4.85E-04
PM2.5		4.85E-04
SO2	2.05E-03	
VOC	2.47E-03	

* AP-42 Section 3.3, Table 3.3-1; Less than 600 hp

** Manufacturer certified factors

*** Maximum hourly usage is only 15 minutes

GHG Emission Factors	
Diesel Fuel	kg/MMBtu*
CO2	73.96
CH4	3.00E-03
N2O	6.00E-04

* 40 CFR part 98 Subpart C

http://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf

7000 btu/hp-hr Brake Specific Fuel Consumption

Non Metal HAP[1]	CAS	EF (lb/MMBtu)	lb/hr	PTE T/yr	Actutal T/yr
Benzene	71-43-2	9.33E-04	2.35E-04	1.03E-03	5.88E-05
Toluene	108-88-3	4.09E-04	1.03E-04	4.51E-04	2.58E-05
Formaldehyde	50-00-0	1.18E-03	2.97E-04	1.30E-03	7.43E-05
1,3-Butadiene	106-99-0	3.91E-05	9.85E-06	4.32E-05	2.46E-06
Xylene	1330-20-7	2.85E-04	7.18E-05	3.15E-04	1.80E-05
Acetaldehyde	75-07-0	7.67E-04	1.93E-04	8.47E-04	4.83E-05
Acrolein	107-02-8	9.25E-05		0.00E+00	0.00E+00
Naphthalene	91-20-3	8.48E-05	2.14E-05	9.36E-05	5.34E-06
			9.32E-04	**4.08E-03**	**2.33E-04**
				PTE	**Actual**

1. Emission factors are based on AP-42 (1998), Section 3.3,Diesel Combustion, Table 3.3-2.

Idaho State TAP	CAS	585/586	EF (lb/MMBtu)	Max lb/hr[2]	PTE Max (T/yr)	Actual Max (T/yr)	24-hr or Annual Average (lb/hr)[1]
Benzene	71-43-2	586	9.33E-04	2.35E-04	1.03E-03	5.88E-05	1.34E-05
Toluene	108-88-3	585	4.09E-04	1.03E-04	4.51E-04	2.58E-05	6.44E-06
Formaldehyde	50-00-0	586	1.18E-03	2.97E-04	1.30E-03	7.43E-05	1.70E-05
1,3-Butadiene	106-99-0	586	3.91E-05	9.85E-06	4.32E-05	2.46E-06	5.62E-07
Xylene	1330-20-7	585	2.85E-04	7.18E-05	3.15E-04	1.80E-05	4.49E-06
Acetaldehyde	75-07-0	586	7.67E-04	1.93E-04	8.47E-04	4.83E-05	1.10E-05
Acrolein	107-02-8	585	9.25E-05	2.33E-05	1.02E-04	5.83E-06	1.46E-06
Naphthalene	91-20-3	586	8.48E-05	2.14E-05	9.36E-05	5.34E-06	1.22E-06

1. 585 is based on 24-hr average and 586 pollutants are annual averages

2. 7,000 btu/hp-hr specific brake hp assumed.

Potential to Emit					
pounds per hour					
PM10	PM2.5	NOx	CO	SO2	VOC
0.004	0.004	0.104	0.038	0.018	0.022

Actual Emissions					
tons per year					
PM10	PM2.5	NOx	CO	SO2	VOC
0.001	0.001	0.026	0.010	0.005	0.006

Potential to Emit					
tons per year					
PM10	PM2.5	NOx	CO	SO2	VOC
0.019	0.019	0.454	0.169	0.081	0.097

Greenhouse Gas Potential to Emit			
metric tons per year			
CO2	CH4	N2O	CO2e
9.3	3.8E-04	7.5E-05	9.3

Unit #	Facility ID	Max Rating (MMbtu/hr)	# of units	Primary Fuel Type	PTE hours	Actual Hours
1	Mod1	0.3	10	Natural Gas	8760	4380
2	Day1	0.2	2	Natural Gas	8760	4380
3	Mod2	0.25	3	Natural Gas	8760	4380
4	Mod3	0.3	2	Natural Gas	8760	4380
5	Len1	0.25	6	Natural Gas	8760	4380
6	Ray1	0.13	6	Natural Gas	8760	4380

Max daily 24 hr

Criteria Emission Factors	
Diesel Fuel	lb/MMscf**
NO2	100
CO	84
PM10	7.6
PM2.5	7.6
SO2	0.6
VOC	5.5

1020 btu/scf Typical Heating Value for Natural Gas

15 ppm Sulfur Content

* AP-42 Section 1.4, Table 1.4-1 and table 1.4-2; assumes regular NOx burner

GHG Emission Factors	
Diesel Fuel	kg/MMBtu
CO2	53.06
CH4	1
N2O	0.1

* 40 CFR part 98 Subpart C

http://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf

Non Metal HAP[2]	CAS	EF (lb/MMscf)	lb/hr	PTE T/yr	Actutal T/yr
Benzene	71-43-2	2.10E-03	1.45E-05	6.34E-05	3.17E-05
Dichlorobenzene	25321-22-6	1.20E-03	8.27E-06	3.62E-05	1.81E-05
Formaldehyde	50-00-0	7.50E-02	5.17E-04	2.26E-03	1.13E-03
Hexane	110-54-3	1.80E+00	1.24E-02	5.43E-02	2.72E-02
Naphthalene	91-20-3	6.10E-04	4.20E-06	1.84E-05	9.21E-06
Toluene	108-88-3	3.40E-03	2.34E-05	1.03E-04	5.13E-05
2-Methylnapthalene[1]	91-57-6	2.40E-05	1.65E-07	7.25E-07	3.62E-07
3-Methylchloranthrene[1]	56-49-5	1.80E-06	1.24E-08	5.43E-08	2.72E-08
7,12-Dimethylbenz(a)anthracene[1]		1.60E-05	1.10E-07	4.83E-07	2.42E-07
Acenaphthene[1]	83-32-9	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Acenaphthylene[1]	203-96-8	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Anthracene[1]	120-12-7	2.40E-06	1.65E-08	7.25E-08	3.62E-08
Benz(a)anthracene[1]	56-55-3	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Benzo(a)pyrene[1]	50-32-8	1.20E-06	8.27E-09	3.62E-08	1.81E-08
Benzo(b)fluoranthene[1]	205-99-2	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Benzo(g,h,i)perylene[1]	191-24-2	1.20E-06	8.27E-09	3.62E-08	1.81E-08
Benzo(k)fluoranthene[1]	205-82-3	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Chrysene[1]	218-01-9	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Dibenzo(a,h)anthracene[1]	53-70-3	1.20E-06	8.27E-09	3.62E-08	1.81E-08
Dichlorobenzene[1]	25321-22-6	1.20E-03	8.27E-06	3.62E-05	1.81E-05
Fluoranthene[1]	206-44-0	3.00E-06	2.07E-08	9.06E-08	4.53E-08
Fluorene[1]	86-73-7	2.80E-06	1.93E-08	8.45E-08	4.23E-08
Indeno(1,2,3-cd)pyrene[1]	193-39-5	1.80E-06	1.24E-08	5.43E-08	2.72E-08
Phenanathrene[1]	85-01-8	1.70E-05	1.17E-07	5.13E-07	2.57E-07
Pyrene[1]	129-00-0	5.00E-06	3.45E-08	1.51E-07	7.55E-08

1. The pollutant is a HAP because it is considered a polycyclic organic matter (POM).
2. Emission factors are based on AP-42 (1998), Section 1.4, Natural Gas Combustion, Table 1.4-3.

Metal HAP[1]	CAS	EF (lb/MMscf)	lb/hr	PTE T/yr	Actual T/yr
Arsenic	7440-38-2	2.00E-04	1.38E-06	6.04E-06	3.02E-06
Beryllium	7440-41-7	1.20E-05	8.27E-08	3.62E-07	1.81E-07
Cadmium	7440-43-9	1.10E-03	7.58E-06	3.32E-05	1.66E-05
Chromium	7440-47-3	1.40E-03	9.65E-06	4.23E-05	2.11E-05
Cobalt	7440-48-4	8.40E-05	5.79E-07	2.54E-06	1.27E-06
Lead	7439-92-1	5.00E-04	3.45E-06	1.51E-05	7.55E-06
Manganese	7439-96-5	3.80E-04	2.62E-06	1.15E-05	5.74E-06
Mercury	7439-97-6	2.60E-04	1.79E-06	7.85E-06	3.92E-06
Molybdenum	7439-98-7	1.10E-03	7.58E-06	3.32E-05	1.66E-05
Nickel	7440-02-0	2.10E-03	1.45E-05	6.34E-05	3.17E-05
Selenium	7782-49-2	2.40E-05	1.65E-07	7.25E-07	3.62E-07

1. Emission factors are based on AP-42 (1998), Section 1.4, Natural Gas Combustion, Table 1.4-4.

Total HAP 1.30E-02 5.71E-02 2.85E-02

Idaho State TAP	CAS	585/586	EF (lb/MMscf)	Max lb/hr	PTE Max (T/yr)	Actual Max (T/yr)	24-hr or Annual Average (lb/hr)[3]
Benzene	71-43-2	586	2.10E-03	1.45E-05	6.34E-05	3.17E-05	7.24E-06
POM[1]		586	1.14E-05	7.86E-08	3.44E-07	1.72E-07	3.93E-08
2-Methylnapthalene[2]	91-57-6	586	2.40E-05	1.65E-07	7.25E-07	3.62E-07	8.27E-08
3-Methylchloranthrene[2]	56-49-5	586	1.80E-06	1.24E-08	5.43E-08	2.72E-08	6.20E-09
Acenaphthene[2]	83-32-9	586	1.80E-06	1.24E-08	5.43E-08	2.72E-08	6.20E-09
Acenaphthylene[2]	203-96-8	586	1.80E-06	1.24E-08	5.43E-08	2.72E-08	6.20E-09
Anthracene[2]	120-12-7	586	2.40E-06	1.65E-08	7.25E-08	3.62E-08	8.27E-09
Benzo(g,h,i)perylene[2]	191-24-2	586	1.20E-06	8.27E-09	3.62E-08	1.81E-08	4.14E-09
Dichlorobenzene[2]	25321-22-6	586	1.20E-03	8.27E-06	3.62E-05	1.81E-05	4.14E-06
Fluoranthene[2]	206-44-0	586	3.00E-06	2.07E-08	9.06E-08	4.53E-08	1.03E-08
Fluorene[2]	86-73-7	586	2.80E-06	1.93E-08	8.45E-08	4.23E-08	9.65E-09
Phenanathrene[2]	85-01-8	586	1.70E-05	1.17E-07	5.13E-07	2.57E-07	5.86E-08
Pyrene[2]	129-00-0	586	5.00E-06	3.45E-08	1.51E-07	7.55E-08	1.72E-08
Formaldehyde	50-00-0	586	7.50E-02	5.17E-04	2.26E-03	1.13E-03	2.58E-04
Napthalene	91-20-3	586	6.10E-04	4.20E-06	1.84E-05	9.21E-06	2.10E-06
Arsenic	7440-38-2	586	2.00E-04	1.38E-06	6.04E-06	3.02E-06	6.89E-07
Beryllium	7440-41-7	586	1.20E-05	8.27E-08	3.62E-07	1.81E-07	4.14E-08
Cadmium	7440-43-9	586	1.10E-03	7.58E-06	3.32E-05	1.66E-05	3.79E-06
Nickel	7440-02-0	586	2.10E-03	1.45E-05	6.34E-05	3.17E-05	7.24E-06
Barium	7440-39-3	585	4.40E-03	1.45E-05	6.34E-05	3.17E-05	1.45E-05
Chromium	7440-47-3	585	1.40E-03	9.65E-06	4.23E-05	2.11E-05	9.65E-06
Cobalt	7440-48-4	585	8.40E-05	5.79E-07	2.54E-06	1.27E-06	5.79E-07
Copper	7440-50-8	585	8.50E-04	5.86E-06	2.57E-05	1.28E-05	5.86E-06
Manganese	7439-96-5	585	3.80E-04	2.62E-06	1.15E-05	5.74E-06	2.62E-06
Molybdenum	7439-98-7	585	1.10E-03	7.58E-06	3.32E-05	1.66E-05	7.58E-06
Selenium	7782-49-2	585	2.40E-05	1.65E-07	7.25E-07	3.62E-07	1.65E-07
Vanadium	7440-62-2	585	2.30E-03	1.59E-05	6.94E-05	3.47E-05	1.59E-05
Zinc	7440-66-6	585	2.90E-02	2.00E-04	8.75E-04	4.38E-04	2.00E-04
Hexane	110-54-3	585	1.80E+00	1.24E-02	5.43E-02	2.72E-02	1.24E-02
Pentane	109-66-0	585	2.60E+00	1.79E-02	7.85E-02	3.92E-02	1.79E-02
Toluene	108-88-3	585	3.40E-03	2.34E-05	1.03E-04	5.13E-05	2.34E-05
Napthalene	91-20-3	585	6.10E-04	4.20E-06	1.84E-05	9.21E-06	4.20E-06

1. POM is the combination of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. and are compared against the emission level of benzo(a)pyrene.

2. These pollutants are evaluated individually against the PAH emission level.

3. 585 is based on 24-hr average and 586 pollutants are annual averages

	Potential to Emit Natural Gas						Potential to Emit Natural Gas					
	pounds per hour						tons per year					
	PM10	PM2.5	NOx	CO	SO2	VOC	PM10	PM2.5	NOx	CO	SO2	VOC
Mod1	0.022	0.022	0.294	0.247	1.76E-03	0.016	0.098	0.098	1.288	1.082	0.008	0.071
Day1	0.003	0.003	0.039	0.033	2.35E-04	0.002	0.013	0.013	0.172	0.144	0.001	0.009
Mod2	0.006	0.006	0.074	0.062	4.41E-04	0.004	0.024	0.024	0.322	0.271	0.002	0.018
Mod3	0.004	0.004	0.059	0.049	3.53E-04	0.003	0.020	0.020	0.258	0.216	0.002	0.014
Len1	0.011	0.011	0.147	0.124	8.82E-04	0.008	0.049	0.049	0.644	0.541	0.004	0.035
Ray1	0.006	0.006	0.076	0.064	4.59E-04	0.004	0.025	0.025	0.335	0.281	0.002	0.018
Total	**0.052**	**0.052**	**0.689**	**0.579**	**0.004**	**0.038**	**0.229**	**0.229**	**3.019**	**2.536**	**0.018**	**0.166**

	Actual Emissions Natural Gas						Actual Emissions Natural Gas*					
	pounds per hour						tons per year					
	PM10	PM2.5	NOx	CO	SO2	VOC	PM10	PM2.5	NOx	CO	SO2	VOC
Mod1	0.022	0.022	0.294	0.247	1.76E-03	0.016	0.0490	0.0490	0.6441	0.5411	0.0039	0.0354
Day1	0.003	0.003	0.039	0.033	2.35E-04	0.002	0.0065	0.0065	0.0859	0.0721	0.0005	0.0047
Mod2	0.006	0.006	0.074	0.062	4.41E-04	0.004	0.0122	0.0122	0.1610	0.1353	0.0010	0.0089
Mod3	0.004	0.004	0.059	0.049	3.53E-04	0.003	0.0098	0.0098	0.1288	0.1082	0.0008	0.0071
Len1	0.011	0.011	0.147	0.124	8.82E-04	0.008	0.0245	0.0245	0.3221	0.2705	0.0019	0.0177
Ray1	0.006	0.006	0.076	0.064	4.59E-04	0.004	0.0127	0.0127	0.1675	0.1407	0.0010	0.0092
Total	**0.052**	**0.052**	**0.689**	**0.579**	**0.004**	**0.038**	**0.115**	**0.115**	**1.509**	**1.268**	**0.009**	**0.083**

*Assumes operation of heaters only 6 months of the year.

	GHG PTE				GHG Actuals*			
	metric tons per year				metric tons per year			
	CO2	CH4	N2O	CO2e**	CO2	CH4	N2O	CO2e**
Mod1	1,391	26.2	2.6	2,829	696	13.1	1.3	1,414
Day1	186	3.5	0.3	377	93	1.7	0.2	189
Mod2	348	6.6	0.7	707	174	3.3	0.3	354
Mod3	278	5.2	0.5	566	139	2.6	0.3	283
Len1	696	13.1	1.3	1,414	348	6.6	0.7	707
Ray1	362	6.8	0.7	735	181	3.4	0.3	368
Total	**3,261**	**61.5**	**6.1**	**6,628**	**1,630**	**30.7**	**3.1**	**3,314**

*Assumes operation of heaters only 6 months of the year.

** Applies GWP values of 1, 25 and 298 as defined in Appendix C of Part 98.

10 hr/day
3 hr/day
1.5 hr/day

Non Combustion TAPs						
Idaho State TAP	CAS #	585/586	Max lb/hr	PTE Max (T/yr)	Actual Max (T/yr)	24-hr or Annual Average (lb/hr)[1]
Acetone	67-64-1	585	2.37	10.21	2.91	9.89E-01
n-Hexane	110-54-3	585	0.32	1.41	0.40	1.34E-01
4,4-methylenediphenyl Diisocyanate	101-68-8	585	0.95	4.16	0.16	1.19E-01
Kaolin	1332-58-7	585	0.83	3.64	1.04	3.47E-01
Quartz	14808-60-7	585	0.03	0.06	0.03	1.06E-02
Tetrahydrofuran	109-99-9	585	0.64	2.82	0.80	2.68E-01
Methyl Ethyl Ketone	78-93-3	585	0.83	3.63	1.04	3.46E-01
Cyclohexanone	108-94-1	585	0.20	0.86	0.24	8.16E-02
Diacetone	123-42-2	585	0.15	0.67	0.19	6.41E-02
Methyl Acetate	79-20-9	585	0.04	0.17	0.05	1.66E-02
Soddard Solvent	8052-41-3	585	6.88E-02	3.01E-01	8.59E-02	2.86E-02
Carbon Black	1333-86-4	585	5.77E-04	2.53E-03	7.21E-04	2.40E-04
Calcium Oxide	1305-78-8	585	2.27E-07	9.94E-07	2.84E-07	9.45E-08
Ethylene Glycol	107-21-1	585	4.46	19.55	5.58	1.86E+00
Ammonia	7664-41-7	585	1.29E-02	5.67E-02	1.62E-02	5.39E-03
Methanol	67-56-1	585	6.47E-02	2.83E-01	8.08E-02	2.69E-02
Amorphous Silica	7631-83-9	585	0.31	1.37	0.39	1.30E-01
Aluminum	7429-90-5	585	0.02	0.07	0.02	6.51E-03
Iron Oxide	1309-37-1	585	0.01	0.05	0.01	4.34E-03
Cristobalite	14464-46-1	585	0.00	0.02	0.01	1.89E-03
Ethylbenzene	100-41-4	585	1.03E-01	4.52E-01	1.29E-01	4.30E-02
Xylene	1330-20-7	585	0.61	2.67	0.76	2.54E-01
Toluene	108-88-3	585	0.44	1.94	0.55	1.85E-01
Cumene	98-82-8	585		1.13	0.32	0.00E+00
Dipropylene Glycol Methyl Ether	34590-94-8	585	0.11	0.49	0.14	4.68E-02
Methyl Isobutyl Ketone	108-10-1	585	1.48E-03	6.46E-03	1.84E-03	6.15E-04
Potassium Hydroxide	1310-58-3	585	1.00E-02	4.38E-02	1.25E-02	4.17E-03
Tetrachloroethylene	127-18-4	586	0.60	2.65	0.76	1.73E-01
Trichloroethylene	79-01-6	585	0.20	0.88	0.25	8.40E-02
1,2-epoxybutane	106-88-7	585	0.01	0.03	0.01	2.80E-03
2 Butoxyethanol	111-76-2	585	0.04	0.07	0.05	1.75E-02
n-Butyl Acetate	123-86-4	585	4.36	19.10	5.45	1.82E+00
2-Methyl-1-propanol	78-83-1	585	1.06	4.65	1.33	4.43E-01
Ethanol	64-17-5	585	0.99	4.32	1.23	4.11E-01
2-Propanol	67-63-0	585	0.66	2.89	0.83	2.75E-01
Formaldehyde	50-00-0	586	0.03	0.12	0.03	7.88E-03
VM&P Naphtha	8032-32-4	585	0.11	0.49	0.14	4.62E-02
Methyl n-Amyl Ketone	110-43-0	585	0.01	0.05	0.01	4.47E-03
Isobuytl Acetate	110-19-0	585	0.05	0.22	0.06	2.09E-02
Zinc Chloride	7646-85-7	585	0.01	0.05	0.02	5.06E-03
Aluminum Chloride	12125-02-9	585	0.01	0.05	0.02	5.06E-03
Tin (dust)	7440-31-5	585	0.01	0.03	0.01	2.67E-03
Copper (fume)	7440-50-8	585	0.01	0.06	0.02	5.50E-03
Silver	7440-22-4	585	6.60E-05	2.89E-04	8.25E-05	2.75E-05
Chromium	7440-47-3	585	5.50E-05	2.41E-04	6.88E-05	2.29E-05
Manganese	7439-96-5	585	0.01	0.05	0.01	4.57E-03
Nickel	7440-02-0	586	5.50E-05	2.41E-04	6.88E-05	1.57E-05
Cobalt	7440-48-4	585	1.10E-05	4.82E-05	1.38E-05	4.58E-06

TAP	CAS #	585/586	Generator	NG Heaters	Non Combustion	Total	EL	Modeling?
Benzene	71-43-2	586	1.34E-05	7.24E-06		2.07E-05	8.00E-04	No
Toluene	108-88-3	585	6.44E-06	2.34E-05	1.85E-01	1.85E-01	25	No
Formaldehyde	50-00-0	586	1.70E-05	2.58E-04	7.88E-03	8.15E-03	5.10E-04	Yes
1,3-Butadiene	106-99-0	586	5.62E-07			5.62E-07	2.40E-05	No
Xylene	1330-20-7	585	4.49E-06		2.54E-01	2.54E-01	29	No
Acetaldehyde	75-07-0	586	1.10E-05			1.10E-05	3.00E-03	No
Acrolein	107-02-8	585	1.46E-06			1.46E-06	0.017	No
Naphthalene	91-20-3	586	1.22E-06	2.10E-06		3.32E-06	9.10E-05	No
POM[1]		586		3.93E-08		3.93E-08	2.00E-06	No
2-Methylnapthalene[2]	91-57-6	586		8.27E-08		8.27E-08	0.000091	No
3-Methylchloranthrene[2]	56-49-5	586		6.20E-09		6.20E-09	0.000091	No
Acenaphthene[2]	83-32-9	586		6.20E-09		6.20E-09	0.000091	No
Acenaphthylene[2]	203-96-8	586		6.20E-09		6.20E-09	0.000091	No
Anthracene[2]	120-12-7	586		8.27E-09		8.27E-09	0.000091	No
Benzo(g,h,i)perylene[2]	191-24-2	586		4.14E-09		4.14E-09	0.000091	No
Dichlorobenzene[2]	25321-22-6	586		4.14E-06		4.14E-06	0.000091	No
Fluoranthene[2]	206-44-0	586		1.03E-08		1.03E-08	0.000091	No
Fluorene[2]	86-73-7	586		9.65E-09		9.65E-09	0.000091	No
Phenanathrene[2]	85-01-8	586		5.86E-08		5.86E-08	0.000091	No
Pyrene[2]	129-00-0	586		1.72E-08		1.72E-08	0.000091	No
Arsenic	7440-38-2	586		6.89E-07		6.89E-07	1.50E-06	No
Beryllium	7440-41-7	586		4.14E-08		4.14E-08	2.80E-05	No
Cadmium	7440-43-9	586		3.79E-06		3.79E-06	3.70E-06	Yes
Nickel	7440-02-0	586		7.24E-06	1.57E-05	2.29E-05	2.70E-05	No
Barium	7440-39-3	585		1.45E-05		1.45E-05	0.033	No
Chromium	7440-47-3	585		9.65E-06	2.29E-05	3.26E-05	0.033	No
Cobalt	7440-48-4	585		5.79E-07	4.58E-06	5.16E-06	0.0033	No
Copper	7440-50-8	585		5.86E-06	5.50E-03	5.51E-03	0.067	No
Manganese	7439-96-5	585		2.62E-06	4.57E-03	4.58E-03	0.333	No
Molybdenum	7439-98-7	585		7.58E-06		7.58E-06	0.333	No
Selenium	7782-49-2	585		1.65E-07		1.65E-07	0.013	No
Vanadium	7440-62-2	585		1.59E-05		1.59E-05	0.003	No
Zinc	7440-66-6	585		2.00E-04		2.00E-04	0.667	No
Hexane	110-54-3	585		1.24E-02	1.34E-01	1.46E-01	12	No
Pentane	109-66-0	585		1.79E-02		1.79E-02	118	No
Napthalene	91-20-3	585		4.20E-06		4.20E-06	3.33	No
Acetone	67-64-1	585			9.89E-01	9.89E-01	119	No
4,4-methylenediphenyl Diisocyanate	101-68-8	585			1.19E-01	1.19E-01	0.003	Yes
Kaolin	1332-58-7	585			3.47E-01	3.47E-01	0.133	Yes
Quartz	14808-60-7	585			1.06E-02	1.06E-02	0.0067	Yes
Tetrahydrofuran	109-99-9	585			2.68E-01	2.68E-01	39.3	No
Methyl Ethyl Ketone	78-93-3	585			3.46E-01	3.46E-01	39.3	No
Cyclohexanone	108-94-1	585			8.16E-02	8.16E-02	6.67	No
Diacetone	123-42-2	585			6.41E-02	6.41E-02	16	No
Methyl Acetate	79-20-9	585			1.66E-02	1.66E-02	40.7	No
Soddard Solvent	8052-41-3	585			2.86E-02	2.86E-02	35	No
Carbon Black	1333-86-4	585			2.40E-04	2.40E-04	0.23	No
Calcium Oxide	1305-78-8	585			9.45E-08	9.45E-08	0.133	No
Ethylene Glycol	107-21-1	585			1.86E+00	1.86E+00	0.846	Yes
Ammonia	7664-41-7	585			5.39E-03	5.39E-03	1.2	No
Methanol	67-56-1	585			2.69E-02	2.69E-02	17.3	No
Amorphous Silica	7631-83-9	585			1.30E-01	1.30E-01	0.667	No
Aluminum	7429-90-5	585			6.51E-03	6.51E-03	0.667	No
Iron Oxide	1309-37-1	585			4.34E-03	4.34E-03	0.333	No
Cristobalite	14464-46-1	585			1.89E-03	1.89E-03	0.0033	No
Ethylbenzene	100-41-4	585			4.30E-02	4.30E-02	29	No
Cumene	98-82-8	585			0.00E+00	0.00E+00	16.3	No
Dipropylene Glycol Methyl Ether	34590-94-8	585			4.68E-02	4.68E-02	40	No
Methyl Isobutyl Ketone	108-10-1	585			6.15E-04	6.15E-04	13.7	No
Potassium Hydroxide	1310-58-3	585			4.17E-03	4.17E-03	0.133	No
Tetrachloroethylene	127-18-4	586			1.73E-01	1.73E-01	1.30E-02	Yes
Trichloroethylene	79-01-6	585			8.40E-02	8.40E-02	17.93	No
1,2-epoxybutane	106-88-7	585			2.80E-03	2.80E-03	0.8	No
2 Butoxyethanol	111-76-2	585			1.75E-02	1.75E-02	8	No
n-Butyl Acetate	123-86-4	585			1.82E+00	1.82E+00	47.3	No
2-Methyl-1-propanol	78-83-1	585			4.43E-01	4.43E-01	10	No
Ethanol	64-17-5	585			4.11E-01	4.11E-01	125	No
2-Propanol	67-63-0	585			2.75E-01	2.75E-01	65.3	No
VM&P Naphtha	8032-32-4	585			4.62E-02	4.62E-02	91.3	No
Methyl n-Amyl Ketone	110-43-0	585			4.47E-03	4.47E-03	15.7	No
Isobuytl Acetate	110-19-0	585			2.09E-02	2.09E-02	46.7	No
Zinc Chloride	7646-85-7	585			5.06E-03	5.06E-03	0.067	No
Aluminum Chloride	12125-02-9	585			5.06E-03	5.06E-03	0.667	No
Tin (dust)	7440-31-5	585			2.67E-03	2.67E-03	0.133	No
Silver	7440-22-4	585			2.75E-05	2.75E-05	0.007	No

Actual pounds per hour Emissions							
Process	**PM10**	**PM2.5**	**NOx**	**SO2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.05	0.05	--	--	--	1.84	2.01
Caulkings	4.22E-06	4.22E-06	--	--	--	0.32	0.08
Paints_Cleaners	0.37	0.37	--	--	--	20.26	6.32
Lacquers_Thinners	0.03	0.03	--	--	--	10.75	0.15
Welding Gases	--	--	--	--	--	2.10	--
Generator	0.004	0.004	0.104	0.038	0.018	0.022	0.001
NG Heaters	0.052	0.052	0.689	0.579	0.004	0.038	0.013
Dust Collection	0.31	0.26	--	--	--	--	--
Welding	0.03	0.03	--	--	--	--	0.011
Miscellaneous	3.29E-03	3.29E-03	--	--	--	2.89E-03	--

PTE pounds per hour Emissions							
Process	**PM10**	**PM2.5**	**NOx**	**SO2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.05	0.05	--	--	--	1.84	2.01
Caulkings	4.22E-06	4.22E-06	--	--	--	0.32	0.08
Paints_Cleaners	0.37	0.37	--	--	--	20.26	6.32
Lacquers_Thinners	0.03	0.03	--	--	--	10.75	0.15
Welding Gases	--	--	--	--	--	2.10	--
Generator	0.004	0.004	0.104	0.038	0.018	0.022	0.001
NG Heaters	0.052	0.052	0.689	0.579	0.004	0.038	0.013
Dust Collection	0.31	0.26	--	--	--	--	--
Welding	0.03	0.03	--	--	--	--	0.011
Miscellaneous	3.29E-03	3.29E-03	--	--	--	2.89E-03	--

Actual tons per year Emissions							
Process	**PM10**	**PM2.5**	**NOx**	**SO2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.01	0.01	--	--	--	2.30	0.66
Caulkings	5.27E-06	5.27E-06	--	--	--	0.40	0.10
Paints_Cleaners	0.47	0.47	--	--	--	25.33	7.90
Lacquers_Thinners	0.03	0.03	--	--	--	13.44	0.19
Welding Gases	--	--	--	--	--	2.63	--
Generator	0.001	0.001	0.026	0.010	0.005	0.006	2.33E-04
NG Heaters	0.115	0.115	1.509	1.268	0.009	0.083	2.85E-02
Dust Collection	0.39	0.32	--	--	--	--	--
Welding	0.035	0.035	--	--	--	--	0.014
Miscellaneous	0.00	4.12E-03	--	--	--	3.61E-03	--
Total	**1.06**	**0.99**	**1.54**	**1.28**	**0.01**	**44.19**	**8.88**
BRC Threshold	**1.50**	**1.00**	**4.00**	**4.00**	**10.00**	**4.00**	
Modeling Required	**No**	**No**	No	No	No		

PTE tons per year Emissions							
Process	**PM10**	**PM2.5**	**NOx**	**SO2**	**CO**	**VOC**	**HAPs**
Adhesives and Glues	0.20	0.20	--	--	--	0.20	8.80
Caulkings	1.85E-05	1.85E-05	--	--	--	1.40	0.34
Paints_Cleaners	1.62	1.62	--	--	--	88.70	27.67
Lacquers_Thinners	0.12	0.12	--	--	--	47.09	0.66
Welding Gases	--	--	--	--	--	9.21	--
Generator	0.019	0.019	0.454	0.169	0.081	0.097	4.08E-03
NG Heaters	0.229	0.229	3.019	2.536	0.018	0.166	5.71E-02
Dust Collection	0.39	0.32	--	--	--	--	--
Welding	0.123	0.123	--	--	--	--	0.049
Miscellaneous	0.01	0.01	--	--	--	1.26E-02	--
Total	**2.71**	**2.65**	**3.47**	**2.70**	**0.10**	**146.88**	**37.58**

Building	Source	Source ID	Orientation	X	Y	Stack Height	Stack Temperature	Exit Diameter	Exit Velocity	Exit Flow Rate	Formaldehyde	Cadmium	Diisocyanate	Kaolin	Quartz	Tetrachloroethylene	Ethylene Gycol
				meters	meters	Ft from ground	F	inches	fps	acfm	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
1	Roof #1	PL1_FAN1	Vertical	567796	4822811.52	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #2	PL1_FAN2	Vertical	567792.39	4822821.32	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #3	PL1_FAN3	Vertical	567779.87	4822807.59	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #4	PL1_FAN4	Vertical	567762.73	4822818.88	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #5	PL1_FAN5	Vertical	567754.17	4822807.09	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #6	PL1_FAN6	Vertical	567737.98	4822809.96	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #7	PL1_FAN7	Vertical	567715.21	4822794.87	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Roof #8	PL1_FAN8	Vertical	567718.91	4822783.13	31	-459.67	32		138.3	8.20E-04		1.24E-02	3.61E-02	1.10E-03	1.80E-02	1.94E-01
1	Heater #1	PL_HEAT1	Vertical	567703.3	4822798.6	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #2	PL_HEAT2	Vertical	567779.15	4822856.57	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #3	PL_HEAT3	Vertical	567807.38	4822866.8	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #4	PL_HEAT4	Vertical	567809.88	4822856.59	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #5	PL_HEAT5	Vertical	567817.35	4822839.77	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #6	PL_HEAT6	Vertical	567815.66	4822838.97	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #7	PL_HEAT7	Vertical	567826.36	4822815.71	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #8	PL_HEAT8	Vertical	567824.91	4822813.99	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #9	PL_HEAT9	Vertical	567832.51	4822799.79	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #10	PL_HEAT10	Vertical	567829.18	4822800.13	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #11	PL_HEAT11	Vertical	567848.93	4822794.45	33.25	68.3	10		17.59	7.35E-06	1.08E-07					
1	Heater #12	PL_HEAT12	Vertical	567835.35	4822785.63	33.25	68.3	10		17.59	7.35E-06	1.08E-07					
1	Heater #13	PL_HEAT13	Vertical	567809.46	4822818.89	33.25	68.3	10		17.59	9.19E-06	1.35E-07					
1	Heater #14	PL_HEAT14	Vertical	567767.13	4822777.25	33.25	68.3	10		17.59	9.19E-06	1.35E-07					
1	Heater #15	PL_HEAT15	Vertical	567771	4822772.11	33.25	68.3	10		17.59	9.19E-06	1.35E-07					
1	Heater #16	PL_HEAT16	Vertical	567774.26	4822763.68	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
1	Heater #17	PL_HEAT17	Vertical	567774.11	4822758.59	33.25	68.3	10		17.59	1.10E-05	1.62E-07					
2	Roof #1	PL2_FAN1	Vertical	567917.69	4822777.99	30	-459.67	32		135.7	6.56E-04		9.88E-03	2.89E-02	8.84E-04	1.44E-02	1.55E-01
2	Roof #2	PL2_FAN2	Vertical	567926.15	4822755.49	30	-459.67	32		135.7	6.56E-04		9.88E-03	2.89E-02	8.84E-04	1.44E-02	1.55E-01
2	Heater #1	PL2_HEAT1	Horizontal	567931.02	4822788.9	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #2	PL2_HEAT2	Horizontal	567922.11	4822785.46	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #3	PL2_HEAT3	Horizontal	567944.87	4822784.97	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #4	PL2_HEAT4	Horizontal	567950.04	4822771.12	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #5	PL2_HEAT5	Horizontal	567946.92	4822755.74	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #6	PL2_HEAT6	Horizontal	567937.63	4822752.68	28	68.3	10		17.59	9.19E-06	1.35E-07					
2	Heater #7	PL2_HEAT7	Vertical	567938.07	4822732.07	28	68.3	10		17.59	4.78E-06	7.01E-08					
2	Heater #8	PL2_HEAT8	Vertical	567943.54	4822718.54	28	68.3	10		17.59	4.78E-06	7.01E-08					
2	Heater #9	PL2_HEAT9	Vertical	567915.92	4822707.32	28	68.3	10		17.59	4.78E-06	7.01E-08					
2	Heater #10	PL2_HEAT10	Vertical	567909.54	4822723.15	28	68.3	10		17.59	4.78E-06	7.01E-08					
2	Heater #11	PL2_HEAT11	Horizontal	567901.78	4822744.2	28	68.3	10		17.59	4.78E-06	7.01E-08					
2	Heater #12	PL2_HEAT12	Horizontal	567893.33	4822769.1	28	68.3	10		17.59	4.78E-06	7.01E-08					
1	Spray Booth #1	SPRAY1	Vertical	567843.12	4822806.9	34.1667	-459.67	34		74.26							
1	Spray Booth #2	SPRAY2	Vertical	567841.55	4822804.61	34.0833	-459.67	50		74.26							
	Cyclone	CYCLONE	Vertical	567853.76	4822790.31	18.5	-459.67	44		209.3							
	Baghouse	BAGHOUSE	Vertical	567844.48	4822781.04	25.833	-459.67	22		11086							
	Generator	GEN1	Vertical	567766.14	4822750	6	1058	6		144	1.70E-05						

Modeling Results						
		Background Concentration ($\mu g/m^3$)	Modeling Impact ($\mu g/m^3$)	Increment Concentration ($\mu g/m^3$)	AACC (µg/m3)	% of Standard
Diisocyanate	24-hr	--	0.91	0.91	2.50	36.6%
Formaldehyde	Annual	--	6.26E-02	6.26E-02	7.70E-02	81.3%
Kaolin	24-hr	--	14.79	14.79	100	14.8%
Quartz	24-hr	--	0.45	0.45	5.00	9.0%
Tetrachloroethylene	Annual	--	1.33	1.33	2.1	63.3%
Ethylene Gycol	24-hr	--	79.40	79.40	6350	1.3%
Cadmium	Annual	--	4.00E-05	0.00	5.60E-04	7.1%

Appendix D AMBIENT AIR ANALYSIS

Idaho DEQ Impact Modeling Analyses Report Form

1.0 Summary

This air quality modeling protocol documents the proposed methodology used to prepare an air quality analysis in support of an Idaho Department of Environmental Quality (IDEQ) Permit to Construct (PTC) application for manufacturing of homes at the Nashua Home Builders (Nashua) facility located in Boise, ID. This is the initial permit for the facility.

Only particulate emissions exceed Below Regulatory Concern (BRC) thresholds and are therefore modeled as part of this permitting action. In addition, there are several toxic air pollutants (TAPs) that exceed the screening levels outlined in IDAPA 58.01.01.585-586. As a result, those pollutants are also modeled.

2.0 Project Description and Background as it relates to Modeling Analyses

Nashua homes consist of the construction of mobile homes and smaller dwellings known as "man camps". The dwellings are constructed in a somewhat assembly line fashion from start to finish. Raw wood is delivered to the mill and cut to size. Appropriate cuts are sent to various locations throughout the plant for use. In addition, the hardwoods department places cut woods through a plainer; it is sanded and cut again for face frames, cabinet doors etc.

The Floors Department frames a wood floor which is secured to a metal frame and insulated. Appropriate ducting and plumbing is installed into the floor. Plywood decking is installed via wood glue products. Linoleum and or carpets are installed only upon request. All walls are constructed with pre-cut lumber, white glue and gypsum. Roofing material also utilizes pre-cut wood and pre-manufactured trusses. Gypsum is installed with a two-part foam adhesive.

Electrical wiring is installed. Interior and exterior walls are prepped, textured and painted where necessary. All interior usage of paints, glues and adhesives are performed with the units fully enclosed with the plant and covered in plastic. Only exterior painting occurs without the plastic covering.

Following the completion of a unit, electrical and water checks are performed. The electrical checks require the use of a diesel generator on occasion. The unit is expected to never operate more than 15 minutes at any one time and a maximum of 1.5 hours/day. Annual usage is expected to never exceed 500 total hours. Lastly, all units are cleaned, prepped for shipping and moved into the yard via a tractor.

2.1 General Facility/Project Descriptions

Emissions sources at the facility will include the following:

- Adhesives and Glues
- Caulking

- Paints and Cleaners
- Lacquer and Thinners
- Welding
- Natural Gas Heaters
- Generators
- Dust Collection (baghouse and cyclone)

Adhesives and Glues

The Nashua facility utilizes a number of adhesives and glues throughout the construction process. All emissions are based on daily usage rates and applicable Safety Data Sheets (SDS), environmental data sheet information. All usage rates are based on the assumption that maximum production rates are met along with a 10% buffer.

Caulking

Similar to adhesives, all caulking emissions are derived from applicable daily usage and SDS information. Again, a 10% buffer on top of maximum production was assumed. Annual usage assumes 10 hour work days, 5 day work week and 50 week per year. This is consistent for all material.

Paints and Cleaners; Lacquers and Thinners

All interior paints are utilized within the units with plastic covering to capture nearly all potential overspray. Only exterior paints do not implement the use of plastic covering, but all painting is conducted with the plant. In addition, some lacquers and thinners are applied within the painting booth at the plant. The filtration system assumes 98.81% control efficiency. As all other material, emissions are determined via daily usage and applicable SDS information.

Welding

Nashua periodically preforms some welding onsite. A Shielded Metal Arc Welding process and an E6011electrode are utilized. Total usage is not expected to exceed 11lb/day. In addition, there are some welding gases that are utilized during the process. Applicable usage rates and SDS are used to establish emission estimates.

Natural Gas Heaters and Generator

Nashua owns a 36 horsepower MQ Power diesel generator that is used sparingly during electrical testing. AP-42 Section 3.3 emission factors were applied to determine total emissions. As stated earlier, the generator will not be used more than 15 minutes at any one time. In addition, the maximum number of usages constructed during a day would be six. Thus, the total daily usage of the generator would not exceed 1.5 hours. Total annual operation will not exceed 500 hours.

Nashua operates several natural gas heaters for comfort throughout the colder months of the year. The sizes of the units range from 0.13 to 0.3 MMBtu/hr. It is assumed that they operate a maximum of six months per year with a daily maximum of 24 hours. Emission factors from AP-42 Section 1.4 were utilized to establish emission estimates.

Dust Collection

The dust collection system at Nashua is used to clear saw dust from wood cutting throughout the plant as well as gypsum dust. All board cutting is routed to the cyclone dust collector. The unit is older and there is no documentation in support of specific control efficiency. Therefore, EPA Fact Sheet Cyclone information was applied. Efficiencies suggest being up to 90% for PM_{10} and 40% for $PM_{2.5}$. The efficiencies range from 30 to 90% and 0 to 40% for PM_{10} and $PM_{2.5}$, respectively. All emission rate calculations use estimates of 45% and 30% control for PM_{10} and $PM_{2.5}$, respectively.

The total amount of saw dust was determined estimating total amount of volume of dust (cubic inches) cut each day. A gallon of saw dust weighs 1.5 pounds and one gallon equates to 231 cubic inches. Five work days per week and 50 weeks per year were used as the maximum estimated time for annual saw dust throughput.

Gypsum dust is routed to the Murphy Rodgers MRA-22 Baghouse. For conservatism, it is assumed that 150 lb/day of gypsum dust is accumulated and routed to the baghouse. The bags are cleaned and replaced regularly to maintain as high efficiency as possible. Older units typically have efficiencies in the range of 95-99.9%. It was assumed that the MRA-22 baghouse is 98% control.

The California Emission Inventory Development and Reporting System data was utilized for sawdust particle distribution. It was determined that PM_{10} comprises 40% of total PM and $PM_{2.5}$ is 28.3% of PM. (70.8% of PM_{10}).

2.2 Location of Project

AERMOD includes rural and urban algorithm options. These options affect the wind speed profile, dispersion rates, and mixing-height formula used in calculating ground-level pollutant concentrations. A protocol was developed by USEPA to classify an area as either rural or urban for dispersion modeling purposes. The classification is based on average heat flux, land use, or population density within a three-km radius from the plant site. Of these techniques, the USEPA has specified that land use is the most definitive criterion (USEPA, 1987). The urban/rural classification scheme based on land use is as follows:

> *The land use within the total area, A_0, circumscribed by a 3-km circle about the source, is classified using the meteorological land use typing scheme proposed by Auer (1978). The classification scheme requires that more than 50% of the area, A0, be from the following land use types in order to be considered urban for dispersion modeling purposes: heavy industrial (I1); light-moderate industrial (I2); commercial (C1); single-family compact residential (R2); and multi-family compact residential (R3). Otherwise, the use of rural dispersion coefficients is appropriate.*

The Nashua facility is located in a light industrial area, in Boise, ID. Although the immediate vicinity of the site is industrial and commercial, site and map reconnaissance showed that the area A_0 within a 3-km circle of the source is below the 50% urban land use criteria necessary for use of urban dispersion coefficients. Rural dispersion coefficients were therefore used in the air quality dispersion modeling.

Ada County is designated as an attainment area for all criteria pollutants. The facility is located at 567,796 mE and 4,822,812 mN, UTM zone 11 NAD 83. A map showing the geographical location of the facility is provided within Appendix A of the application.

2.3 Existing Permits and Modeling Analyses Performed

This is the first permitting action of the Nashua facility. Thus no previous modeling analyses have been conducted.

3.0 Modeling Analyses Applicability

The Idaho Department of Environmentally Quality (IDEQ) Air Quality Rules identify a threshold known as Below Regulatory Concern (BRC). It is defined as less than 10% of significant as defined by section 006 of the Rules. BRC typically applies only for exception determinations outlined in Sections 220-223 of IDAPA 58.01.01. However, IDEQ has instituted a policy whereby facilities can demonstrate to BRC status for specific criteria pollutants and not be required to conduct an ambient air quality analysis for said pollutants.

As discussed in Section 2.2.2 of the associated application, all criteria pollutants with the exception of VOCs are below the BRC threshold. No ambient air quality analysis is required for VOCs as a whole. Therefore, no criteria pollutants were modeled.

However, there are several TAPs that exceeded the applicable screening level which requires ambient analysis for those pollutants. Seven TAPs were modeled and demonstrated compliance with both the AAC and AACC.

3.1 Applicable Standards

Criteria pollutant NAAQS are listed in Table 1, along with significant impact levels (SILs).

Table 1 APPLICABLE REGULATORY LIMITS

Pollutant	Averaging Period	Significant Impact Levels[a] ($\mu g/m^3$)[b]	Regulatory Limit[c] ($\mu g/m^3$)	Modeled Design Value Used[d]
PM_{10}[e]	24-hour	5.0	150[f]	Maximum 6th highest[g]
$PM_{2.5}$[h]	24-hour	1.2	35[i]	Mean of maximum 8th highest[j]
	Annual	0.3	12[k]	Mean of maximum 1st highest[l]
Carbon monoxide (CO)	1-hour	2,000	40,000[m]	Maximum 2nd highest[n]
	8-hour	500	10,000[m]	Maximum 2nd highest[n]
Sulfur Dioxide (SO_2)	1-hour	3 ppb[o] (7.8 $\mu g/m^3$)	75 ppb[p] (196 $\mu g/m^3$)	Mean of maximum 4th highest[q]
	3-hour	25	1,300[m]	Maximum 2nd highest[n]
	24-hour	5	365[m]	Maximum 2nd highest[n]
	Annual	1.0	80[r]	Maximum 1st highest[n]
Nitrogen Dioxide (NO_2)	1-hour	4 ppb (7.5 $\mu g/m^3$)	100 ppb[s] (188 $\mu g/m^3$)	Mean of maximum 8th highest[t]
	Annual	1.0	100[r]	Maximum 1st highest[n]
Lead (Pb)	3-month[u]	NA	0.15[r]	Maximum 1st highest[n]
	Quarterly	NA	1.5[r]	Maximum 1st highest[n]
Ozone (O_3)	8-hour	40 TPY VOC[v]	70 ppb[w]	Not typically modeled

a. Idaho Air Rules Section 006 (definition for significant contribution) or as incorporated by reference as per Idaho Air Rules Section 107.03.b.
b. Micrograms/cubic meter.
c. Incorporated into Idaho Air Rules by reference, as per Idaho Air Rules Section 107.
d. The maximum 1st highest modeled value is always used for the significant impact analysis unless indicated otherwise. Modeled design values are calculated for each ambient air receptor.
e. Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
f. Not to be exceeded more than once per year on average over 3 years.
g. Concentration at any modeled receptor when using five years of meteorological data.
h. Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
i. 3-year mean of the upper 98th percentile of the annual distribution of 24-hour concentrations.
j. 5-year mean of the 8th highest modeled 24-hour concentrations at the modeled receptor for each year of meteorological data modeled. For the SIL analysis, the 5-year mean of the 1st highest modeled 24-hour impacts at the modeled receptor for each year.
k. 3-year mean of annual concentration.
l. 5-year mean of annual averages at the modeled receptor.
m. Not to be exceeded more than once per year.
n. Concentration at any modeled receptor.
o. Interim SIL established by EPA policy memorandum.
p. 3-year mean of the upper 99th percentile of the annual distribution of maximum daily 1-hour concentrations.
q. 5-year mean of the 4th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of 1st highest modeled 1-hour impacts for each year is used.
r. Not to be exceeded in any calendar year.
s. 3-year mean of the upper 98th percentile of the annual distribution of maximum daily 1-hour concentrations.
t. 5-year mean of the 8th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of maximum modeled 1-hour impacts for each year is used.
u. 3-month rolling average.
v. An annual emissions rate of 40 ton/year of VOCs is considered significant for O_3.
w. Annual 4th highest daily maximum 8-hour concentration averaged over three years.

Applicable TAP-specific increment standards are provided in Idaho Air Rules Section 585 and 586. A table of identified TAP emissions resulting from the proposed project is provided in this section of the Modeling Report. TAP emissions increases resulting from the project are identified in Table 2.

Table 2 TAP ELS AND AACS/AACCS

TAP	Non-Carcinogen or Carcinogen	Screening Emissions Level (EL)[a] (lb/hr)	AAC or AACC[b] (µg/m^3)
Cadmium	Carcinogenic	3.7E-06	5.6E-04
Formaldehyde	Carcinogenic	5.1E-04	7.7E-02
Tetrachloroethylene	Carcinogenic	1.30E-02	2.1
MDI	Non-carcinogenic	0.003	2.50
Kaolin	Non-carcinogenic	0.133	100
Quartz	Non-carcinogenic	0.0067	5.0
Ethylene Glycol	Non-carcinogenic	0.846	6350

a. ELs from Idaho Air Rules Section 585 and 586 in pounds/hour.
b. Acceptable Ambient Concentration (AAC) or Acceptable Ambient Concentration for a Carcinogen (AACC) from Idaho Air Rules Section 585 and 586, in micrograms/cubic meter or milligrams/cubic meter. Note that AACs listed in Idaho Air Rules Section 585 are expressed in units of milligrams/cubic meter rather than micrograms/cubic meter.

All TAPs identified in the emissions inventory for the project are listed in the TAPs EL and AAC/AACC Table in this section.

3.2 Criteria Pollutant Modeling Applicability

All criteria pollutants and averaging periods that were modeling during the previous permitting action will be modeled again on a facility-wide basis. CO and SO_2 annual are not modeled because the Level I Thresholds are not exceeded. Please see the associated emission Inventory for details.

Table 3 lists criteria pollutants for which site-specific modeling analyses were performed to demonstrate compliance with NAAQS.

Table 3 MODELING APPLICABILITY		
Criteria Pollutant	**Modeled (yes/no)**	**Basis for Exclusion from Modeling**
$PM_{2.5}$ 24-hour	Yes	_X__BRC Exempt[a] ___Emissions Below Level l Thresholds[b] ___Emissions Below Level II Thresholds[c]
$PM_{2.5}$ annual	Yes	_X__BRC Exempt ___Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
PM_{10} 24-hour	Yes	_X__BRC Exempt ___Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
NO_2 1-hour	Yes	_X__BRC Exempt ___Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
NO_2 annual	Yes	_X__BRC Exempt ___Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
SO_2 1-hour, 3-hour	Yes	_X__BRC Exempt ___Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
SO_2 annual	No	_X__BRC Exempt _ _Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds
CO 1-hour, 8-hour	No	_X__BRC Exempt _ _Emissions Below Level l Thresholds ___Emissions Below Level II Thresholds

a. If the project would have qualified for a Category I BRC permitting exemption for the criteria pollutant in question, as per Idaho Air Rules Section 221.01, except for the emissions quantities of another criteria pollutant, then a NAAQS compliance analysis is not required under Section 203.02 or 403.02 for that criteria pollutant.

b. Level I Modeling Thresholds from Table 2 in Section 3 of the DEQ Modeling Guideline. NAAQS compliance is assured through DEQ's non-site-specific modeling analyses.

c. Level II Modeling Thresholds from Table 2 in Section 3 of the DEQ Modeling Guideline. NAAQS compliance is assured through DEQ's non-site-specific modeling analyses. Level II Modeling Thresholds can only be used with prior DEQ approval.

Emissions calculations that clearly show how the modeling applicability determination was performed are provided in Appendix C of the application.

3.3 TAP Modeling Applicability

As stated above, seven TAPs exceed the emission screening level (EL). Modeling analysis was conducted for four non-carcinogenic (MDI, kaolin, quartz and ethylene glycol) and three carcinogenic pollutants (formaldehyde, cadmium and tetrachloroethylene).

3.4 Modeling Protocol

A modeling protocol was submitted to DEQ on March 28, 2016. It was initially thought that particulates would require modeling. However, after adjusting usage rates both PM2.5 and PM10 dropped below BRC. In addition, some TAPs either dropped below or rose above the applicable EL based on the usage adjustments. While, there are some different pollutants that were analyzed than proposed in the protocol, the premise of the protocol was maintained. The protocol approval letter was received on April XX, 2016.

4.0 Modeled Emissions Sources

All the sources described in Section 2.1 of this report were modeled. Operating hours are 10 hr/day; 5 day/week and 50 week per year for most paints etc. Only, the AlphaSeal A&B and the Spray Foam are the only items that are not assumed that schedule. They are assumed to be only 3 hours/day, 2 day/week and 50 week/yr. Also, only one is used at a time. All other operations are assumed to be simultaneous. Gypsum dust is accumulated at a maximum of 150 pounds per day. All sawdust is calculated based on total number of cuts from each saw per day which totaled 8.74 lb/day.

The modeling emissions inventory and the emissions inventory presented in other parts of the permit application are consistent.

4.1 Criteria Pollutants

No criteria pollutants were modeled as all were BRC.

4.1.1 Modeled Emissions Rates for Cumulative Impact Analyses

All emission rates used in the modeling analysis is equivalent to those rates identified in Appendix C of the application. The Emission Inventory also includes a “Modeling Parameters” tab that demonstrates how the modeled emission rates were calculated from data provided within the inventory.

4.2 Toxic Air Pollutants

The emissions, calculated using fuel usage rates and AP-42 factors, are distributed across the 10 exhaust fans, heater exhaust stacks and/or generator stack. Factors were derived from sections 1.4 and 3.3 of AP-42 or appropriate SDS information.

Table 4 lists TAP emissions rates that were included in modeling analyses. Modeling was performed for each TAP having total project emissions exceeding the TAP-specific screening Emissions Level (EL).

TABLE 4 MODELED EMISSIONS RATES FOR TAP ANALYSES				
Source ID	**Source Description**	**TAP**	**Averaging Period**	**Emissions[a] (lb/hr)**
PL1_FAN1	Plant #1 Exhaust fan #1	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN2	Plant #1 Exhaust fan #2	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN3	Plant #1 Exhaust fan #3	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN4	Plant #1 Exhaust fan #4	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN5	Plant #1 Exhaust fan #5	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN6	Plant #1 Exhaust fan #6	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL1_FAN7	Plant #1 Exhaust fan #7	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01

TABLE 4 MODELED EMISSIONS RATES FOR TAP ANALYSES				
Source ID	**Source Description**	**TAP**	**Averaging Period**	**Emissions[a] (lb/hr)**
PL1_FAN8	Plant #1 Exhaust fan #8	Formaldehyde	24-hour/annual	8.20E-04
		Diisocyanate	24-hour/annual	1.24E-02
		Kaolin	24-hour/annual	3.61E-02
		Quartz	24-hour/annual	1.10E-03
		Tetrachroloethylene	24-hour/annual	1.80E-02
		Ethylene Glycol	24-hour/annual	1.94E-01
PL2_FAN1	Plant #2 Exhaust fan #1	Formaldehyde	24-hour/annual	6.56E-04
		Diisocyanate	24-hour/annual	9.88E-03
		Kaolin	24-hour/annual	2.89E-02
		Quartz	24-hour/annual	8.84E-04
		Tetrachroloethylene	24-hour/annual	1.44E-02
		Ethylene Glycol	24-hour/annual	1.55E-01
PL2_FAN2	Plant #2 Exhaust fan #2	Formaldehyde	24-hour/annual	6.56E-04
		Diisocyanate	24-hour/annual	9.88E-03
		Kaolin	24-hour/annual	2.89E-02
		Quartz	24-hour/annual	8.84E-04
		Tetrachroloethylene	24-hour/annual	1.44E-02
		Ethylene Glycol	24-hour/annual	1.55E-01
PL_HEAT1	Plant #1 Heater #1	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT2	Plant #1 Heater #2	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT3	Plant #1 Heater #3	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT4	Plant #1 Heater #4	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT5	Plant #1 Heater #5	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT6	Plant #1 Heater #6	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT7	Plant #1 Heater #7	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT8	Plant #1 Heater #8	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT9	Plant #1 Heater #9	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT10	Plant #1 Heater #10	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT11	Plant #1 Heater #11	Formaldehyde	24-hour/annual	7.35E-06
		Cadmium	24-hour/annual	1.08E-07
PL_HEAT12	Plant #1 Heater #12	Formaldehyde	24-hour/annual	7.35E-06
		Cadmium	24-hour/annual	1.08E-07
PL_HEAT13	Plant #1 Heater #13	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL_HEAT14	Plant #1 Heater #14	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07

TABLE 4 MODELED EMISSIONS RATES FOR TAP ANALYSES				
Source ID	**Source Description**	**TAP**	**Averaging Period**	**Emissions[a] (lb/hr)**
PL_HEAT15	Plant #1 Heater #15	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL_HEAT16	Plant #1 Heater #16	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL_HEAT17	Plant #1 Heater #17	Formaldehyde	24-hour/annual	1.10E-05
		Cadmium	24-hour/annual	1.62E-07
PL2_HEAT1	Plant #2 Heater #1	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT2	Plant #2 Heater #2	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT3	Plant #2 Heater #3	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT4	Plant #2 Heater #4	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT5	Plant #2 Heater #5	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT6	Plant #2 Heater #6	Formaldehyde	24-hour/annual	9.19E-06
		Cadmium	24-hour/annual	1.35E-07
PL2_HEAT7	Plant #2 Heater #7	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
PL2_HEAT8	Plant #2 Heater #8	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
PL2_HEAT9	Plant #2 Heater #9	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
PL2_HEAT10	Plant #2 Heater #10	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
PL2_HEAT11	Plant #2 Heater #11	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
PL2_HEAT12	Plant #2 Heater #12	Formaldehyde	24-hour/annual	4.78E-06
		Cadmium	24-hour/annual	7.01E-08
GEN1	Generator Set	Formaldehyde	24-hour/annual	1.70E-05

a. Pounds/hour emissions rate modeled is the project-specific increase in potential/allowable emissions increase for the averaging period specified for the TAP.

Emissions rates in Table 4 are identical to those in the model input file for TAP analyses.

4.3 Emissions Release Parameters

All emissions release parameters are based on manufacturer data, direct measurement made by the facility or is ambient exhaust temperatures. Table 5 lists stack parameters for all point sources.

Table 8 POINT SOURCE STACK PARAMETERS								
Release Point	Description	UTM[a] Coordinates		Stack Height (ft)	Stack Gas Flow Temp. (F)[c]	Stack Gas Flow (ft^3/m)[d]	Modeled Stack Diameter (in)	Orient. Of Release[e]
		Easting-X (m)[b]	Northing-Y (m)					
PL1_FAN1	Plant #1 Fan Exhaust #1	567796.00	4822811.52	31	0	138.3	32	Vertical
PL1_FAN2	Plant #1 Fan Exhaust #2	567792.39	4822821.32	31	0	138.3	32	Vertical
PL1_FAN3	Plant #1 Fan Exhaust #3	567779.87	4822807.59	31	0	138.3	32	Vertical
PL1_FAN4	Plant #1 Fan Exhaust #4	567762.73	4822818.88	31	0	138.3	32	Vertical
PL1_FAN5	Plant #1 Fan Exhaust #5	567754.17	4822807.09	31	0	138.3	32	Vertical
PL1_FAN6	Plant #1 Fan Exhaust #6	567737.98	4822809.96	31	0	138.3	32	Vertical
PL1_FAN7	Plant #1 Fan Exhaust #7	567715.21	4822794.87	31	0	138.3	32	Vertical
PL1_FAN8	Plant #1 Fan Exhaust #8	567718.91	4822783.13	31	0	138.3	32	Vertical
PL_HEAT1	Plant #1 Heater #1	567703.30	4822798.60	33.25	68.3	17.59	10	Vertical
PL_HEAT2	Plant #1 Heater #2	567779.15	4822856.57	33.25	68.3	17.59	10	Vertical
PL_HEAT3	Plant #1 Heater #3	567807.38	4822866.80	33.25	68.3	17.59	10	Vertical
PL_HEAT4	Plant #1 Heater #4	567809.88	4822856.59	33.25	68.3	17.59	10	Vertical
PL_HEAT5	Plant #1 Heater #5	567817.35	4822839.77	33.25	68.3	17.59	10	Vertical
PL_HEAT6	Plant #1 Heater #6	567815.66	4822838.97	33.25	68.3	17.59	10	Vertical
PL_HEAT7	Plant #1 Heater #7	567826.36	4822815.71	33.25	68.3	17.59	10	Vertical
PL_HEAT8	Plant #1 Heater #8	567824.91	4822813.99	33.25	68.3	17.59	10	Vertical
PL_HEAT9	Plant #1 Heater #9	567832.51	4822799.79	33.25	68.3	17.59	10	Vertical
PL_HEAT10	Plant #1 Heater #10	567829.18	4822800.13	33.25	68.3	17.59	10	Vertical
PL_HEAT11	Plant #1 Heater #11	567848.93	4822794.45	33.25	68.3	17.59	10	Vertical
PL_HEAT12	Plant #1 Heater #12	567835.35	4822785.63	33.25	68.3	17.59	10	Vertical
PL_HEAT13	Plant #1 Heater #13	567809.46	4822818.89	33.25	68.3	17.59	10	Vertical
PL_HEAT14	Plant #1 Heater #14	567767.13	4822777.25	33.25	68.3	17.59	10	Vertical
PL_HEAT15	Plant #1 Heater #15	567771.00	4822772.11	33.25	68.3	17.59	10	Vertical
PL_HEAT16	Plant #1 Heater #16	567774.26	4822763.68	33.25	68.3	17.59	10	Vertical
PL_HEAT17	Plant #1 Heater #17	567774.11	4822758.59	33.25	68.3	17.59	10	Vertical
PL2_FAN1	Plant #2 Fan Exhaust #1	567917.69	4822777.99	30	0	135.7	32	Vertical
PL2_FAN2	Plant #2 Fan Exhaust #2	567926.15	4822755.49	30	0	135.7	32	Vertical
PL2_HEAT1	Plant #2 Heater #1	567931.02	4822788.90	28	68.3	17.59	10	Horizontal
PL2_HEAT2	Plant #2 Heater #2	567922.11	4822785.46	28	68.3	17.59	10	Horizontal
PL2_HEAT3	Plant #2 Heater #3	567944.87	4822784.97	28	68.3	17.59	10	Horizontal
PL2_HEAT4	Plant #2 Heater #4	567950.04	4822771.12	28	68.3	17.59	10	Horizontal
PL2_HEAT5	Plant #2 Heater #5	567946.92	4822755.74	28	68.3	17.59	10	Horizontal
PL2_HEAT6	Plant #2 Heater #6	567937.63	4822752.68	28	68.3	17.59	10	Horizontal
PL2_HEAT7	Plant #2 Heater #7	567938.07	4822732.07	28	68.3	17.59	10	Vertical
PL2_HEAT8	Plant #2 Heater #8	567943.54	4822718.54	28	68.3	17.59	10	Vertical
PL2_HEAT9	Plant #2 Heater #9	567915.92	4822707.32	28	68.3	17.59	10	Vertical
PL2_HEAT10	Plant #2 Heater #10	567909.54	4822723.15	28	68.3	17.59	10	Vertical
PL2_HEAT11	Plant #2 Heater #11	567901.78	4822744.20	28	68.3	17.59	10	Vertical
PL2_HEAT12	Plant #2 Heater #12	567893.33	4822769.10	28	68.3	17.59	10	Vertical
GEN1	Generator Set	567766.14	4822750.00	6	1058	144	6	Vertical

a. Universal Transverse Mercator.
b. Meters.
c. Fahrenheit; zero is set for ambient which is in Kelvin.
d. Cubic feet per minute.
e. Vertical uninterrupted, rain-capped, or horizontal release.

__X___The specific methods used to determine/calculate given release parameters is described in this section.

__X__The release orientation of all point source stacks (horizontal, rain-capped, or uninterrupted vertical release) has been verified and is documented in this section.

5.0 Modeling Methodology

Table 6 summarizes the key modeling parameters used in the impact analyses.

Table 6 MODELING PARAMETERS		
Parameter	**Description/Values**	**Documentation/Addition Description**
General Facility Location	Boise, Idaho	The area is an attainment, maintenance or unclassified area for all criteria pollutants
Model	AERMOD	AERMOD with the PRIME downwash algorithm, version 15181
Meteorological Data	Boise surface data Boise upper air data	The meteorological model input files for this project were developed by IDEQ. See Section 5.2 of this memorandum for additional details of the meteorological data.
Terrain	Considered	3-dimensional receptor coordinates were obtained from USGS National Elevation Dataset (NED) files and were used to establish elevation of ground level receptors. AERMAP was used to determine each receptor elevation and hill height scale.
Building Downwash	Considered	Plume downwash was considered for the structures associated with the facility. BPIP-PRIME was used to evaluate building dimensions for consideration of downwash effects in AERMOD.
NOx Chemistry	NA	NOx modeling was not required for this project.
Receptor Grid	**Significant Impact Analyses**	
	Grid 1	10-meter spacing along the ambient air boundary
	Grid 2	10-meter spacing in a 680.2 meter (easting) by 573.6 meter (northing) grid centered on the facility
	Grid 3	25-meter spacing in a 700.1 meter (easting) by 631.6 meter (northing) grid centered on Grid 2
	Grid 4	50-meter spacing in a 900 meter (easting) by 900 meter (northing) grid centered on Grid 3
	Grid 5	100-meter spacing in a 1.5 kilometer (easting) by 1.5 kilometer (northing) grid centered on Grid 4
	Grid 6	250-meter spacing in a 3.5 kilometer (easting) by 2.8 kilometer (northing) grid centered on Grid 5
	Grid 7	500-meter spacing in a 5.0 kilometer (easting) by 5.0 kilometer (northing) grid centered on Grid 6
	NAAQS Analyses	
	List if different from grid used for Significant Impact Analyses	
	TAPs Analyses	
	List if different from grid used for Significant Impact Analyses	

5.1 Model Selection

AERMOD version 15181 was used for the modeling analyses to evaluate impacts of the Nashua Homes facility. This is the current version of the regulatory guideline model.

__X__The current versions of all models and associated programs were used in analyses, or alternate versions were specifically approved by DEQ.

__X__Any non-default model options used were approved by DEQ in advance.

5.2 Meteorological Data

Preprocessed AERMOD ready meteorological files were provided by Darrin Mehr of IDEQ. The data files cover the years 2008 through 2012 from the Boise Regional Airport. The data is hourly from the National Weather Service Automated Surface Observing System (ASOS). The data presented by IDEQ is model-ready, and was used without alteration or processing. These data originated from IDEQ, but has been included as part of this submittal.

__X__Meteorological data files are provided with the application.

5.3 Effects of Terrain

All source base and receptor elevations were calculated from USGS NED data obtained via the National Map Viewer website using the Bee-Line BEEST preprocessing system. A 1/3 arc second NED file was used in the analysis Input and output files from AERMAP will be included on the associated DVD.

__X__The datum of terrain data, building corner locations, emissions sources, and the ambient air boundary are specified and are consistent such that the modeled plot plan accurately represents the facility and surroundings.

5.4 Facility Layout

The image shown below identifies the general location of the Nashua Homes facility.

__X__The facility layout plot plan is provided in this section that clearly and accurately depicts buildings, emissions points, and the ambient air boundary.

5.5 Effects of Building Downwash

Building downwash effects were determined using the BPIP – Prime algorithm. There are several surrounding buildings and tanks that were incorporated into the analysis. These include: the main Nashua Home buildings, a storage shed, attached office segment, nearby OrePac and associated shed, and another three tiered building to the southeast of the property boundary.

5.6 Ambient Air Boundary

The ambient air boundary is defined by Federal Way, surrounding fence line and undeveloped section acquired by the Yanke family, owners of Nashua Homes. Appropriate signage has or will be placed to prohibit access to the undeveloped area.

__X__This section thoroughly describes how the facility can legally preclude public access (and practically preclude access) to areas excluded from ambient air in the modeling analyses.

5.7 Receptor Network

__X__This section of the Modeling Report provides justification that receptor spacing used in the air impact analyses was adequate to reasonably resolve the maximum modeled concentrations to the point that NAAQS or TAP compliance is assured.

The facility is located in a light industrial area in Boise, ID. The property covers approximately 10.82 acres. Consistent with IDEQ guidance, the ambient air boundary used in this analysis is the leased property boundary, which also serves as the public access boundary.

Receptor density will be set to a spacing of 10 meters along the ambient air boundary, 10 meters for the first 100 meters past the boundary, then receptors were set at a density of one per 25 meters out to 200 meters away from the ambient air boundary, 50 meters out to 400 meters from the ambient air boundary, 100 meters out to another 400 meters, 250 meter spacing for another 2 kilometers and 500 meters out to 5.0 kilometers past the ambient air boundary.

The receptor network ensures that the analysis meets or exceeds EPA receptor network requirements and captures the maximum impact from the facility. Therefore, no supplemental receptor network or expansion of the model domain is included.

5.8 Background Concentrations

Only TAPs were necessary to model. Therefore, no background values were applied.

__X__ Background concentrations have been thoroughly documented and justified for all criteria pollutants where a cumulative NAAQS impact analysis was performed.

5.9 NOx Chemistry

NO_x chemistry was not evaluated because NO2 compliance was not required for this project.

6.0 Results and Discussion

The air quality impact limits applicable to this analysis are the Idaho ambient impact limits for Toxic Air Pollutants. All TAPs that exceed the emission screening level are considered either daily non-carcinogenic or annual carcinogenic pollutants.

6.1 Criteria Pollutant Impact Results

All applicable criteria pollutants were determined to be BRC and were not evaluated against any standard.

6.1.1 Significant Impact Level Analyses

A significance analysis is not necessary for this project because facility-wide modeling has been completed for all applicable criteria pollutants.

6.1.2 Cumulative NAAQS Impact Analyses

A NAAQS analysis was not performed.

6.2 TAP Impact Analyses

Table 7 provides results for TAP impact analyses.

Table 12. RESULTS FOR TAP IMPACT ANALYSES			
TAP	**Averaging Period**	**Maximum Modeled Impact (µg/m^3)[a]**	**AAC or AACC (µg/m^3)**
Cadmium	Annual	4.0E-05	5.6E-04
Diisocyanate	24-hr	0.91	2.5
Ethylene Glycol	24-hr	79.4	6,350
Formaldehyde	Annual	6.26E-02	7.7E-02
Kaolin	24-hr	14.79	100
Quartz	24-hr	0.45	5
Tetrachloroethylene	Annual	1.33	2.1

a. Micrograms/cubic meter.

7.0 Quality Assurance/Control

All modeling has been reviewed and expected to be accurate and complete. The results of all ambient modeling suggest that all emissions are compliant with applicable AAC or AACC.

Appendix E SAFETY DATA SHEETS

Safety Data Sheet

Revision Number: 002.1 **Issue date:** 12/18/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **OSI Green Series SC-175 Draft and Acoustical Sound Sealant**
IDH number: 1496542
Product type: SealantJoint sealant, acrylate
Restriction of Use: None identified
Region: United States
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
WARNING:	ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE. CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
EYE IRRITATION	2A

PICTOGRAM(S)

Precautionary Statements

Prevention:
Wash thoroughly after handling. Wear eye and face protection.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: Not prescribed
Disposal: Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Ethylene glycol	107-21-1	1 - 5
Quartz (SiO2)	14808-60-7	0.1 - 1

Titanium dioxide	13463-67-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Rinse out mouth. Do not drink. Never give anything by mouth to an unconscious person. If adverse health effects develop seek medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Water may be unsuitable as an extinguishing media, but may be helpful in keeping adjacent containers cool.

Unusual fire or explosion hazards: This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a slight fire hazard.

Hazardous combustion products: Oxides of nitrogen. Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Ventilate area. Do not allow product to enter sewer or waterways.

Clean-up methods: Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Use only with adequate ventilation. Wash hands before breaks and immediately after handling the product. Keep out of the reach of children.

Storage: Keep from freezing.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Ethylene glycol	100 mg/m3 Ceiling Aerosol.	None	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None

Engineering controls: Use local exhaust ventilation.

Respiratory protection: No personal respiratory protective equipment normally required.

Eye/face protection: None required in normal use.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: pasty
Color: white
Odor: Acrylic
Odor threshold: Not available.
pH: 7.5
Vapor pressure: 15 mm hg (20 °C (68°F)) no method
Boiling point/range: > 100 °C (> 212°F)
Melting point/ range: Not available.
Specific gravity: 1.589
Vapor density: Heavier than air, (Air = 1)
Flash point: Not applicable
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: 0.6 (Butyl acetate = 1)
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available.
VOC content: < 1 %; 45 g/l (calculated)
Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Oxides of nitrogen. Oxides of carbon.

Incompatible materials: None expected.

Reactivity: Not available.

Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors from uncured sealant may cause respiratory tract irritation. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

Skin contact: Prolonged or repeated contact with uncured sealant may cause skin irritation.

Eye contact: Contact with uncured product may irritate the eyes.

Ingestion: Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Ethylene glycol	Oral LD50 (RAT) = 5.89 g/kg Dermal LD50 (RABBIT) = 9,530 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Ethylene glycol	No	No	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No
Titanium dioxide	No	Group 2B	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis

CERCLA/SARA Section 311/312: Delayed Health, Immediate Health

CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: Corrected information in Section(s): 2

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 12/18/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

2091

SPECIFICATION SHEET

META-TEC® 2091 TUFF-GRIP TRANSITIONAL PRESSURE SENSITIVE (TPS)™ ADHESIVE

For use with luxury vinyl tile & plank, solid vinyl sheet goods, rubber sheet goods & tile, and vinyl & rubber stair treads. Taylor 2091, with patented Meta-Tec® technology, is an advanced, cross-linking pressure sensitive adhesive featuring high aggressive peel and shear strength. This solvent-free, non-flammable, easy troweling product provides excellent installations for tile-over-tile applications, luxury vinyl tile and plank, solid vinyl tile & plank, vinyl composition tile, homogeneous vinyl sheet goods, and rubber tile & sheet goods over both porous and non-porous surfaces. Taylor 2091 has low odor, and is very quick and easy to use. It demonstrates excellent water and alkali resistance and may be used with confidence over a variety of flooring materials. Plasticizer migration resistance allows installation of a broad variety of vinyl floor products.

USE OVER: APA registered underlayment grade plywood; terrazzo; existing well adhered tile and sheet goods; radiant heated subfloors where surface temperatures do not exceed 85° F (29.40° C); and above, on, or below grade concrete in the absence of hydrostatic pressure, excessive moisture or alkalinity. The pH level of concrete must be between 5 and 9 (do not install if over 9) and moisture level of concrete must be below 8 lbs./1000 sq. ft./24 hours using an anhydrous calcium chloride test kit according to ASTM F-1869 test method. Relative Humidity readings according to ASTM F-2170 should not exceed (RH) 90%. If both tests are performed the RH test is the qualifying standard.

SUBSTRATE PREPARATION: Substrate must be sound, smooth, clean, level, dry, and free of dust, dirt, grease, oil, paint, incompatible curing compounds or sealers, fire retardant chemicals, release agents, or any other foreign substance that might interfere with a good bond. Subfloor must be smooth and fully adhered. Subfloor must be structurally sound and smooth. All cracks and depressions must be filled and leveled with a high quality latex fortified Portland cementitious underlayment according to the instruction of the underlayment manufacturer. Do not fill expansion joints or other moving joints.

INSTALLATION: The adhesive, floor covering, and area to receive flooring must be maintained at a temperature of 65° to 95° F (18.30° to 35.02° C) and at a relative humidity of 30% to 60% for 72 hours before, during, and after installation. Follow the flooring manufacturer's guidelines regarding site conditions and installation. **Porous Surfaces:** May be used either wet or as a pressure sensitive adhesive over porous surfaces. To use wet, apply adhesive with the recommended trowel and allow to flash off for 5-10 minutes before installing flooring. Lay tile, plank or sheet goods into wet adhesive according to flooring manufacturer's instructions. Adhesive must transfer to floor product to ensure proper bond. To use as a pressure sensitive adhesive, dry to a tacky state and then install flooring according to flooring manufacturer's instructions within 3 hours. **Non-Porous Surfaces–Tile & Plank***:* Apply with the recommended trowel, allow to dry completely from yellow to tan, and lay in the tile or plank according to the flooring manufacturers instructions within 3 hours. The highly aggressive pressure sensitive grip prevents slippage and minimizes seam gaps. Drying time is 45-90 minutes and will vary depending on temperature and humidity. Installation over areas of incomplete drying can result in job failure. **Non-Porous Surfaces–Sheet Goods:** Apply with the recommended trowel. When installing sheet goods over non-porous surfaces, Taylor 2091 must be allowed to set open for up to 30 minutes until dry-to-touch. (Dry-to-touch is tacky but no transfer to fingers). Time required will vary with ambient conditions. Adhesive must be open enough to dry on the surface but still allow 100% wet transfer to the back of the sheet goods to ensure proper adhesion and repositioning.

Type of Installation	Trowel Size* and Notch	Coverage
Over porous substrates (Vinyl Tile & Plank, Rubber Tile, Vinyl & Rubber Stair Treads)	1/16" x 1/16" x 1/16" Sq. 1.6mm x 1.6mm x 1.6mm Sq.	Up to 250 sq. ft./gal Up to 6.1 sq. meters/liter
Over porous substrates (Solid Vinyl Sheet Goods, Rubber Sheet Goods)	1/16" x 1/32" x 1/32" U 1.6mm x 0.8mm x 0.8mm U	Up to 350 sq. ft./gal Up to 8.6 sq. meters/liter
Over non-porous substrates (Vinyl Tile & Plank, Rubber Tile, Vinyl & Rubber Stair Treads)	1/16" x 1/32" x 1/32" U 1.6mm x 0.8mm x 0.8mm U	Up to 350 sq. ft./gal Up to 8.6 sq. meters/liter
Over non-porous substrates (Solid Vinyl Sheet Goods, Rubber Sheet Goods)	1/16" x 1/32" x 5/64" U 1.6mm x 0.8mm x 2mm U	Up to 400 sq. ft./gal Up to 8.9 sq. meters/liter

*Trowel dimensions are width x depth x spacing. Coverage is approximate and may vary depending on porosity of substrate and the angle at which the trowel is held. *IT IS THE INSTALLER'S RESPONSIBILITY TO APPLY THE PROPER AMOUNT OF ADHESIVE FOR THE JOB CONDITION.*

When installing homogenous sheet vinyl, it is recommended to trowel the adhesive, then back roll with a short-nap paint roller to minimize the possibility of trowel ridge telegraphing.

PHYSICAL PROPERTIES

Base:	Amide-Ester-Acrylate Resin Blend
Appearance:	Smooth, creamy, easy to trowel. Yellow when wet, tan when dry.
Working time:	Three hours depending on temperature and humidity.
Shelf life:	One year in unopened container at 70° F (21.10° C).
Other features:	Waterproof when cured, VOC compliant, non-flammable, freeze/thaw stable to 10° F (-12.22° C). Made with anti-microbial agents that will provide its dry film with protection from fungal growth. This protection is determined using the ASTM G21 test method.
Clean up:	Warm water when wet, Taylor Touchdown #9 Adhesive Remover/Stripper when dry.

CAUTION: DO NOT take internally. If swallowed, DO NOT induce vomiting. Call a physician immediately. KEEP OUT OF REACH OF CHILDREN.

WARRANTY INFORMATION: This product is manufactured according to exacting quality control standards and is warranted to be free from manufacturing defects. Defective material called to our attention within one year of manufacture will be replaced. No guarantee, expressed or implied, is made regarding the performance of this product since the manner and conditions of application are beyond our control. For complete warranty information, call Technical Services at 800-868-4583; visit us on the web at www.wftaylor.com; or e-mail us at info@wftaylor.com.

W.F. TAYLOR CO., INC. * FONTANA, CA 800.397.4583 * DALTON, GA 800.868.4583

TAYLOR 2091
MATERIAL SAFETY DATA SHEET

SECTION I *IDENTIFICATION*

Manufacturer's Name: W.F. Taylor Co., Inc.
Address/Phone: 11545 Pacific Ave.
Fontana, CA 92337
951.360.6677
Emergency Phone No.: 800.535.5053
Product Class: Amide-Ester-Acrylate Resin Blend
Manufacturer's Code Identification: 2091
Trade Name: 2091 Tuff Grip Transitional Pressure Sensitive (TPS)™ Adhesive
Date Revised: 12-21-10

SECTION II *HAZARDOUS INGREDIENTS*

None per OSHA Regulation: 29 CFR 1910.1200
SARA Title III Section 313 Chemicals: None

NFPA	HMIS
	H = 1
	F = 0
	R = 0

SECTION III *PHYSICAL DATA*

Boiling Point: No Data
LBS/GAL: 8.3 – 8.6
Evaporation Rate/Vapor Density: Low
Vapor Pressure: Low
Percent Volatile: 32 – 34 (by weight)
Color: Yellow
Odor: Mild

SECTION IV *FIRE AND EXPLOSION HAZARD DATA*

DOT Category: Not regulated
Flash Point: N/A
LEL: N/A
Extinguishing Media: Water spray, dry chemical, CO_2 foam
Unusual Fire and Explosion Hazards: None Known
Special Fire Fighting Procedures: Use self-contained breathing apparatus and turn out gear.

SECTION V *HEALTH HAZARD DATA*

Symptoms of Over Exposure:
Eyes: May cause mild irritation
Skin/ Inhalation/ Ingestion: May cause slight irritation

First Aid Procedures:
Eyes: Flush with water
Skin: Wash with soap and water
Inhalation: Remove to fresh air if needed

SECTION VI *REACTIVITY DATA*

Stability: Stable
Conditions to avoid: Protect from freezing, excessive heat
Hazardous decomposition products: None known
Hazardous polymerization: Will not occur
Incompatibility/Materials to avoid: Metal salts may coagulate the product

SECTION VII *SPILL OR LEAK PROCEDURES*

Steps to Be Taken if Material is Spilled: Collect large amount of material into container for disposal. Use absorbent materials to collect and contain any remaining residue.

Waste Disposal: Abide by all Federal, State, and local regulations.

SECTION VIII *SPECIAL PROTECTION INFORMATION*

Ventilation: Local exhaust
Respiratory protection: NIOSH respirator if needed
Clothing: Chemical resistant gloves, apron, coveralls, and boots as necessary to prevent contact
Eye Protection: Chemical goggles or face shield
Other clothing and equipment: If clothing becomes contaminated, remove and clean before rewearing

SECTION IX *SPECIAL PRECAUTIONS*

Precaution for Handling and Storing: Do not puncture, protect from freezing and excessive heat.

KEEP OUT OF REACH OF CHILDREN

WF Taylor co. inc.

www.wftaylor.com

TAYLOR

Safety Data Sheet

T&A TA9640 Architects Choice Cove Base Adhesive

Revision date: September 16, 2015

Version: 2

1. **Identification**

T&A TA9640 Architects Choice Cove Base Adhesive

Recommended use of the chemical and restriction on use: interior installation of flooring material over approved subfloors – rubber and vinyl cove base

Details of the supplier of the safety data sheet

Company:
W.F.Taylor LLC
11545 Pacific Avenue
Fontana, CA 92337, USA

Telephone number: (951) 360-6677

Emergency Telephone Number: 1-800-535-5053

Other Means of Identification
Chemical Family: Acrylic latex blend

---

2. **Hazards identification**

According to regulation 2012 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

Classification of the Product:

No need for classification according to GHS criteria for this product.

Label Elements
This product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified
None known if used according to instructions. Irritation may occur when in contact with eyes and skin.

Emergency Overview

Caution:
May cause skin irritation if not removed after skin contact.
Use with Use with local exhaust ventilation.
Use protective equipment for eyes, skin protection.

---

3. Composition / Information on Ingredients

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

This product does not contain any components classified as hazardous under the referenced regulation.

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

CAS number	Content	Chemical Name
Trade Secret	35-55	Acrylic latex
7732-18-5	20-30	Water
14808-60-7	20-25	Silica
1332-58-7	15-30	Kaolin clay

---

4. First Aid Measures

Description of First Aid measures

General Advice:

Upon contact, remove material from skin, eyes, and clothing. If irritation persists, seek medical attention.

If inhaled:
Remove individual to fresh air if needed.

If on Skin:

Wash with mild soap and water.

If in eyes:

Open eyelids and flush with running water for at least 15 minutes.

If Swallowed:

Do not induce vomiting. Seek medical help immediately.

Most Important symptoms and effects, both acute and delayed

Not expected due to non- classification of the product.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Symptomatic treatment

---

5. Fire-Fighting Measures

Extinguishing Media
None needed in wet state. Product is water based.
Dry material will burn. Use Water spray, foam, dry powder when needed.
Special hazards arising from the substance or mixture
Material is a mixture of organic compounds. Compounds of carbon may arise during burning.
Advice for fire-fighters
Wear self-contained breathing apparatus and turn out gear.
Further Information:
Dispose debris and contaminated clothing in accordance with regulations.

---

6. Accidental release measures

Further accidental release measures:
Slip hazard when spilled.

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Avoid contact with skin and eyes.
Environmental Precautions
Do not release spilled material into natural waters.
Methods and material for containment and cleaning up
Remove material using absorbents. Scrape off excess and place in closed DOT approved containers for disposal.

7. Handling and Storage

Precautions for Safe Handling
Do not puncture. Keep out of the reach of children.
Conditions for safe storage, including any incompatibilities
Keep from freezing. Avoid extreme temperatures.

---

8. Exposure Control/ Personal Protection

Advice on system design: Maintain proper ventilation.

Personal protective equipment:

Respiratory protection: NIOSH respirator if needed. Use local exhaust ventilation. Do not use closed air-circulating system.

Skin protection: chemical resistant gloves, apron, coveralls, and boots to prevent unnecessary contact.

Eye protection: safety glasses, goggles, or face shield

General safety and hygiene safety measures:

Wash hands and face after use. Launder contaminated clothing before re-use. Always use protective equipment to avoid direct contact.

---

9. Physical and Chemical Properties

Form: high viscosity mastic
Odor: mild
Odor threshold: no data

Color: off white to cream
pH value: 8.0 – 9.0
Melting point: not applicable
Boiling point: similar to water
Flash point: not applicable
Flammability: none flammable
Lower Explosion Limit: low
Upper Explosion Limit: low
Vapor Pressure: low
Density: 10.9-11.5 lbs. per gallon
Relative density: 1.31 – 1.38 grams / cm3
Vapor density: low
Partition Coefficient n-octanol /water (log Pow): no data
Self- ignition temperature: not applicable
Viscosity, dynamic: 1,375,000 – 1,625,000 cps
Solubility in water: limited
Miscibility in water: miscible
Evaporation rate: same as water
Other information:

---

10. Stability and Reactivity

Reactivity: Stable
Chemical stability: Stable
Possibility of hazardous reactions: None, product is stable.
Conditions to avoid: Extreme temperatures.
Incompatible materials: None known
Hazardous decomposition products: None known.

---

11. Toxicological Information

No data available
Primary routes of exposure: respiratory, eyes, skin. Ingestion is not likely but might cause gastric disturbances.

Acute Toxicity / Effects

Acute toxicity: May cause irritation upon contact.

Chronic Toxicity Effects

Repeated dose toxicity: no data available
Genetic toxicity: no data available
Carcinogenicity: not carcinogenic
Reproductive toxicity: no data available
Teratogenicity: no data available
Experiences in humans

Other Information

---

12. Ecological Information
No data available

---

13. Disposal Considerations
Abide by all State, federal and local regulations

---

14. Transport Information
Proper Shipping name: Not applicable
Proper Hazard Class: Not hazardous
Hazard Code: None hazardous
Bill of Lading Description: **Adhesives, NOI**

---

15. Regulatory Information:

Federal Regulations

Registration status:

TSCA: Chemicals contained in the product are either listed or exempt in the U.S. EPA TSCA inventory list.

SARA Title III, Section 312 Hazard Class: None

EPA SARA Title III Section 313: None

State regulations:

CA Prop 65:

Warning: This product may contain a chemical (s) known to the state of California to cause cancer and birth defects or other reproductive harm.

NFPA Hazard Codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

HMIS rating:

Health: 1 Flammability: 0 Physical hazard: 0

---

16. Other Information

SDS prepared by: Darwin C. Regis

SDS prepared on: September 16, 2015

W.F. Taylor LLC believes the data set forth herein are accurate as of the date hereof. Taylor makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.

SAFETY DATA SHEET

A6T254

Section 1. Identification

Product name : A-100® Exterior Acrylic Latex Flat Ultradeep Base

Product code : A6T254

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 1A

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 21.3%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Cristobalite	1.1	14464-46-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Cristobalite	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / 2 x (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Respirable TWA: 30 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Total dust

Section 8. Exposure controls/personal protection

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Section 9. Physical and chemical properties

Vapor density : 1 [Air = 1]

Relative density : 1.18

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Aerosol product

Heat of combustion : 0.000001303 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Cristobalite	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Section 14. Transport information

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

1. Identification

Product number	1000002422
Product identifier	**12 OZ INTERTAPE AC50 SPRAY ADHSV LT 12PK**
Company information	INTERTAPE POLYMER 2000 SOUTH BELTLINE BLVD COLUMBIA, SC 29201 United States
Company phone	General Assistance 941-739-7580
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	01
Recommended use	ADHESIVE
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement Extremely flammable aerosol. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Specific treatment (see this label). Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	51.91% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 43.62% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	20 - 40
Propane		74-98-6	20 - 40
Dimethyl Ether		115-10-6	10 - 20
n-Hexane		110-54-3	10 - 20
2-Methylpentane		107-83-5	2.5 - 10
3-Methylpentane		96-14-0	1 - 2.5
Other components below reportable levels			20 - 40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes. Prolonged exposure may cause chronic effects. May cause drowsiness or dizziness.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water. Dry powder. Carbon dioxide (CO_2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Ground and bond containers when transferring material. Do not re-use empty containers. Do not breathe gas. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Use only in well-ventilated areas. Use personal protective equipment as required. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Level 3 Aerosol.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Dimethyl Ether (CAS 115-10-6)	STEL	2 ppm
	TWA	0.75 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Dimethyl Ether (CAS 115-10-6)	Ceiling	0.3 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
n-Hexane (CAS 110-54-3)	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
Dimethyl Ether (CAS 115-10-6)	Ceiling	0.1 ppm
	TWA	0.016 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3 50 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Dimethyl Ether (CAS 115-10-6)	TWA	1880 mg/m3 1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye/face protection. Wear safety glasses with side shields (or goggles).

Hand protection Wear protective gloves.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Aerosol.

Color Not available.

Odor Not available.

Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	-156.0 °F (-104.4 °C) PROPELLANT estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Heat of combustion	35.57 kJ/g estimated
Heat of combustion (NFPA 30B)	35.57 kJ/g estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	May be fatal if swallowed and enters airways. Prolonged inhalation may be harmful. Narcotic effects. May cause damage to organs by inhalation.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritant effects.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours

Components	Species	Test Results
	Rabbit	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours
		50.1 mg/l
Oral		
LD50	Rat	5800 mg/kg
		2.2 ml/kg
Dimethyl Ether (CAS 115-10-6)		
Acute		
Inhalation		
NOEL	Rat	2 ppm, 6 Hours
Oral		
LD50	Rat	460 mg/kg
n-Hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 4 Hours
		> 5 ml/kg, 4 Hours
Inhalation		
LC50	Rat	> 5000 ppm, 24 Hours
		> 31.86 mg/l
		73860 ppm, 4 Hours
Oral		
LD50	Rat	24 ml/kg
		24 g/kg
	Wistar rat	49 g/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Suspected of damaging fertility.

Specific target organ toxicity - single exposure	Narcotic effects.
Specific target organ toxicity - repeated exposure	Respiratory system. Skin. Central nervous system. Eyes. Peripheral nervous system. May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Dimethyl Ether (CAS 115-10-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	4.3 - 7.8 mg/l, 48 hours
Fish	LC50	Striped bass (Morone saxatilis)	10.302 - 16.743 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-Methylpentane	3.74
3-Methylpentane	3.6
Acetone	-0.24
Dimethyl Ether	0.1
n-Hexane	3.9
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste U List: Reference

Acetone (CAS 67-64-1)	U002

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	Yes
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Packaging Exceptions	LTD QTY
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

DOT

IATA; IMDG

Marine pollutant

General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	Listed.
n-Hexane (CAS 110-54-3)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Vinyl Acetate	108-05-4	5000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
n-Hexane	110-54-3	10 - 20
Vinyl Acetate	108-05-4	0.01 - 0.1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

n-Hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Dimethyl Ether (CAS 115-10-6)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

US state regulations

US. Massachusetts RTK - Substance List

2-Methylpentane (CAS 107-83-5)
3-Methylpentane (CAS 96-14-0)
Acetone (CAS 67-64-1)
Dimethyl Ether (CAS 115-10-6)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-Methylpentane (CAS 107-83-5)
Acetone (CAS 67-64-1)
Dimethyl Ether (CAS 115-10-6)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Methylpentane (CAS 107-83-5)
3-Methylpentane (CAS 96-14-0)
Acetone (CAS 67-64-1)
Dimethyl Ether (CAS 115-10-6)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Dimethyl Ether (CAS 115-10-6)
n-Hexane (CAS 110-54-3)
Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 11-20-2014

Version # 01

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

1 Identification

· **Product identifier**

· **Trade name: 5200A**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Alpha Systems, LLC
5120 Beck Drive
ELKHART, IN 46516
USA

· **Information department:** Product safety department
· **Emergency telephone number:**
CHEMTREC Emergency: (800) 424-9300
During normal opening times:+1 (574) 295-5206

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351	Suspected of causing cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
diphenylmethanediisocyanate,isomeres and homologues
4,4'-methylenediphenyl diisocyanate
o-(p-isocyanatobenzyl)phenyl isocyanate
· **Hazard statements**
Harmful if inhaled.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 1)

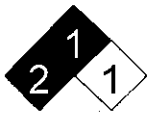
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 1
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

*Health = *2*
Fire = 1
Reactivity = 1

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 2)

· **vPvB:** *Not applicable.*

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**		
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	60.0%
101-68-8	4,4'-methylenediphenyl diisocyanate	45.0%
5873-54-1	o-(p-isocyanatobenzyl)phenyl isocyanate	5.0%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
Acute: Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the repiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, non specific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL mayn lead to bronchitis, bronchial spasm and pulmonary edema (fluid in the lungs). Chemical or hyper sensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Causes skin irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash. Cured material is difficult to remove. Contact with MDI can cause discoloration.

Causes eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract. Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Delayed colon symptoms affecting the respiratory tract can also occur several hours after overexposure.

NOTES TO PHYSICIANS: Eyes: stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 3)

edema imparing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermititis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Administer oxygen or artifical respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyante.

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Use fire fighting measures that suit the environment.
Dry chemical, Carbon dioxide (CO2), foam, water spray for large fires.

Unsuitable extinguishing media: high volume water jet.

· **Special hazards arising from the substance or mixture**
Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO2 formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Larg fires can be extinquished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

· **Advice for firefighters**
Fire Fighting Procedure: Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire isocyanate vapors and orther irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Hazardous decomposition products: By fire and heat: carbon dioxide, CO2, carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, isocyanate, isocyanic acid, other undetermined compounds.

· **Protective equipment:** *Mouth respiratory protective device.*

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Implement site emergency response plan. Evacuate non-emergency personnel. The magnitude of the evacuation depends upon the quantity released, site conditions, and the ambient temperature. Isolate the area and prevent access of unauthorized personnel. Notify management. call CHEMTREC at 1-800-424-9300 for assistance and advice.

Wear necessary personal protective equipment (PPE) as specified in the SDS or the site emergency response plan. Ventilate and remove ignition sources. Control the source of the leak. Contain the released material by damming, diking, retaining, or diverting into an appropriate containment area. Absorb or pump off as much of the spilled material as possible. When using absorbent, completely cover the spill area with suitable absorbent material (e.g., vermiculite, kitty litter, Oil-Dri, etc...).

· **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 4)

· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Allow for the absorbent material to absorb the spilled liquid. shovel the absorbent material into an approved metal container (i.e., 55-gallon salvage drum). Do not fill the container more than 2/3 full to allow for expansion, and do not tighten the lid on the container. Repeat application of absorbent material until all liquid has been removed from the surface.

Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container. Check for residual surface contamination using Swype test kits, available from Colorimetric Laboratories, Inc. (CLI) at 847-803-3737. If the Swype test pad demonstrates that isocyanate remains on the surface (red color on pad), repeat applications of neutralization solution, with scrubbing, followed by absorbent until the surface is decontaminated (no color change on Swype pad). Apply lid loosely to metal waste container (do not tighten the lid because carbon dioxide gas and heat can be generated from the neutralization process). With the lid still loosely in place, move the container to an isolated, well-ventilated area to allow release of carbon dioxide. After 72 hours, seal the container, and properly dispose of the waste material and any contaminated equipment (i.e.,. broom or brush) in accordance with existing federal, state and local regulations.

Additional Spill Procedures/Neutralization: Products or product mixtures that have been shown to be effective neutralization solutions for decontaminating surfaces, tools, or equipment that have been in contact with an isocyanate includes:

Spartan Chemical Company: 1-800-537-8990:
Spartan ShineLine Emulsifier Plus
Spartan SC-200 Heavy Duty Cleaner
Colorimetric Laboratories, Inc. (CLI): 1-847-803-3737
Isocyanate Decontamination Solution
A mixture of 80% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10).
Mix equal amounts of the following:
Mineral spirits (80%), VM&P Naphtha (15%), and household detergent (5%), and
A 50-50 mixture of monoethanolamine and water.
In a seperate container, blend the two solutions in a 1:1 ratio by volume. Immediately prior to applying this blended neutralization solution onto the contaminated surface area, mix or agitate the container to help ensure uniform mixing of the ingredients.

If the above products are not available, the following products can be obtained through retail outlets:

ZEP Commercial Heavy-Duty Floor Stripper
Greased Lightning Super Strength Cleaner and Degreaser
EASY OFF Grill and Oven Cleaner or EASY OFF Fume Free Oven Cleaner
A mixture of 50% Simple Green Pro HD Heavy-Duty Cleaner and 50% household ammonia.
A mixture of 90% Fantastic Heavy Duty All Prupose Cleaner and 10% household ammonia.

Note: Always wear proper PPE when cleaning up an isocyanate spill and using a neutralization solution. It may take two or more applications of the neutralization soljution to decontaminate the surface. Check for residual surface contamination using a surface wipe method such as CLI Swype pad.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 5)

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
Substances to avoid: water, amines, strong bases, alcohols, copper alloys
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL	Ceiling limit value: 0.2 mg/m³, 0.02 ppm
REL	Long-term value: 0.05 mg/m³, 0.005 ppm Ceiling limit value: 0.2* mg/m³, 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m³, 0.005 ppm

· **Additional information:**
The lists that were valid during the creation were used as basis.
Medical Surveillance: All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted. Refer to the Bayer pamphlet (Medical Surveillance Program for Isocyanate Workers) for additional guidance.

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 6)

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Airborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If an APR is selected then (a) the cartridge must be equipped with and end-of-service life indicator (ESLI) certified by NIOSH, or (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Industrial Hygiene/Ventilation Measures: Local exhaust should be used to maintain levels below the TLV whenever MDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program. NIOSH, OSHA, Bayer, and others have developed sampling and analytical methods. Bayer methods can be made available, upon request.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Gloves should be worn. Nitrile rubber showed excellent resistance. Butyl rubber, neoprene and PVC are also effective.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 7)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Brown
· **Odor:**	musty
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	208 °C (406 °F)
· **Flash point:**	198 °C (388 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	400 °C (752 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	0.4 Vol %
Upper:	Not determined.
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	1.234 g/cm³ (10.298 lbs/gal)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100.0 %

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 8)

· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** Avoid water, amines, strong bases, alcohols, copper alloys.
· **Hazardous decomposition products:**
By Fire and Heat: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, isocyanate, isocyanic acid, other undetermined compounds.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
Likely routes of exposure: Skin contact, Inhalation, Eye contact

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	3
101-68-8	4,4'-methylenediphenyl diisocyanate	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 *Reviewed on 05/19/2015*

Trade name: 5200A

(Contd. of page 9)

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** *No further relevant information available.*
· **Persistence and degradability** *Biodegradation: 0%, Exposure time: 28 days, i.e. not degradable.*
· **Behavior in environmental systems:**
· **Bioaccumulative potential**
Oncorhynchus mykiss (rainbow trout), Exposure time: 112 days,< BCF. Does not bioaccumulate.
· **Mobility in soil** *No further relevant information available.*
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*
· **Other adverse effects** *No further relevant information available.*

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Waste Disposal Method: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

· **Uncleaned packagings:**
· **Recommendation:**
Empty Container Precautions: empty containers retain product residue, observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.
· **Recommended cleansing agent:** *See SDS Section 6.*

14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	*UN3082*
· **ADN**	*not regulated*
· **UN proper shipping name**	*Other regulated substances, liquid, n.o.s. (contains 4,4'-diphenylmethane Diisocyanate (MDI))* *Hazard class or Division: 9* *UN/NA Number: NA3082* *Packaging Group: III*

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 10)

·	Hazard Label(s): Class 9 RSPA/DOT Regulated Components: 4,4'- Diphenylmethane Diisocyanate (MDI) Reportable Quantity: 5040 Kg (11,111 lb) Sea Transport (IMDG): Non-regulated Air Transport (ICAO/IATA): Non-regulated Additional Transportation Information: When in individual containers of less than the Product RQ, this material ships as non-regulated. MARPOL./IBC PRODUCT NAME: Diphenylmethane Diisocyanate POLLUTION CATEGORY: Y SHIP TYPE: 2 FLASH POINT: 390°F
· **DOT**	Environmentally hazardous substances, liquid, n.o.s.
· **ADN**	not regulated
· **IMDG, IATA**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	9 Miscellaneous dangerous substances and articles
· **ADN/R Class:**	not regulated
· **Packing group**	
· **DOT**	III
· **IMDG, IATA**	not regulated
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **EMS Number:**	F-A,S-F
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	UN3082, Environmentally hazardous substances, liquid, n.o.s.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
U.S. EPA CERCLA Hazardous Substances (40 CFR 302) Components:
4,4'- Diphenylmethane Diisocyanate (MDI) Reportable Quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories:

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 11)

Acute Health Hazard
Chronic Health Hazard

U.S. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

This product contains a trace (ppm) amount of phenyl isocyanate (CAS 103-71-9) and monochlorobenzene (CAS 108-90-7) as impurities.

Massachusetts, New Jersey or Pennsylvania Right-To-Know Substance Lists:

Weight %	Components	CAS
50-60	Polymeric Diphenylmethane Diisocyanate	9016-87-9
35-45	4,4'-Diphenylmethane Diisocyanate	101-68-8
1-5	2,4'- Diphenylmethane Diisocyanate	5873-54-1

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Weight %	Components	CAS
50-60	Polymeric Diphenylmethane Diisocyanate	9016-87-9
35-45	4,4'- Diphenylmethane Diisocyanate	101-68-8

California Prop. 65
To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No.S7-40-10;Date 2012-08-22).

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**	
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

(Contd. on page 13)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 12)

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
diphenylmethanediisocyanate, isomeres and homologues
4,4'-methylenediphenyl diisocyanate
o-(p-isocyanatobenzyl)phenyl isocyanate

· **Hazard statements**
Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.

(Contd. on page 14)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/11/2015 Reviewed on 05/19/2015

Trade name: 5200A

(Contd. of page 13)

Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *LABORATORY*
· **Contact:** *SAFETY DATA SHEET DEPARTMENT*
· **Date of preparation / last revision** *08/11/2015 / -*
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

1 Identification

· **Product identifier**

· **Trade name: 5200B**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Alpha Systems, LLC
5120 Beck Drive
ELKHART, IN 46516
USA

· **Information department:** Product safety department
· **Emergency telephone number:**
CHEMTREC Emergency: (800) 424-9300
During normal opening times:+1 (574) 295-5206

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
Catalyst
· **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wear eye protection / face protection.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 1)

Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	1
REACTIVITY	0

Health = 1
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**		
98-94-2	cyclohexyldimethylamine	2.0%
	Catalyst	1.1%

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
· **After skin contact:** *Generally the product does not irritate the skin.*
· **After eye contact:** *Rinse opened eye for several minutes under running water.*
· **After swallowing:** *If symptoms persist consult doctor.*
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 2)

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
· **Breathing equipment:** Not required.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 3)

· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	10.5
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	351 °C (664 °F)
· **Flash point:**	255 °C (491 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	> 450 °C (> 842 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	1 hPa (1 mm Hg)
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 4)

· **Solubility in / Miscibility with Water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
Water:	1.0 %
– **Solids content:**	34.8 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
98-94-2 cyclohexyldimethylamine		
Oral	LD50	348 mg/kg (rat)
Inhalative	LC50/4 h	1.88 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 5)

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number** · **DOT, ADN, IMDG, IATA**	not regulated
· **UN proper shipping name** · **DOT, ADN, IMDG, IATA**	not regulated
· **Transport hazard class(es)** · **DOT, ADN, IMDG, IATA** · **Class**	not regulated
· **Packing group** · **DOT, IMDG, IATA**	not regulated
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 6)

· **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	not regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

107-21-1	ethanediol

· **TSCA (Toxic Substances Control Act):**

8001-79-4	Castor oil
25265-71-8	oxydipropanol
98-94-2	cyclohexyldimethylamine
107-21-1	ethanediol
7732-18-5	water, distilled, conductivity or of similar purity

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

107-21-1	ethanediol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 7)

· ***Hazard pictograms***

GHS07 GHS08

· ***Signal word*** *Warning*

· ***Hazard-determining components of labeling:***
Catalyst

· ***Hazard statements***
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

· ***Precautionary statements***
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Department issuing SDS:*** *LABORATORY*
· ***Contact:*** *SAFETY DATA SHEET DEPARTMENT*
· ***Date of preparation / last revision*** *09/10/2015 / -*
· ***Abbreviations and acronyms:***
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/10/2015 Reviewed on 06/25/2015

Trade name: 5200B

(Contd. of page 8)

HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

5120 Beck Drive
Elkhart, IN 46516
Phone (574) 295-5206
Fax (574) 970-2703

Material Safety Data Sheet

SECTION 1: PRODUCT INFORMATION

PRODUCT NAME: Pemco 5983
MANUFACTURER: Alpha Systems
5120 Beck Drive
Elkhart, IN 46516

EMERGENCY TELEPHONE NO.: 800-424-9300
OTHER INFORMATION CALLS: 574-295-5206
DATE REVISED: 03/10/10

SECTION 2: HAZARDOUS INGREDIENTS/ IDENTITY

Hazardous Component(s) (Chemical & Common Name(s))	OSHA PEL	ACGIH TLV	Other Exposure Limits	%	CAS NO.
Dipropylene Glycol Methyl Ether		100ppm		>50	34590-94-8
1-Methyl-2-Pyrrolidone		100ppm		<50	26872-50-4

SECTION 3: PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: >360 F
SPECIFIC GRAVITY: 0.98
VAPOR DENSITY (Butyl Ether=1): <0.5 mm Hg

SOLUBILITY: Water Reducible
EVAPORATION RATE (Butyl Acetate=1): 0.04
VOC CONTENT: 8.17lb/gal (980.4g/l)

REACTIVITY IN WATER: N/A
MELTING POINT: N/A
APPEARANCE AND ODOR: White liquid with slight odor.
FREEZING POINT: <-15 F
% VOLATILE: 100

HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: B

SECTION 4: FIRE & EXPLOSION DATA

FLASH POINT: >170 F
FLAMMABLE LIMITS(%)
LFL LOWER: N/A
UFL UPPER: N/A
EXTINGUISHING MEDIA: Alcohol foam, carbon dioxide, dry chemical, water
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and full protective gear.
FIRE AND EXPLOSION HAZARD: Moderate fire hazard when exposed to heat or flame

PEMCO 5983

5120 Beck Drive
Elkhart, IN 46516
Phone (574) 295-5206
Fax (574) 970-2703

SECTION 5: PHYSICAL HAZARDS (REACTIVITY DATA)

STABILITY: Stable.
CONDITIONS TO AVOID: Avoid strong oxidizing and reducing agents
HAZARDOUS DECOMPOSITION or BYPRODUCTS: Carbon dioxide and noxious fumes emitted when heated to decomposition.
HAZARDOUS POLYMERIZATION: Will Not Occur
PRODUCT: Pemco 5983

SECTION 6: HEALTH HAZARDS

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Sensitive skin can be irritated. Severe eye irritant, no permanent damage.
CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:
NATIONAL TOXICOLOGY PROGRAM: No
I.A.R.C. MONOGRAPHS: No
OSHA: No
EMERGENCY AND FIRST AID PROCEDURES: As with signs of symptoms of exposure
ROUTES OF ENTRY:

1. INHALATION: Remove to fresh air. Administer artificial respiration if breathing has stopped. Call doctor
2. EYES: Flush with water, lifting lids occasionally. Get medical attention
3. SKIN: Thoroughly wash exposed area with soap and water. Remove contaminated clothing
4. INGESTION: Induce vomiting by giving 2 glasses of water and sticking finger down throat, call a doctor. Never give anything by mouth to an unconscious person.

SECTION 7: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATRIAL IS RELEASED OR SPILL:
SEE SECTION 8 FOR PROTECTION MEASURES TO TAKE BEFORE COMING INTO CONTACT WITH THIS PRODUCT.

Avoid breathing of vapors. Floor may be slippery; use care to avoid falling. Contain spill with materials such as sand, sweeping material, or diatomaceous earth. Soak up spill with absorbent material (saw dust, floor absorbent). Place material in suitable covered container for recovery or disposal in a licensed facility. Keep spills and cleaning runoffs out of municipal sewers, septic systems and open bodies of water.

WASTE DISPOSAL METHODS:

Dispose of waste materials including the solids and contaminated diking material in compliance with all applicable federal, state, and local environmental regulations.

5120 Beck Drive
Elkhart, IN 46516
Phone (574) 295-5206
Fax (574) 970-2703

SECTION 8: SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION:
Not required if good ventilation is maintained. Wear respirator suitable for concentrations and types of air contaminates encountered.

VENTILATION:
Provide sufficient ventilation to remove vapors.

EYE PROTECTION:
Use safety goggles.

HAND PROTECTION:
Rubber protective gloves are recommended.

WORK/HYGIENIC PRACTICS:
Keep containers closed when not in use. Wash hands after using product.

Safety Data Sheet
2172-9-66
8/15/14

Section 1 - Product and Company Identification

Material Name	-	**Black Jack All Weather Roof Cement**
Chemical Category	-	Mixture
Product Code	-	2172-9-66
Product Description	-	Black paste.
Product Use	-	Repair cracks, seams and holes in roofing materials.
Synonyms	-	Roof and Flashing cement
Manufacturer	-	Gardner-Gibson 4161 E. 7th Avenue Tampa, FL 33605 United States
Telephone		
Technical	-	813-248-2101 - Customer Service: 8 AM - 5 PM M-F Eastern Standard Time
Emergency	-	800-424-9300 - CHEMTREC
Emergency	-	703-527-3887 - CHEMTREC (Outside US)
Last Revision Date	-	08/15/14

Section 2 - Hazards Identification

GHS HAZARDS AND PRECAUTIONS

SIGNAL WORD: WARNING!

Flammable liquid (paste)and vapor. Contains Combustible Petroleum Distillates. Harmful or Fatal if swallowed. Keep away from heat, sparks, and open flame. Avoid prolonged breathing of vapor and use only in adequate ventilation. Repeated and prolonged overexposure to solvent vapor may cause brain and nervous system damage, respiratory tract irritation, dizziness, or loss of consciousness. May cause skin and eye irritation.

Prevention	Avoid breathing dust, fume, gas, mist, vapors and/or spray. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces. - No smoking. Use personal protective equipment as required. Keep out of reach of children.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
Storage/Disposal	Store in a closed container. Store in a well-ventilated place. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Physical Form	-	Liquid / Paste
Color	-	Black
Odor	-	Petroleum solvent odor.
Flash Point	-	105°F(41°C)
OSHA HCS2012	-	Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A

WHMIS - Class B - Flammable and Combustible Materials - Division 3, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision A

-

GHS - Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A

Route Of Entry - Inhalation, Skin, Eye, Ingestion/Oral

Potential Health Effects

Inhalation

Acute (Immediate) - May cause irritation. Excessive breathing of high vapor concentration can cause possible unconsciousness and even asphyxiation.

Chronic (Delayed) - Refer to other information found in Section 11-Toxicology.

Skin

Acute (Immediate) - May cause irritation.

Chronic (Delayed) - Repeated and prolonged exposure to the skin may cause dermatitis.

Eye

Acute (Immediate) - May cause irritation.

Chronic (Delayed) - Repeated and prolonged exposure may cause irritation.

Ingestion

Acute (Immediate) - May be harmful or fatal if swallowed.

Chronic (Delayed) - Repeated and prolonged exposure may be harmful.

Carcinogenic Effects - This product or one of its ingredients present at 0.1% or more is listed as a carcinogen by NTP, IARC or OSHA. See Section 11 - Toxicological Information for more details.

Carcinogenic Effects			
	CAS	**IARC**	**NTP**
Asphalt	8052-42-4	Group 2B-Possible Carcinogen	Under Consideration

Section 3 - Composition/Information on Ingredients

Hazardous Components						
Chemical Name	**CAS**	**%(wt)**	**UN;EINECS**	**LD50/LC50**	**Classifications According to Regulation/Directive**	
Asphalt	8052-42-4	40% TO 50%	NA1999, 232-490-9	Ingestion/Oral-Rat LD50 · >5000 mg/kgInhalation-Rat LC50 · >94.4 mg/m³	**WHMIS:** Other Toxic Effects - D2A **UN GHS:** Carc. 2; Eye Irrit. 2A; Skin Irrit. 2 **EU DSD/DPD:**	
Mineral spirits	8052-41-3	8% TO 20%	232-489-3		**EU DSD/DPD:** Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65	
Cellulose	9004-34-6	2% TO 6%	232-674-9	Ingestion/Oral-Rat LD50 · >5 g/kgInhalation-Rat LC50 · >5800 mg/m³ 4 Hour(s)Skin-Rabbit LD50 · >2 g/kg	**WHMIS:** Other Toxic Effects - D2B **UN GHS:** Eye Irrit. 2A; Skin Irrit. 2 **EU DSD/DPD:**	
Bentonite	1302-78-9	10% TO 25%	215-108-5	NDA	**WHMIS:** Other Toxic Effects - D2A **UN GHS:** STOT RE 2	
1,2,4-Trimethylbenzene	95-63-6	< 1%	202-436-9	Ingestion/Oral-Rat LD50 · 5 g/kgInhalation-Rat LC50 · 18000 mg/m³ 4 Hour(s)	**UN GHS:** Acute Tox. 4 (Inhalation); Aquatic Chronic 2; Flam. Liq. 3; Eye Irrit. 2A; Skin Irrit. 2; STOT RE 2; STOT SE 2 **EU DSD/DPD:** R10Xn; R20Xi; R36/37/38N; R51 R53	
Benzene, 1,3,5-trimethyl	108-67-8	< 1%	UN2325, 203-604-4		**EU DSD/DPD:** R10 Xi; R37 N; R51 R53	

Hazardous Components						
Chemical Name	**CAS**	**%(wt)**	**UN;EINECS**	**LD50/LC50**	**Classifications According to Regulation/Directive**	
Surfactant	30113-45-2	< 0.5%	250-056-7		NDA	

This product is an encapsulated mixture which reduces the likelihood of exposure to hazardous particulates. Airborne exposures to hazardous dusts or mists may be generated by spraying, sanding or grinding.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

Inhalation - IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. Move victim to fresh air. If breathing is difficult, give oxygen.

Skin - IF ON SKIN: Wash with plenty of soap and water. If irritation develops and persists, get medical attention.

Eye - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion - If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

Extinguishing Media - LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO_2, water spray or regular foam.

Unsuitable Extinguishing Media - Do not use direct stream of water.

Firefighting Procedures - Fight advanced or massive fires from safe distance or protected location. Avoid water in a straight hose stream as the stream will cause splatter and spread fire. If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and are ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.

Unusual Fire and Explosion Hazards - Combustible liquid. May release irritating or toxic gases, fumes, or vapors.

Hazardous Combustion Products - Carbon monoxide, carbon dioxide, hydrocarbons.

Protection of Firefighters - Firefighters should wear self-contained breathing apparatus and full protective gear.

Flash Point - 105°F(41°C) CC (Closed Cup)

Explosion Limits

Upper - 6 %

Lower - 0.9 %

Autoignition Temperature - 450 °F(232°C)

Section 6 - Accidental Release Measures

Personal Precautions - Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind and Ventilate the area before entry.

Emergency Procedures - ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can without risk. Isolate the area and contain the spilled material. Persons not wearing the appropriate PPE should be removed from the area until the spill is cleaned up. Keep unauthorized personnel away.

Environmental Precautions - Prevent entry into waterways, sewers, basements or confined areas.

Containment/Clean-up Measures	-	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not use water to flush spill area. Use appropriate Personal Protective Equipment (PPE).
Prohibited Materials	-	Avoid contact with strong oxidizing agents.

Section 7 - Handling and Storage

Handling	-	KEEP OUT OF THE REACH OF CHILDREN! Keep away from heat and ignition sources – No Smoking. Use only with adequate ventilation.
Storage	-	Store in a well-ventilated place. Keep container tightly closed. Keep container/package tightly closed in a cool, well-ventilated place. No open flames, no sparks and no smoking.
Special Packaging Materials	-	No data available
Incompatible Materials or Ignition Sources	-	Avoid contact with strong oxidizing agents and acids.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment Pictograms	-	
Respiratory	-	In case of insufficient ventilation, wear suitable respiratory equipment. If listed exposure limits are expected to be exceeded, use approved respirtory protection suitable for the hazard.
Eye/Face	-	Wear ANSI approved safety glasses with side shields or safety goggles.
Hands	-	Wear chemical protective gloves made of Nitrile or Neoprene.
Skin/Body	-	Wear clothing that covers the skin to prevent skin exposure.
General Industrial Hygiene Considerations	-	Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Avoid breathing vapors.
Engineering Measures/Controls	-	Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use precaution to protect building intake from fumes and vapors created outdoors.

Exposure Limits/Guidelines					
	Result	**ACGIH**	**Canada Ontario**	**OSHA**	**United States - California**
Cellulose (9004-34-6)	TWAs	10 mg/m3 TWA	10 mg/m3 TWAEV (paper fibre, total dust)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction)
mineral spirits (8052-41-3)	TWAs	100 ppm TWA	525 mg/m3 TWAEV	500 ppm TWA; 2900 mg/m3 TWA	100 ppm PEL; 525 mg/m3 PEL
Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (as benzene soluble aerosol, fume, inhalable fraction)	0.5 mg/m3 TWAEV (fume, inhalable, as benzene-soluble aerosol)	Not established	5 mg/m3 PEL (fume)

Exposure Control Notations

ACGIH

- Asphalt (8052-42-4):Carcinogens:A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)

Key to abbreviations

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

Physical Form - Liquid (Paste)
Appearance/Description - Thick Black paste. Semi-liquid

Color: Black		**Odor**: Petroleum solvent odor.	
Taste: NDA		**Odor Threshold**: NDA	
Boiling Point:	300 to 400 F(148.8889 to 204.4444 C)	**Vapor Pressure:**	= 2 mmHg (torr) @ 68 F(20 C)
Melting Point:	NDA	**Vapor Density:**	= 1 Air=1
Specific Gravity/Relative Density:	= 1.046 Water=1	**Evaporation Rate:**	NDA
Density:	= 8.71 lbs/gal	**VOC (Wt.):**	= 1.66 lbs/gal
Bulk Density:	NDA	**VOC (Vol.):**	< 200 g/L
pH:	NDA	**Volatiles (Wt.):**	NDA
Water Solubility:	NDA	**Volatiles (Vol.):**	= 60 %
Solvent Solubility:	Yes	**Flash Point:**	105 F(40.5556 C)
Viscosity:	NDA	**Flash Point Test Type:**	CC (Closed Cup)
Coefficient of Water:	NDA	**Autoignition:**	450 F(232.2222 C)

Section 10 - Stability and Reactivity

Stability - Stable under normal temperatures and pressures.
Hazardous Polymerization - Hazardous polymerization will not occur.
Conditions to Avoid - Avoid contact with strong oxidizing agents and flame.
Incompatible Materials - Strong oxidizers and acids.
Hazardous Decomposition Products - Carbon monoxide, carbon dioxide and hydrocarbons.

Section 11 - Toxicological Information

Component Name	Concentration	CAS	Data
Asphalt	40% TO 50%	8052-42-4	Acute Toxicity: ; orl-rat LD50:>5000 mg/kg; ihl-rat LC50:>94.4 mg/m3 Tumorigen/Carcinogen: ; skn-mus TD :69 gm/kg/43W-I; skn-mus TDLo:905 gm/kg/2Y-I
Cellulose	2% TO 6%	9004-34-6	Acute Toxicity: ; orl-rat LD50:>5 gm/kg; ihl-rat LC50:>5800 mg/m3/4H; skn-rbt LD50:>2 gm/kg
Bentonite	10% TO 25%	1302-78-9	Acute Toxicity: ; orl-mus TDLo:14 gm/kg/7D-I
1,2,4-Trimethylbenzene	< 1%	95-63-6	Acute Toxicity: ; orl-rat LD50:5 gm/kg; ihl-rat LC50:18000 mg/m3/4H

Other Component Information - IARC has concluded that the following chemicals in this product are carcinogenic to humans (Group 1): silica, quartz. ACGIH has designated the following chemicals in this product as suspected human carcinogens (A2): silica, quartz. NTP has listed the following chemicals in this product as known human carcinogens: silica, quartz. Risk of cancer depends on duration and level of exposure to this product as a dust or aerosol mist.

Other Information - This product contains petroleum asphalt. Petroleum asphalt is not listed as a carcinogen by OSHA or NTP. The National Institute of Occupational Safety and Health (NIOSH), has concluded that at higher temperatures roofing asphalt fumes are a potential occupational carcinogen. If this product is heated or comes in contact with heated material, avoid breathing fumes. This product may contain small amounts of polycyclic aromatic hydrocarbons (PAH's) which are recognized carcinogens in humans and experimental animals. Mouse skin painting studies of roofing asphalt vapor concentrate have shown evidence of tumor formation associated with localized skin irritation in recent studies. Inhalation studies of high airborne concentrations of asphalt/bitumen fumes in rats and mice produced bronchitis, pneumonitis, and lung changes such as fibrosis and cell damage.

Section 12 - Ecological Information

Ecological Fate - No data available.
Persistence/Degradability - No data available.
Bioaccumulation Potential - No data available.
Mobility in Soil - No data available.

Section 13 - Disposal Considerations

Product - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transportation Information

DOT – Department of Transportation - Not Regulated when shipped in containers <119 gallons.

TDG Transportation Other Information▪: Not Restricted under General Exemption for small container packaging.
TDG - **Canada Transportation of Dangerous Goods:** Tars, Liquids; UN1999; Hazard Class: 3; Packing Group: III 1.33 Class 3, Flammable Liquids

IMO/IMDG –International Maritime Transport ▪ IMDG Code 2.3.2.5 - exempted from marking, labeling & testing of packages.

IATA - International Air Transport Association - TARS, LIQUID; UN1999; Hazard Class: 3; Packing Group: III.

Section 15 - Regulatory Information

SARA Hazard Classifications - Acute, Chronic
Risk & Safety Phrases - California PROP 65: Asphalt and Asphalt Fumes may contain detectable amounts of chemicals known to the State of California to cause cancer or reproductive harm. .

State Right To Know					
Component	CAS	MA	MN	NJ	PA
Asphalt	8052-42-4	Yes	Yes	Yes	Yes
mineral spirits	8052-41-3	Yes	Yes	Yes	Yes
Cellulose	9004-34-6	Yes	Yes	Yes	Yes
Bentonite	1302-78-9	No	No	No	No
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes	Yes	Yes
Benzene, 1,3,5-trimethyl	108-67-8	Yes	No	No	No
Surfactant	30113-45-2	No	No	No	No

Inventory			
Component	CAS	EU EINECS	TSCA
Asphalt	8052-42-4	Yes	Yes
mineral spirits	8052-41-3	Yes	Yes
Cellulose	9004-34-6	Yes	Yes
Bentonite	1302-78-9	Yes	Yes
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes

Inventory			
Component	**CAS**	**EU EINECS**	**TSCA**
Benzene, 1,3,5-trimethyl	108-67-8	Yes	Yes
Surfactant	30113-45-2	Yes	Yes

Canada

Canada - WHMIS - Classifications of Substances

▪ Cellulose	9004-34-6	2% TO 6%	Uncontrolled product according to WHMIS classification criteria (including microcrystalline and paper fibers)
▪ Asphalt	8052-42-4	40% TO 50%	Not Listed
▪ 1,2,4-Trimethylbenzene	95-63-6	< 1%	B3
▪ Bentonite	1302-78-9	10% TO 25%	D2A
▪ Water	7732-18-5	35% TO 45%	Uncontrolled product according to WHMIS classification criteria
▪ mineral spirits	8052-41-3	8% TO 15%	B3, D2B
▪ Benzene, 1,3,5-trimethyl	108-67-8	< 1%	B3
▪ Surfactant	30113-45-2	< 0.5%	Not Listed

United States

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

▪ Cellulose	9004-34-6	2% TO 6%	Not Listed
▪ Asphalt	8052-42-4	40% TO 50%	Not Listed
▪ 1,2,4-Trimethylbenzene	95-63-6	< 1%	1.0 % de minimis concentration
▪ Bentonite	1302-78-9	10% TO 25%	Not Listed
▪ mineral spirits	8052-41-3	8% TO 25%	Not Listed
▪ Benzene, 1,3,5-trimethyl	108-67-8	< 1%	Not Listed
▪ Surfactant	30113-45-2	< 0.5%	Not Listed

Section 16 - Other Information

Last Revision Date - 08/15/14

Prepared By - Gardner-Gibson

Disclaimer/Statement of Liability - This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to verify the suitability and completeness of such information for particular use. Gardner-Gibson does not accept liability for any loss or damage that may occur from the use of this information.

NFPA

Carefree Floor Finish

Version Number: 1

Preparation date: 2014-06-25

1. IDENTIFICATION

Product name: Carefree Floor Finish
Product Code: 3029503, 5104731, 5383021
SDS #: MS0800407
Recommended use:
- Floor care
- Floor finish for professional use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-1964
Phone: 1-888-352-2249
MSDS Internet Address: www.diversey.com

Canadian Headquarters
Diversey, Inc. - Canada
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product

This product is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and current Canadian Controlled Products Regulations (CPR).

Precautionary Statements

May be mildly irritating to eyes and skin. In case of contact, immediately flush with plenty of water. If irritation occurs and persists, get medical attention.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

Percentage of unknown Acute Toxicity 13.8

Classification for the diluted product @ RTU

This product is intended to be used neat.

Precautionary Statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Diethylene glycol monoethyl ether	111-90-0	3% - < 5%

Ethylene glycol 2-ethylhexyl ether	1559-35-9	1% - < 3%
Potassium hydroxide	1310-58-3	> 0.1% - < 1%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: In case of contact, immediately flush with plenty of water. If irritation occurs and persists, get medical attention.
Skin: In case of contact, immediately flush with plenty of water. If irritation occurs and persists, get medical attention.
Inhalation: No specific first aid measures are required.
Ingestion: Rinse mouth with water.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.
Aggravated Medical Conditions: None known.

Diluted Product:

This product is intended to be used neat.

Eyes: See undiluted product information above.
Skin: See undiluted product information above.
Inhalation: See undiluted product information above.
Ingestion: See undiluted product information above.

5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Not applicable.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special measures required.
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.
Aerosol Level (if applicable) : Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: .

Ingredient(s)	CAS #	ACGIH	OSHA
Diethylene glycol monoethyl ether	111-90-0	-	-
Ethylene glycol 2-ethylhexyl ether	1559-35-9	-	-
Potassium hydroxide	1310-58-3	2 mg/m^3 (Ceiling)	-

Undiluted Product:

Engineering measures to reduce exposure:
No special ventilation requirements General room ventilation is adequate

Personal Protective Equipment
Eye protection: No special requirements under normal use conditions.

Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

Diluted Product:

This product is intended to be used neat.

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/range: Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 8.58 lbs/gal 1.029 Kg/L
Bulk density: No information available
Flash point: > 200 °F > 93.3 °C
Dilution Flash Point: > 200 °F > 93.3 °C
Elemental Phosphorus: 0.06 % by wt.
pH: 8.8
Dilution pH: 8.8 @ RTU
Metal Corrosion Not determined
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Opaque, Off-White
Odor: Ammonia
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Dispersible
Relative Density (relative to water): 1.029
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Viscosity: No information available
VOC: 0.06 % *
VOC % by wt. at use dilution 0.06 % *
Flammability (Solid or Gas): Not applicable

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	None known.
Conditions to avoid:	No information available.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Eye contact, Skin contact, Inhalation

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: May be mildly irritating to skin. Symptoms may include redness and/or transient discomfort.
Eye contact: May be mildly irritating to eyes. Symptoms may include redness, watering and/or transient discomfort.
Ingestion: No information available.
Inhalation: No information available.
Sensitization: No known effects.

Numerical measures of toxicity

ATE - Oral (mg/kg):	>5000
Percentage of unknown Acute Toxicity	13.8

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.
Contaminated Packaging: Do not re-use empty containers.
RCRA Hazard Class (undiluted product): Not Regulated

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, only available through Internet Explorer, http://naextranet.diversey.com/dot/, for up to date shipping information.

DOT (Ground) Bill of Lading Description: BUFFING OR POLISHING COMPOUNDS

IMDG (Ocean) Bill of Lading Description: BUFFING OR POLISHING COMPOUNDS

15. REGULATORY INFORMATION

International Inventories at CAS# Level
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL).

U.S. Regulations

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Ammonium salt of modified acrylic copolymers	Proprietary	-	-	-	-
Diethylene glycol monoethyl ether	111-90-0	-	X	-	-
Modified acrylic polymer	TS*	-	-	-	-
Ethylene glycol 2-ethylhexyl ether	1559-35-9	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Diethylene glycol monoethyl ether	111-90-0	3% - < 5%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Diethylene glycol monoethyl ether	X		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: -
Reactivity: -
Sudden Release of Pressure: -

Canada
WHMIS hazard class: Non-controlled.

16. OTHER INFORMATION

NFPA

Health 1
Flammability 0
Instability 0

Version Number: 1
Preparation date: 2014-06-25

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	• This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations • Does not contain an added fragrance

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT	**COLORFLEX II CF9000 and all colors**	DATE	January 2008
MANUFACTURER	Kampel Enterprises, Inc.		
ADDRESS	8930 Carlisle Road, Box 157		
CITY, STATE	Wellsville, PA		
ZIP	17365-0157	EMERGENCY TELEPHONE	1-800-457-4280
PROPER SHIPPING NAME	Caulk	DOT HAZARD CLASS Non-hazardous	CAS NO. Mixture

NFPA / HMIS INFORMATION

HEALTH	1	FLAMMABILITY	1
REACTIVITY	0	PROTECTION	0

SECTION II - HAZARDOUS INGREDIENTS

CAS NO.	HAZARDOUS INGREDIENT	PERCENT (Vol)	OSHA PERMISSIBLE EXPOSURE LLIMIT (PEL) TO,E WEIGHTED AVERAGE (TWA)	ACGIH THRESHOLD LIMIT VALUE (TLV) TIME EIGHTED AVERAGE	ACGIH THRESHOLD LIMIT VALUE, SHORT TERM EXPOSURE LIMIT (STEL)
25265-77-4	Texanol (trade name)	< 2	Not Established	Not Established	Not Established

VOC Content: 34 grams per liter 1.87 by weight

This product does not contain ingredients listed by IARC, NTP, or OSHA as carcinogens or potential carcinogens.

SECTION III - PHYSICAL DATA

APPEARANCE , ODOR	Paste-like Caulk with Slight Ammonia Odor.				
SPECIFIC GRAVITY @ 60º F	1.05 (water=1)	VAPOR PRESSURE	17 mm Hg @ 20º C	FREEZING POINT	32 ° F
PERCENT VOLATILE (VOC) BY WT	40.7 %	VAPOR DENSITY	1: Water Vapor	EVAPORATION RATE	Less than Ether
SOLUBILITY IN WATER	Partial	BOILING RANGE @760 mmHg	Approx. 212° F	MELTING POINT	N / A

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT	N / A		
FLAMMABLE LIMITS	LEL: N/A UEL: N/A	AUTO IGNITION	N/A
MEANS OF EXTINCTION	Water, Foam, Co_2 , or Dry Chemical	HAZARDOUS PRODUCTS OF DECOMPOSITION	Thermal decomposition in the presence of air may yield Carbon monoxide and/or carbon dioxide. Small quantities of Nitrogen Oxides may also be formed.
SPECIAL FIRE IGHTING PROCEDURES	The use of self-contained breathing apparatus is recommended for firefighters. Cool exposed containers with water.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	Product will not burn but may splatter if temperature exceeds boiling point. Acrylic latex polymer films are capable of burning.		

SECTION V - HEALTH HAZARD AND FIRST AID DATA

- NATURE OF HAZARDS DUE TO EXPOSURE -

PERMISSIBLE EXPOSURE LIMIT	Refer to Section Two	THRESHOLD LIMIT VALUE	Refer to Section Two

EFFECTS OF ACUTE OVEREXPOSURE	Product contains , 2% 2,2, 4-Trimethylpentaneodiol-1,3-monoisobutyrate by weight. For acute caulk exposure treatment, see Emergency First Aid Procedures below.
EFFECTS OF CHRONIC OVEREXPOSURE	Refer to Section Two for 2,2,4-Trimethylpentanediol-1, 3-monoisobutyrate. Reports have associated repeated or prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

- EMERGENCY AND FIRST AID PROCEDURES -

EYE CONTACT	Immediately flush with large quantities of water for at least 15 minutes. Seek immediate medical attention.
SKIN CONTACT	If this product comes in contact with the skin, wash with soap and water. Remove and wash contaminated clothing with soap and water before reuse. It is easier to remove caulk from clothing and skin before it dries. Obtain medical attention of irritation from contact persists.
INHALATION	If breathing difficulties, dizziness or light-headedness occur, remove individual to fresh air. If breathing stops, begin artificial respiration and seek immediate medical attention. Keep person warm and quiet.
INGESTION	If victim is conscious, administer two glasses of water. Keep victim warm and quiet. Get medical attention immediately.
PRIMARY ROUTE IF ENTRY	(Refer to Section Two), Inhalation, Ingestion
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	(Refer to Section Two), Skin & Inhalation-People with pre-existing skin and respiratory disorders (like asthma) may be more aggravated by the effects of this material.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY	This product is stable in most conditions. Use this product only as recommended by manufacturer.		
INCOMPATIBLE WITH OTHER SUBSTANCES (Y/N)	Yes	INCOMPATIBLE WITH WHICH PRODUCTS?	Avoid contact with strong oxidizing agents.
HAZARDOUS POLYMERIZATION	Will not occur		

SECTION VII - HANDLING PRECAUTIONS / SPILL OR LEAK PROCEDURES

CONDITIONS TO AVOID	Avoid eye contact. Minimize skin contact, breathing of vapors and ingestion. Keep out of the reach of children. Do not take internally.
-SPILL PROCEDURES-	
SMALL SPILL OR LEAK	Provide adequate ventilation. Transfer material to containers for recovery or disposal with a shovel. Keep material out of sewers and open bodies of water. Dispose of product in accordance with applicable local, county, state and federal regulations.
LARGE SPILL	Isolate from oxidizers. Contact approved Haz Mat remedial agency for disposal.
-STORAGE AND DISPOSAL PROCEDURES-	
TRANSFER METHOD	Ground containers to prevent static spark. Prevent vapor accumulation; close containers, ventilate area.
WAREHOUSING	Store in plastic or lined containers, tightly sealed. Keep containers cool, dry and away from sources of ignition. Keep from freezing. Keep product containers closed when not in use.
DISPOSAL	Observe Federal, State, and Local regulations. Recycle spent wash water in approved equipment. Contact RCRA approved Hazardous Waste Recycling/Disposal Facility.
OTHER PRECAUTIONS	Due to the presence of an acrylic polymer in this product, residual acrylic monomer may be present in concentration of less than 0.1%. Avoid inhalation of vapors, monomer vapors can be evolved during use, particularly when product is heated. Provide sufficient ventilation. *Note: The acrylic monomers noted above are not listed by IARC, NTP, or OSHA as carcinogens or potential carcinogens.

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

GLOVES	Rubber	RESPIRATOR	OSHA approved	EYEWEAR	Chemical googles and/or safety glasses.
FOOTWEAR	Impervious boots	CLOTHING	Rubber apron	FACILITY	Local Exhaust
RESPIRATORY PROTECTION	If uncertain of vapor concentration use a National Institute of Occupational Safety and Health approved respirator.				
LOCAL EXHAUST	May be needed if used indoors in areas with poor general ventilation.	SPECIAL	N/A	MECHANICAL	General mechanical ventilation is recommended when product is used indoors.
OTHER	Mechanical ventilation / respiratory protection is typically not needed when product is used outdoors.				

SECTION IX - ENVIRONMENTAL PROTECTION

-APPLICABLE LAWS AND GOVERNMENT AGENCIES-

TRANSPORTATION REQUIREMENTS	49 CFR, Parts 100 through 177	EMPLOYEE PROTECTION REQUIREMENTS	29 CFR, Parts 1900 through 1926 (OSHA Hazard Communication Standard)
WORKER & COMMUNITY RIGHT TO KNOW, AND EMERGENCY PLANNING	SARA (Superfund Amendments and Reauthorization Act) Title III	EMERGENCY RELEASE REQUIREMENTS	EPA 40 CFR, Part 117-372 ; CERCLA (Federal Superfund), National Response Center, SARA Sections 304 and 313
FEDERAL CLEAN AIR REQUIREMENTS	EPA, Clean Air Act and Amendments of 1990	STATE CLEAN AIR REQUIREMENTS	PA Air Pollution Control Act, or equivalent
FEDERAL HAZARDOUS CHEMICAL REPORTING REQUIREMENTS	CERCLA (Comprehensive Environmental Resource & Conservation Liability Act) for substances above reportable threshold.	STATE HAZARDOUS CHEMICAL REPORTING REQUIREMENTS & EMERGENCY PLANNING	SARA Section 312 Reporting of facility's chemical inventory to State Emergency Response Commission and Local Emergency Planning Committee or equivalent.

The above information is offered in good faith for usage under typical conditions. Recommendations should be reviewed to determine the applicability of this information in the context of intended usage.

Printed in USA
form #wp2008ColorflexIIMSDS.1/08

SAFETY DATA SHEET #2303
REVISION #2
DATE REVISED: 05/02/2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name(s): (CELITE® = C) C350, C507

Generic Name: CALCINED DIATOMACEOUS EARTH
Chemical Name: SILICA
Manufacturer: Imerys
Address: 1732 North First Street, Suite 450
City: San Jose **State:** CA **Zip:** 95112

CAS: 91053-39-3
EINECS: 293-303-4
Formula: SiO_2
Telephone: (805) 737-1239
Emergency: CHEMTREC – USA: (800) 424-9300
International: +01 (703) 527-3887 (collect)

2. HAZARD IDENTIFICATION

SIGNAL WORD: DANGER
HAZARD PHRASE H372: CAUSES DAMAGE TO LUNGS THROUGH PROLONGED OR REPEATED EXPSOSURE BY INHALATION.
PRECAUTIONARY PHRASE P260: DO NOT BREATHE DUST.
PRECAUTIONARY PHRASE P285: IN CASE OF INADEQUATE VENTILATION, WEAR RESPIRATORY PROTECTION.
PRECAUTIONARY PHRASE P501: DISPOSE OF CONTENTS IN ACCORDANCE WITH LOCAL REGULATIONS.

THIS PRODUCT CONTAINS CRYSTALLINE SILICA (CS) WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED INHALATION OF CS AS A CARCINOGEN FOR HUMANS (GROUP 1). CS IS LISTED BY NTP AS A KNOWN HUMAN CARCINOGEN. INHALATION OF CS IS ALSO A KNOWN CAUSE OF SILICOSIS, A NON-CANCEROUS LUNG DISEASE.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME:	CAS NUMBER:	%	PEL AND TLV (except as noted)
CALCINED DIATOMACEOUS EARTH (DE)	91053-39-3	100	
THIS PRODUCT MAY CONTAIN UP TO 38% CRYSTALLINE SILICA:			
CRISTOBALITE	14464-46-1	< 35	.025mg/M_3 RESPIRABLE CRISTOBALITE, ACGIH
QUARTZ	14808-60-7	< 3	.025mg/M_3 RESPIRABLE QUARTZ, ACGIH

4. FIRST AID MEASURES

Inhalation: REMOVE TO FRESH AIR. DRINK WATER TO CLEAR THROAT AND BLOW NOSE TO EVACUATE DUST.
Eyes: FLUSH EYES WITH LARGE QUANTITIES OF WATER. IF IRRITATION PERSISTS, CONSULT A PHYSICIAN.
Skin Contact: NA **Skin Absorption:** NA **Ingestion:** NA

5. FIRE FIGHTING MEASURES

Flash Point (Method): NONFLAMMABLE
Flammable Limits: LEL: NA UEL: NA
NFPA Flammable/Combustible Liquid Classification: NA
Auto-Ignition Temperature: NA
Extinguishing Media: NA **Unusual Fire or Explosion Hazards:** NONE **Special Fire-Fighting Procedure:** NONE

6. ACCIDENTAL RELEASE MEASURES

Procedure for Spill/ Leak: VACUUM CLEAN DUST WITH EQUIPMENT FITTED WITH HEPA FILTER. USE A DUST SUPPRESSANT SUCH AS WATER IF SWEEPING IS NECESSARY.

7. HANDLING AND STORAGE

MINIMIZE DUST GENERATION AND ACCUMULATION. AVOID BREATHING DUST. AVOID CONTACT WITH EYES. SEAL BROKEN BAGS IMMEDIATELY. CONTINUE TO FOLLOW ALL MSDS/ LABEL WARNING WHEN HANDLING EMPTY CONTAINERS.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Goggles: GOGGLES OR SAFETY GLASSES WITH SIDESHIELDS ARE RECOMMENDED.
Gloves: NOT NORMALLY REQUIRED.
Respirator: <10X PEL, USE AN N95 QUARTER OR HALF MASK RESPIRATOR; <50X PEL, USE A FULL FACE RESPIRATOR EQUIPPED WITH N95 FILTERS; <200X PEL, USE A POWERED AIR PURIFYING RESPIRATOR (POSITIVE PRESSURE) WITH N95 FILTERS; >200X PEL, USE A FULL FACE, TYPE C SUPPLIED AIR RESPIRATOR (CONTINUOUS FLOW MODE).
Ventilation: USE SUFFICIENT NATURAL OR MECHANICAL VENTILATION TO KEEP DUST LEVEL BELOW PEL.
Other: Special Considerations for Repair/Maintenance of Contaminated Equipment: INSURE PROPER RESPIRATORY PROTECTION.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: FINE PINK POWDER, NO ODOR.

Boiling Point:	NA	**Evaporation Rate (=1):**	NA	**Specific Gravity (water = 1):**	2.3
Vapor Pressure:	NA	**Melting Point:**	ND	**% Volatile by Volume:**	NIL
Water Solubility (%):	NEGLIGIBLE	**Vapor Density (Air=1):**	NA	**pH:**	6.0-8.0

10. STABILITY AND REACTIVITY

MATERIAL IS STABLE. HAZARDOUS POLYMERIZATION CANNOT OCCUR
Chemical Incompatibilities: HYDROFLUORIC ACID **Conditions to Avoid:** NONE IN DESIGNED USE.

11. TOXICOLOGY INFORMATION

Summary: THIS PRODUCT CONTAINS CRYSTALLINE SILICA (CS), WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED CS AS CARCINOGENIC FOR HUMANS (GROUP 1). CS IS LISTED BY NTP AS A KNOWN HUMAN CARCINOGEN. CS IS ALSO A KNOWN CAUSE OF SILICOSIS, A NONCANCEROUS LUNG DISEASE.

12. ECOLOGICAL INFORMATION

GENERALLY CONSIDERED CHEMICALLY INERT IN THE ENVIRONMENT. USED MATERIAL WHICH HAS BECOME CONTAMINATED MAY HAVE SIGNIFICANTLY DIFFERENT CHARACTERISTICS BASED ON THE CONTAMINANT AND SHOULD BE EVALUATED ACCORDINGLY

13. DISPOSAL CONSIDERATIONS

WASTE IS NOT HAZARDOUS AS DEFINED BY RCRA (40 CFR 261). OTHER STATE AND LOCAL REGULATIONS MAY VARY, CONSULT LOCAL AGENCIES AS NEEDED. USED MATERIAL WHICH HAS BECOME CONTAMINATED MAY HAVE SIGNIFICANTLY DIFFERENT CHARACTERISTICS BASED ON THE CONTAMINANTS AND SHOULD BE EVALUATED ACCORDINGLY.

14. TRANSPORTATION INFORMATION

D.O.T. Proper Shipping Name: EARTH, DIATOMACEOUS, CRUDE OR GROUND **Hazard Classification:** Not Classified
Reportable Quantities: NA **UN (United Nations), NA (North America) Number:** NA

15. Regulatory Information

OSHA Hazard Communications Standard, 29 CFR 1910.1200: MATERIAL IS CONSIDERED HAZARDOUS, SEE SECTION 3.
RCRA: THIS MATERIAL IS NOT DEFINED AS HAZARDOUS WASTE PER 40 CFR 261.
TSCA: THIS MATERIAL IS LISTED IN THE TSCA INVENTORY, AND IS NOT OTHERWISE REGULATED BY TSCA SEC. 4, 5, 6, 7 OR 12.
CERCLA: MATERIAL IS NOT REPORTABLE UNDER CERCLA, LOCAL REQUIREMENTS MAY VARY.
SARA: 311/312 HAZARD CATEGORIES -IMMEDIATE AND DELAYED HEALTH, 313 REPORTABLE INGREDIENTS - NONE.
Canada: THIS PRODUCT IS LISTED ON THE DSL.
California Proposition 65: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.
EU (REGULATION (EC) N° ° 1272/2008): THIS MATERIAL IS LABELED AND SUPPORTED ACCORDINGLY WITH GHS STANDARDS.
European Inventory of Existing Chemicals (EINECS): ALL OF THE COMPONENTS OF THIS PRODUCT ARE INCLUDED ON EINECS.

16. OTHER INFORMATION

Storage Segregation Hazard Classes: NA
Special Handling/Storage: REPAIR ALL BROKEN BAGS IMMEDIATELY.
Special Workplace Engineering Controls: ADEQUATE VENTILATION TO KEEP DUST LEVEL BELOW PEL.

Prepared/Revised by: R. Bruce Coggin, Senior EHS Manager, Imerys Filtration Minerals, (805) 737-1239
Revisions Made Since Last Version: Includes OSHA Haz Com 2012 compliance with North America GHS format.

As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given. Always assume that unless this document is viewed on the Imerys Filtration technical library, this document may not be fully current and up-to-date Please log onto www.worldminerals.com and find the technical library section for the most recent and up-to-date SDS. End of SDS.

Safety Data Sheet

Material Name: Duct-Seal 321

Product #: 304159- 11 oz
304158- 5 gal
304157- 2 gal
304156- 1 gal

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Duct-Seal 321

Synonyms
Sealant

Chemical Family
Water based mastic

Product Use
Duct sealant

Restrictions on Use
For industrial use only

Manufacturer Information

Carlisle HVAC Products
900 Hensley Lane
Wylie, TX 75098
www.carlislehvac.com
MSDS Assistance – 972-442-6545
Technical Assistance – 888-229-2199
Customer Service – 888-229-0199

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Reproductive Toxicity - Category 1B
Specific Target Organ Toxicity - Single Exposure - Category 1 (body, central nervous system, systemic toxicity, eyes)
Specific Target Organ Toxicity - Repeated Exposure - Category 1 (eyes,central nervous system)

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
May damage fertility or the unborn child
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Do not eat, drink or smoke when using this product

Response
If exposed: Call a POISON CENTER or doctor/physician
Get medical advice/attention if you feel unwell
Specific treatment (see label)

Storage
Store locked up

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Statement of Unknown Toxicity
86.9402% of the mixture consists of ingredient(s) of unknown acute toxicity.

Other Hazards
No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	De-foaming agent	0.1-1
Trade Secret	Nonylphenol polyethylene glycol ether	0.1-1
Mixture	Polymer, ethyl acrylate and methacrylic acid	0.5-1.5
Mixture	Polycarboxylate salt	0.1-1
107-21-1	Ethylene glycol	0.1-1
Mixture	Fuller's earth	0.5-1.5

7664-41-7	Ammonia	0.1-1
1317-65-3	Limestone	15-40
Trade Secret	Clay compound	1-5
67-56-1	Methanol	1-5
Mixture	4,4-Dimethyloxazolidine	0.1-1
Mixture	Carbamic acid mixture	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures
If exposed: Call a POISON CENTER or doctor/physician.

Inhalation
Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Skin
Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

Eyes
Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion
Do NOT induce vomiting. If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically and supportively.

Most Important Symptoms/Effects
Acute
Causes damage to central nervous system, body, eyes, systemic toxicity.
Delayed
May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

Note to Physicians
Contains: ethylene glycol, ammonia, methanol.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media
None known.

Special Hazards Arising from the Chemical
Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

Hazardous Combustion Products
oxides of carbon, oxides of nitrogen, hydrocarbons

Advice for firefighters
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures
Remove product from area of fire. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up
Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions
Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities
Store locked up

Store in a well-ventilated place. Store above 0 C. Store below 45 C. When not in use, keep containers tightly closed. Do not cut, puncture, or weld on or near this container. Keep away from incompatible materials.

Incompatible Materials
Strong acids, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Ethylene glycol	107-21-1	
ACGIH:	100 mg/m3 Ceiling aerosol only	
Europe:	20 ppm TWA; 52 mg/m3 TWA	40 ppm STEL; 104 mg/m3 STEL
	Possibility of significant uptake through the skin	
Mexico:	100 mg/m3 Ceiling aerosol	
Ammonia	7664-41-7	
ACGIH:	25 ppm TWA	35 ppm STEL
NIOSH:	25 ppm TWA; 18 mg/m3 TWA	35 ppm STEL; 27 mg/m3 STEL
	300 ppm IDLH	
Europe:	20 ppm TWA; 14 mg/m3 TWA	50 ppm STEL; 36 mg/m3 STEL
OSHA (US):	50 ppm TWA; 35 mg/m3 TWA	
Mexico:	25 ppm TWA LMPE-PPT; 18 mg/m3 TWA LMPE-PPT	
	35 ppm STEL [LMPE-CT]; 27 mg/m3 STEL [LMPE-CT]	
Limestone	1317-65-3	
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust	
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction	
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]

Clay compound	Trade Secret	
ACGIH:	0.025 mg/m3 TWA respirable fraction	
NIOSH:	0.05 mg/m3 TWA respirable dust	50 mg/m3 IDLH respirable dust
OSHA (US):	((30)/(%SiO2 + 2) mg/m3 TWA) total dust; ((250)/(%SiO2 + 5) mppcf TWA) respirable fraction; ((10)/(%SiO2 + 2) mg/m3 TWA) respirable fraction	
Mexico:	0.1 mg/m3 TWA LMPE-PPT respirable fraction	
Methanol	67-56-1	
ACGIH:	200 ppm TWA	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route	
NIOSH:	200 ppm TWA; 260 mg/m3 TWA	250 ppm STEL; 325 mg/m3 STEL
	Potential for dermal absorption	
	6000 ppm IDLH	
Europe:	200 ppm TWA; 260 mg/m3 TWA	
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA	
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m3 TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 310 mg/m3 STEL [LMPE-CT]	
	Skin - potential for cutaneous absorption	

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection
Wear appropriate work clothing.

Respiratory Protection
A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

Glove Recommendations
Wear appropriate gloves. Recommended material type: Hycron(R), neoprene, nitrile.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	gray paste	**Physical State**	solid
Odor	Slight,ammonia	**Color**	gray
Odor Threshold	Not available	**pH**	8.4 - 9.5
Melting Point	Not available	**Boiling Point**	212 °F
Freezing point	Not available	**Evaporation Rate**	28 - 32 % volatile
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not available
Autoignition	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	**Specific Gravity (water=1)**	Not available
Water Solubility	soluble	**Partition coefficient: n-octanol/water**	Not available
Viscosity	>300 Kcps	**Solubility (Other)**	Not available
Density	1.34 - 1.41 (relative)	**VOC**	92 g/L

Other Information
No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected.

Chemical Stability
Stable under normal conditions of use.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials
strong acids, strong oxidizing agents.

Hazardous decomposition products
Oxides of carbon, oxides of nitrogen, hydrocarbons

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
May cause adverse effects on the central nervous system.

Skin Contact
May cause mild skin irritation.

Eye Contact
May cause mild eye irritation.

Ingestion
Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:

Ethylene-vinyl acetate copolymer (Trade Secret)
Oral LD50 Rat >2000 mg/kg

Epoxidized soybean oil (Trade Secret)
Oral LD50 Rat >5 g/kg
Dermal LD50 Rabbit >20 mL/kg

De-foaming agent (Trade Secret)
Oral LD50 >2000 mg/kg

Nonylphenol polyethylene glycol ether (Trade Secret)
Oral LD50 Rat 2780 mg/kg

Chlorinated paraffins (Trade Secret)
Oral LD50 Rat >4 g/kg

Polymer, ethyl acrylate and methacrylic acid (Mixture)
Oral LD50 Rat >5000 mg/kg
Dermal LD50 Rabbit >5000 mg/kg

Polycarboxylate salt (Mixture)
Oral LD50 Rat >5000 mg/kg
Dermal LD50 Rabbit >2000 mg/kg

Ethylene glycol (107-21-1)
Oral LD50 Rat 4700 mg/kg
Dermal LD50 Rat 10600 mg/kg
Inhalation LC50 Rat >200 mg/m3 vapor 4 hr

Ammonia (7664-41-7)
Oral LD50 Rat 350 mg/kg
Inhalation LC50 Rat 2000 ppm 4 h

Limestone (1317-65-3)
Oral LD50 Rat 6450 mg/kg

Clay compound (Trade Secret)
Oral LD50 Rat 500 mg/kg

Methanol (67-56-1)
Oral LD50 Rat 6200 mg/kg
Inhalation LC50 Rat 22500 ppm 8 h

4,4-Dimethyloxazolidine (Mixture)
Oral LD50 Rat 1037 mg/kg
Dermal LD50 Rat >2000 mg/kg
Inhalation LC50 Rat 1.1 mg/L 4 hr

Carbamic acid mixture (Mixture)
Oral LD50 Rat >2000 mg/kg
Dermal LD50 Rabbit >2000 mg/kg
Inhalation LC50 Rat >2.04 mg/L 4 hr

Immediate Effects
Causes damage to central nervous system, body, eyes, systemic toxicity.

Delayed Effects
May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

Irritation/Corrosivity Data
May cause mild skin irritation. May cause mild eye irritation.

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

Chlorinated paraffins	Trade Secret
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
Ethylene glycol	107-21-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Clay compound	Trade Secret
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)
DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure
Central nervous system, body, systemic toxicity, eyes

Specific Target Organ Toxicity - Repeated Exposure
Central nervous system, eyes

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Additional Data
This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Ethylene-vinyl acetate copolymer	Trade Secret
Fish:	LC50 96 hr Cyprinus carpio >1000 mg/L
Epoxidized soybean oil	Trade Secret
Fish:	LC50 48 hr Fish 900 mg/L
Algae:	EC50 72 h Desmodesmus subspicatus 8 mg/L IUCLID
Invertebrate:	Ec50 24 hr Daphnia >100 mg/L
Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L
Polymer, ethyl acrylate and methacrylic acid	Mixture
Fish:	LC50 96 hr Pimephales promelas >1000 mg/L
Invertebrate:	EC50 48 hr Daphnia magna >1000 mg/L

Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
Ammonia	7664-41-7
Fish:	LC50 96 h Cyprinus carpio 0.44 mg/L; LC50 96 h Lepomis macrochirus 0.26 - 4.6 mg/L; LC50 96 h Lepomis macrochirus 1.17 mg/L [flow-through]; LC50 96 h Pimephales promelas 0.73 - 2.35 mg/L; LC50 96 h Pimephales promelas 5.9 mg/L [static]; LC50 96 h Poecilia reticulata >1.5 mg/L; LC50 96 h Poecilia reticulata 1.19 mg/L [static]
Invertebrate:	LC50 48 h Daphnia magna 25.4 mg/L IUCLID
Methanol	67-56-1
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through]
4,4-Dimethyloxazolidine	Mixture
Fish:	LC50 96 hr Rainbow trout 95 mg/L [flow-through]

Persistence and Degradability
No information available for the product.

Bioaccumulative Potential
No information available for the product.

Mobility
No information available for the product.

Other Toxicity
No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated

IATA Information:
UN#: Not regulated

IMDG Information:
UN#: Not regulated

TDG Information:
UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Ammonia	7664-41-7
SARA 302:	500 lb TPQ
SARA 313:	1 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)

CERCLA:	100 lb final RQ; 45.4 kg final RQ
OSHA (safety):	10000 lb TQ anhydrous); 15000 lb TQ solution, >44% Ammonia by weight)
SARA 304:	100 lb EPCRA RQ
Methanol	67-56-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Carbamic acid mixture	Mixture
CERCLA:	10 lb final RQ; 4.54 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Chlorinated paraffins	Trade Secret	No	Yes	No	No	No
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
Ammonia	7664-41-7	Yes	Yes	Yes	Yes	Yes
Limestone	1317-65-3	No	Yes	Yes	Yes	Yes
Clay compound	Trade Secret	No	Yes	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	Yes
Carbamic acid mixture	Mixture	No	No	No	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Clay compound	Trade Secret
Carc:	carcinogen , initial date 10/1/88 (airborne particles of respirable size)
Methanol	67-56-1
Repro/Dev. Tox	Developmental toxicity , initial date 3/16/12

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ethylene glycol	107-21-1
	1 %
Ammonia	7664-41-7
	1 %
Clay compound	Trade Secret
	1 %
Methanol	67-56-1
	1 %

Component Analysis - Inventory

Ethylene-vinyl acetate copolymer (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	ELN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Epoxidized soybean oil (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Nonylphenol polyethylene glycol ether (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Chlorinated paraffins (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Polymer, ethyl acrylate and methacrylic acid (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Ethylene glycol (107-21-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Fuller's earth (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Ammonia (7664-41-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Limestone (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Clay compound (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Kaolin, calcined (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Methanol (67-56-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Carbamic acid mixture (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1* Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
New SDS: April 1, 2015

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition

coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:
The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

SAFETY DATA SHEET

C1T254

Section 1. Identification

Product name : DuraCraft™ Exterior Acrylic Latex, Flat Ultradeep Base

Product code : C1T254

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 1A

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 31.8%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Cristobalite	0.1	14464-46-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Cristobalite	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / 2 x (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Respirable TWA: 30 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Total dust

Section 8. Exposure controls/personal protection

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Section 9. Physical and chemical properties

Vapor density : 1 [Air = 1]

Relative density : 1.28

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Aerosol product

Heat of combustion : 0.000001274 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Cristobalite	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Section 14. Transport information

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Material Safety Data Sheet

SECTION 1. IDENTIFICATION

NEWSTAR ADHESIVES **31 Silver Hill Road** **PH # 1-855-497-0700**
Weston, MA 02493 **FX # 1-770-607-3637**

EMERGENCY Contact: 1-800-424-9300 (Chemtrec)

PRODUCT NAME
EVERSTRONG™ ESW10

RECOMMENDED USE:
Contact Adhesive

SECTION 2. HAZARDOUS INGREDIENTS

Hazardous Ingredients	C.A.S. Number	%

No reportable hazardous ingredients known to manufacturer.

SECTION 3. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Immediate Health, Physical and Environmental Hazards: Containers exposed to high heat from fire or other sources may build pressure and explode.

3.2 POTENTIAL HEALTH EFFECTS

Eye Effects: May cause moderate eye irritation. Signs/Symptoms may include redness, swelling, tearing, and/or blurred vision.

Skin Contact: May cause moderate skin Irritation. Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation: Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose or throat pain.

Intentional concentration and inhalation may be harmful or fatal.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Prolonged or repeated exposure may cause:
None known

SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water. Get medical attention if symptoms persist,
Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention if symptoms persist.
Inhalation: Remove person to fresh air. Get medical attention if symptoms develop,.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Do not give anything by mouth to an unconscious person. Get medical attention.

SECTION 5. FIRE & EXPLOSION HAZARD DATA

5.1 FLAMMABLE PROPERTIES
Flammability – NonFlammable
Flash Point – aqueous, n/a
LEL – n/a
UEL – n/a

5.2 Extinguishing Media –
Class B extinguishing agents: Carbon Dioxide, Dry Chemical, Foam
5.3 Special Fire Fighting Procedures –
Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Evacuate unprotected and untrained personnel from hazard area. Only trained and qualified personnel should clean up spills. For large spills, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practices. Contain spill. Cover with commercially available nonflammable inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Collect waste and dispose of in accordance with all applicable local, state and federal regulations.

In the event of a release the user should determine if the release is a reportable quantity under local, state or federal regulations.

SECTION 7. HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Prevent build-up of vapors. Open windows and doors. Use only with ventilation. Use general ventilation and/or local ventilation. Keep out of reach of children.

7.2 STORAGE
Store in well ventilated area. Protect from freezing. Not usable after freeze cycle. Keep container tightly closed. Keep out of reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use only in well ventilated areas. Do not use in a confined area or areas with little or no air movement. Use general ventilation and/or local exhaust ventilation. If ventilation is not adequate, use personal protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)
8.2.1 Eye/Face protection
Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields or Indirect Vented Goggles.

8.2.2 Skin Protection
Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with glove or protective clothing manufacturer for selection of appropriate protective materials. Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA), Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Conduct air monitoring to determine adequacy of ventilation and the need for respiratory protective equipment. If ventilation is inadequate select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface pressure demand self-contained breathing apparatus. Consult personal protection supplier for further information.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit
None			

Vacated Permissible Exposure Limits (PEL) are enforced in some states as the OSHA PEL. Check with your local regulatory agency.

SOURCES OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)
CMRG: Chemical Manufacturer Recommended Guideline
EPA: Environmental Protection Agency
IARC: International Agency for the Research on Cancer
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
WEEL Workplace Environmental Exposure Level

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color: Mild, acetic odor, creamy white or red liquid
Boiling point: 100°C (212°F)

Vapor Pressure Not Determined
Vapor Density Not Determined
Specific Gravity 1.08-1.10 g/cc
Solubility in Water: Soluble
Volatile Organic Compounds: not applicable, less than .1% lbs/gal.

10. STABILITY AND REACTIVITY

Stability :
Stable
Incompatibility:
None known.
Hazardous Polymerization :
Will not occur.
Hazardous By-Products: Combustion may result in formation of aldehydes, hydrocarbons, carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity:
There is no data indicating this mixture contains any chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulations
None			

SECTION 12. ECOLOGICAL INFORMATION

Ecological information has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of only by a permitted hazardous waste TSD facility in accordance with all local, state and federal regulations.

SECTION 14. TRANSPORTATION INFORMATION

This Section Provided for Informational Purposes Only.

DOT CLASSIFICATION
Not regulated

Protect from freezing

SECTION 15. REGULATORY INFORMATION

311/312 Hazard Categories:
Fire Hazard – No; Pressure Hazard – Yes; Reactivity Hazard – No; Immediate Hazard – Yes; Delayed Hazard – Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. Number	% by Wt.
None		

STATE REGULATIONS:
CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. Number	Classification
None		

WHMIS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

HMIS Hazard Rating
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
Health: 2
Flammability: 1
Reactivity: 0
Special Hazard: None

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. NEWSTAR MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. The user is responsible for determining whether the NEWSTAR product is fit for a particular purpose and suitable for users' method of use or application, given the variety of factors that can affect the use and application of a NEWSTAR product, many of which are solely within the user's knowledge and control. It is essential that the user evaluate the NEWSTAR product to determine whether it is fit for a particular purpose and suitable for users' method of use or application.

MSDS Issue Date: May 22, 2014
Supersedes: New

Safety Data Sheet Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Lap Sealant HS**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

250 West 96th Street
Indianapolis, IN 46260
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Skin Irritation 2 - H315
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
Carcinogenicity 1A - H350

DSD/DPD • Irritant (Xi)
Carcinogenic Substances - Category 1
R37/38, R45, R67

2.2 Label Elements

CLP

DANGER

Hazard statements • H315 - Causes skin irritation
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H350 - May cause cancer.

Precautionary statements

Prevention • P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust.
P264 - Wash thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves .
P281 - Use personal protective equipment as required.

Response • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P321 - Specific treatment, see supplemental first aid information.
P362 - Take off contaminated clothing and wash before reuse.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Risk phrases • R37/38 - Irritating to respiratory system and skin.
R45 - May cause cancer.
R67 - Vapours may cause drowsiness and dizziness.

Safety phrases • S53 - Avoid exposure - obtain special instructions before use.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Skin Irritation 2
Eye Irritation 2
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Carcinogenicity 1A

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements • Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
May cause drowsiness or dizziness
May cause cancer.

Precautionary statements

Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If on skin: Wash with plenty of water .
Specific treatment, see supplemental first aid information.
Take off contaminated clothing and wash before reuse.
If skin irritation occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • Store in a well-ventilated place. Keep container tightly closed.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Other Toxic Effects - D2A
  Other Toxic Effects - D2B

2.2 Label elements

WHMIS

- Other Toxic Effects - D2A
  Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Limestone	**CAS:**1317-65-3 **EC Number:**215-279-6	50% TO 100%	NDA	**EU DSD/DPD:** Xn, R48/20 **EU CLP:** STOT RE 2 (Lung, Inhl), H373 **OSHA HCS 2012:** STOT RE 2 (Lung, Inhl)	NDA
Light aliphatic solvent naphtha	**CAS:**64742-89-8 **EC Number:**265-192-2 **EU Index:**649-267-00-0	5% TO 20%	NDA	**EU DSD/DPD:** Annex VI, Table 3.2: Xn R65, R67; Xi, R38; N; R51/53 **EU CLP:** Annex VI, Table 3.1: Skin Irrit. 2, H315; Asp Tox. 1, H304; STOT SE 3: Narc., H336; Aquatic Chronic 2, H411; Flam. Liq. 3, H226 **OSHA HCS 2012:** Flam. Liq. 2; Eye Irrit. 2; Skin Irrit. 2; Asp. Tox. 1; STOT SE: Narc. & Resp. Irrit.	NDA
Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	**CAS:**64742-52-5 **EC Number:**265-155-0 **EU Index:**649-465-00-7	2.5% TO 10%	Ingestion/Oral-Rat LD50 • >5000 mg/kg Skin-Rabbit LD50 • >2000 mg/kg	**EU DSD/DPD:** Annex VI, Table 3.2: Carc. Cat. 2, R45 **EU CLP:** Annex VI, Table 3.1: Carc. 1B, H350 **OSHA HCS 2012:** Skin Irrit. 2	Contains less than 3% DMSO. Carcinogen classification not applicable.
Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl-, salt with bentonite	**CAS:**68953-58-2 **EC Number:**273-219-4	<= 2.5%	NDA	**EU DSD/DPD:** Not Classified **EU CLP:** Not Classified **OSHA HCS 2012:** Not Classified	NDA
Carbon Black	**CAS:**1333-86-4 **EC Number:**215-609-9	<= 2.5%	Ingestion/Oral-Rat LD50 • >15400 mg/kg Skin-Rabbit LD50 • >3 g/kg	**EU DSD/DPD:** T, R48/23; Carc. Cat. 3, R40 **EU CLP:** Carc. 2, H351; STOT RE 1, H372 **OSHA HCS 2012:** Carc. 2; STOT RE 1 (Lungs, Inhl); Comb. Dust	NDA
Stearic acid	**CAS:**57-11-4 **EC Number:**200-313-4	<= 1%	Skin-Rabbit LD50 • >5 g/kg Ingestion/Oral-Rat LD50 • 4600 mg/kg	**EU DSD/DPD:** Xi, R38 **EU CLP:** Skin Irrit. 2, H315 **OSHA HCS 2012:** Skin Irrit. 2	NDA
Calcium oxide	**CAS:**1305-78-8 **EC Number:**215-138-9	<= 1%	NDA	**EU DSD/DPD:** Xi; R41; C; R34 **EU CLP:** Skin Corr. 1C, H314; Eye Dam. 1, H318 **OSHA HCS 2012:** Skin Corr. 1C; Eye Dam. 1	NDA
Quartz	**CAS:**14808-60-7 **EC Number:**238-878-4	<= 0.5%	NDA	**EU DSD/DPD:** Carc. Cat. 1, T, R45, R48/23 **EU CLP:** Carc. 1A, H350i; STOT RE 1, H372 (Lungs, Inhl) **OSHA HCS 2012:** Carc. 1A; STOT RE 1 (Lungs, Inhl)	NDA

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial

respiration if victim is not breathing. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention if artificial oxygen is administered.

Skin
- IF ON SKIN: Wash with plenty of soap and water. Remove and isolate contaminated clothing. If skin irritation occurs: Get medical advice/attention.

Eye
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion
- Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- CO_2, extinguishing powder or water spray. Fight larger fires with water spray.

Unsuitable Extinguishing Media
- No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- Containers may explode when heated.

Hazardous Combustion Products
- No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
  Wear positive pressure self-contained breathing apparatus (SCBA).
  Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures
- Stay upwind. Keep out of low areas. Keep unauthorized personnel away.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Stop leak if you can do it without risk.
  Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Wear appropriate personal protective equipment. Avoid breathing dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container closed when not in use. Store in a cool location away from direct heat. Keep away from incompatible materials.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	**ACGIH**	**Canada Alberta**	**Canada British Columbia**	**Canada Manitoba**	**Canada New Brunswick**
Quartz (14808-60-7)	TWAs	0.025 mg/m3 TWA (respirable fraction)	0.025 mg/m3 TWA (respirable particulate)	0.025 mg/m3 TWA (respirable)	0.025 mg/m3 TWA (respirable fraction)	0.1 mg/m3 TWA (respirable fraction)
Calcium oxide (1305-78-8)	TWAs	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA
Carbon Black (1333-86-4)	TWAs	3 mg/m3 TWA (inhalable fraction)	3.5 mg/m3 TWA	3 mg/m3 TWA (inhalable)	3 mg/m3 TWA (inhalable fraction)	3.5 mg/m3 TWA
Limestone (1317-65-3)	TWAs	Not established	10 mg/m3 TWA	10 mg/m3 TWA (total dust); 3 mg/m3 TWA (respirable fraction)	Not established	10 mg/m3 TWA (particulate matter containing no Asbestos and <1% Crystalline silica)
	STELs	Not established	Not established	20 mg/m3 STEL (total dust)	Not established	Not established

Exposure Limits/Guidelines (Con't.)						
	Result	**Canada Northwest Territories**	**Canada Nova Scotia**	**Canada Nunavut**	**Canada Ontario**	**Canada Quebec**
Quartz (14808-60-7)	TWAs	0.1 mg/m3 TWA (respirable mass); 0.3 mg/m3 TWA (total mass)	0.025 mg/m3 TWA (respirable fraction)	0.1 mg/m3 TWA (respirable mass); 0.3 mg/m3 TWA (total mass)	0.10 mg/m3 TWA (designated substances regulation, respirable, listed under Silica, crystalline)	0.1 mg/m3 TWAEV (respirable dust)
Calcium oxide (1305-78-8)	STELs	4 mg/m3 STEL	Not established	4 mg/m3 STEL	Not established	Not established
	TWAs	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWAEV
Carbon Black (1333-86-4)	STELs	7 mg/m3 STEL	Not established	7 mg/m3 STEL	Not established	Not established
	TWAs	3.5 mg/m3 TWA	3 mg/m3 TWA (inhalable fraction)	3.5 mg/m3 TWA	3 mg/m3 TWA (inhalable)	3.5 mg/m3 TWAEV
Limestone (1317-65-3)	TWAs	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total	Not established	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total	Not established	10 mg/m3 TWAEV (Limestone, containing no Asbestos and <1%

		mass)		mass)		Crystalline silica, total dust)

Exposure Limits/Guidelines (Con't.)					
	Result	**Canada Saskatchewan**	**Canada Yukon**	**NIOSH**	**OSHA**
Quartz (14808-60-7)	TWAs	0.05 mg/m3 TWA (respirable fraction, listed under Silica - crystalline)	300 particle/mL TWA (listed under Silica)	0.05 mg/m3 TWA (respirable dust)	Not established
Calcium oxide (1305-78-8)	TWAs	2 mg/m3 TWA	2 mg/m3 TWA	2 mg/m3 TWA	5 mg/m3 TWA
	STELs	Not established	4 mg/m3 STEL	Not established	Not established
Carbon Black (1333-86-4)	TWAs	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH)	3.5 mg/m3 TWA
	STELs	Not established	7 mg/m3 STEL	Not established	Not established
Limestone (1317-65-3)	TWAs	10 mg/m3 TWA	30 mppcf TWA; 10 mg/m3 TWA	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
	STELs	Not established	20 mg/m3 STEL	Not established	Not established

Exposure Control Notations

Canada Ontario

•Quartz (14808-60-7): **Designated Substances:** (0.10 mg/m3 TWA (respirable fraction, listed under Silica, crystalline))

Canada Quebec

•Quartz (14808-60-7): **Carcinogens:** (C2 carcinogen - effect suspected in humans)

ACGIH

•Carbon Black (1333-86-4): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)

•Quartz (14808-60-7): **Carcinogens:** (A2 - Suspected Human Carcinogen)

Exposure Limits Supplemental

OSHA

•Quartz (14808-60-7): **Mineral Dusts:** ((30)/(%SiO2 + 2) mg/m3 TWA, total dust; (250)/(%SiO2 + 5) mppcf TWA, respirable fraction; (10)/(%SiO2 + 2) mg/m3 TWA, respirable fraction)

ACGIH

•Carbon Black (1333-86-4): **TLV Basis - Critical Effects:** (bronchitis)

•Calcium oxide (1305-78-8): **TLV Basis - Critical Effects:** (upper respiratory tract irritation)

•Quartz (14808-60-7): **TLV Basis - Critical Effects:** (lung cancer; pulmonary fibrosis)

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body

- Wear appropriate gloves.

Environmental Exposure

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of

Controls waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid (Paste)	Appearance/Description	Black paste with a petrol-like odor.
Color	Black	Odor	Petrol-like
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Bulk Density	1.35 g/cm³
Water Solubility	Insoluble	Viscosity	> 20.5 Centistoke (cSt, cS) or mm2/sec
Explosive Properties	Data lacking	Oxidizing Properties:	Data lacking
Volatility			
Vapor Pressure	45 mmHg (torr) @ 20 C(68 F)	Vapor Density	3.8 Air=1
Evaporation Rate	9.2 n-Butyl Acetate = 1	VOC (Vol.)	< 250 g/L
Flammability			
Flash Point	83 C(181.4 F)	UEL	6.7 %
LEL	0.9 %	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Excess heat.

10.5 Incompatible materials

- Oxidizing agents.

10.6 Hazardous decomposition products

- None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined) (2.5% TO 10%)	64742-52-5	**Irritation:** Skin-Rabbit • 500 mg • Severe irritation
Carbon Black (<= 2.5%)	1333-86-4	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • >15400 mg/kg; *Behavioral*:**Somnolence (general depressed activity)**; Skin-Rabbit LD50 • >3 g/kg; **Mutagen:** DNA adduct • Inhalation-Mouse • 6200 µg/m³ 16 Hour(s) 12 Week(s)-Intermittent; DNA damage • Inhalation-Rat • 50 g/L 13 Week(s); DNA damage • Inhalation-Rat • 50 µg/L 13 Week(s)-Intermittent; **Tumorigen / Carcinogen:** Inhalation-Rat TCLo • 11600 µg/m³ 18 Hour(s) 2 Year(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Lungs, Thorax, or Respiration*:**Tumors**
Stearic acid (<= 1%)	57-11-4	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 4600 mg/kg; Skin-Rabbit LD50 • >5 g/kg; **Irritation:** Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; **Mutagen:** DNA damage • Unreported Route-Human • Liver (Somatic cell) • 10 mg/L 20 Hour(s); **Tumorigen / Carcinogen:** Implant-Mouse TDLo • 400 mg/kg; *Tumorigenic*:**Equivocal tumorigenic agent by RTECS criteria**; *Kidney, Ureter, and Bladder*:**Tumors**
Quartz (<= 0.5%)	14808-60-7	**Acute Toxicity:** Inhalation-Human TCLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis, focal (pneumoconiosis)**; *Lungs, Thorax, or Respiration*:**Cough**; *Lungs, Thorax, or Respiration*:**Dyspnea**; Inhalation-Rat TCLo • 200 mg/kg; *Lungs, Thorax, or Respiration*:**Fibrosis, focal (pneumoconiosis)**; *Lungs, Thorax, or Respiration*:**Other changes**; *Nutritional and Gross Metabolic:Changes in Chemistry or Temperature*:**Fe**; Intratracheal-Mouse TDLo • 80 mg/kg; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Immunological Including Allergic*:**Increase in cellular immune response**; *Biochemical:Metabolism (intermediary)*:**Effect on inflammation or mediation of inflammation**; **Multi-dose Toxicity:** Inhalation-Hamster TCLo • 3 mg/m³ 6 Hour(s) 78 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Fibrosis (interstitial)**; *Lungs, Thorax, or Respiration*:**Changes in lung weight**; Inhalation-Rat TCLo • 6.2 mg/m³ 6 Hour(s) 6 Week(s)-Intermittent; *Lungs, Thorax, or Respiration*:**Other changes**; *Blood*:**Changes in spleen**; *Immunological Including Allergic*:**Increase in cellular immune response**; **Mutagen:** Micronucleus test • Unreported Route-Hamster • Lung (Somatic cell) • 160 µg/cm³; DNA damage • Unreported Route-Human • Other Cell Type • 120 mg/L 24 Hour(s); Micronucleus test • Unreported Route-Human • Lung (Somatic cell) • 40 µg/cm³; **Tumorigen / Carcinogen:** Inhalation-Rat TCLo • 50 mg/m³ 6 Hour(s) 71 Week(s)-Intermittent; *Tumorigenic*:**Carcinogenic by RTECS criteria**; *Liver*:**Tumors**

GHS Properties	Classification
Respiratory sensitization	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Serious eye damage/Irritation	**EU/CLP** • Data lacking **OSHA HCS 2012** • Eye Irritation 2
Acute toxicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking

Aspiration Hazard	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Carcinogenicity	**EU/CLP** • Carcinogenicity 1A **OSHA HCS 2012** • Carcinogenicity 1A
Skin corrosion/Irritation	**EU/CLP** • Skin Irritation 2 **OSHA HCS 2012** • Skin Irritation 2
Skin sensitization	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
STOT-RE	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
STOT-SE	**EU/CLP** • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation **OSHA HCS 2012** • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking
Germ Cell Mutagenicity	**EU/CLP** • Data lacking **OSHA HCS 2012** • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)
- May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)
- No data available.

Skin

Acute (Immediate)
- Causes skin irritation.

Chronic (Delayed)
- No data available.

Eye

Acute (Immediate)
- Causes serious eye irritation.

Chronic (Delayed)
- No data available.

Ingestion

Acute (Immediate)
- Ingestion of this product unlikely.

Chronic (Delayed)
- No data available.

Carcinogenic Effects
- Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

Carcinogenic Effects			
	CAS	**IARC**	**NTP**
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen
Carbon Black	1333-86-4	Group 2B-Possible Carcinogen	Not Listed

Key to abbreviations

LD = Lethal Dose
TC = Toxic Concentration
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted by the manufacturer.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user
- None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications
- Acute, Chronic

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Calcium oxide	1305-78-8	Yes	Yes	Yes
Carbon Black	1333-86-4	Yes	Yes	Yes
Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	No	No	No
Light aliphatic solvent naphtha	64742-89-8	No	No	No
Limestone	1317-65-3	Yes	Yes	Yes
Quartz	14808-60-7	Yes	Yes	Yes
Quaternary ammonium compounds, bis (hydrogenated tallow alkyl) dimethyl-, salt with bentonite	68953-58-2	No	No	No
Stearic acid	57-11-4	No	No	No

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ELNICS**	**TSCA**
Calcium oxide	1305-78-8	Yes	No	Yes	No	Yes
Carbon Black	1333-86-4	Yes	No	Yes	Yes	Yes
Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Yes	No	Yes	No	Yes
Light aliphatic solvent naphtha	64742-89-8	Yes	No	Yes	No	Yes
Limestone	1317-65-3	No	Yes	Yes	No	Yes
Quartz	14808-60-7	Yes	No	Yes	No	Yes
Quaternary ammonium compounds, bis (hydrogenated tallow alkyl) dimethyl-, salt with bentonite	68953-58-2	Yes	No	Yes	No	Yes
Stearic acid	57-11-4	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Stearic acid	57-11-4	Uncontrolled product according to WHMIS classification criteria
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed

• Calcium oxide	1305-78-8	E
• Carbon Black	1333-86-4	D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Carbon Black, non-respirable on Health Canada's WHMIS Division website.)
• Limestone	1317-65-3	D2A
• Light aliphatic solvent naphtha	64742-89-8	B2
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Silica, crystalline, encapsulated on Health Canada's WHMIS Division website.)

Canada - WHMIS - Ingredient Disclosure List

• Stearic acid	57-11-4	1 %
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	1 %
• Carbon Black	1333-86-4	1 %
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	1 %

Environment

Canada - CEPA - Priority Substances List

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed

• Quartz	14808-60-7	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Carc.Cat.2; R45
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	T R:45 S:53-45
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	T R:45-46-65 S:53-45
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	L
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	P
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	S:53-45
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed

• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	S:53-45
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size)
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	carcinogen, initial date 10/1/88 (airborne particles of respirable size)

U.S. - California - Proposition 65 - Developmental Toxicity

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed

• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Stearic acid	57-11-4	Not Listed
• Hydrotreated heavy naphthenic distillates (petroleum) (Highly Refined)	64742-52-5	Not Listed
• Calcium oxide	1305-78-8	Not Listed
• Carbon Black	1333-86-4	
• Limestone	1317-65-3	Not Listed
• Light aliphatic solvent naphtha	64742-89-8	Not Listed
• Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl-, salt with bentonite	68953-58-2	Not Listed
• Quartz	14808-60-7	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H226 - Flammable liquid and vapour
  H304 - May be fatal if swallowed and enters airways

H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage
H350i - May cause cancer by inhalation.
H351 - Suspected of causing cancer.
H372 - Causes damage to organs through prolonged or repeated exposure.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects

R34 - Causes burns.
R38 - Irritating to skin.
R40 - Limited evidence of a carcinogenic effect.
R41 - Risk of serious damage to eyes.
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.

Revision Date

- 28/October/2015

Preparation Date

- 17/July/2008

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

Safety Data Sheet **Firestone Building Products Company**

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Modular Water Based Bonding Adhesive WBA 3781**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction: Adhesive

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

250 West 96th Street
Indianapolis, IN 46260
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Eye Irritation 2 - H319
Specific Target Organ Toxicity Single Exposure 3: Respiratory T ract Irritation - H335

DSD/DPD • Irritant (Xi)

R36/37

2.2 Label Elements

CLP

WARNING

Hazard statements • H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements

Prevention • P261 - Avoid breathing dust, fume, gas, mist, vapours and/or spray.
P271 - Use only outdoors or in a well-ventilated area.
P264 - Wash thoroughly after handling.

P280 - Wear eye/face protection , .

Response • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage/Disposal • P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Risk phrases • R36/37 - Irritating to eyes and respiratory system.

Safety phrases • S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Eye Irritation 2A - H319
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335

2.2 Label elements

OSHA HCS 2012

WARNING

Hazard statements • Causes serious eye irritation - H319
May cause respiratory irritation - H335

Precautionary statements

Prevention • Avoid breathing dust, fume, gas, mist, vapours and/or spray. - P261
Wash thoroughly after handling. - P264
Use only outdoors or in a well-ventilated area. - P271
Wear eye/face protection , . - P280

Response • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
Call a POISON CENTER or doctor/physician if you feel unwell. - P312
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
If eye irritation persists: Get medical advice/attention. - P337+P313

Storage/Disposal • Store in a well-ventilated place. Keep container tightly closed. - P403+P233
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012 • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication

Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Other Toxic Effects - D2B

2.2 Label elements

WHMIS

- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Butadiene Styrene Copolymer	NDA	40% TO 50%	NDA	**EU DSD/DPD:** Data Lacking **EU CLP:** Data Lacking **OSHA HCS 2012:** Data Lacking	NDA
1,2-Propanediol	**CAS:**57-55-6 **EC Number:**200-338-0	< 1%	Ingestion/Oral-Rat LD50 • 20 g/kg Skin-Rabbit LD50 • 20800 mg/kg	**EU DSD/DPD:** Not Classified - Criteria Not Met **EU CLP:** Not Classified - Criteria Not Met **OSHA HCS 2012:** Eye Irrit. 2B	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Take off contaminated clothing and

wash before reuse. If irritation develops and persists, get medical attention.

Eye
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion
- Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention and advise the physician of the nature of the material. If ingested, monitor for acidosis and central nervous system changes. Those with kidney history of dysfunction may require special treatment.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- Material is non-flammable. Use media appropriate for surrounding materials (e.g., water spray, alcohol foam, or carbon dioxide).

Unsuitable Extinguishing Media
- None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- None known.

Hazardous Combustion Products
- Oxides of carbon.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
  Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
  Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Use only with adequate ventilation. Wear respiratory protection. Wear appropriate protective clothing.

Emergency Procedures
- As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) Stay upwind. Keep out of low areas. Keep unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

- No special precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Stop leak if you can do it without risk.
  Absorb liquid on inert material. Transfer to secured container for proper disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal

Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Do not breathe vapors, dust, or spray mist. Use only with adequate ventilation. Avoid contact with eyes. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Do not allow product to freeze. Keep container/package tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines		
	Result	**Canada Ontario**
1,2-Propanediol (57-55-6)	TWAs	10 mg/m3 TWA (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present, aerosol only); 50 ppm TWA (aerosol and vapor); 155 mg/m3 TWA (aerosol and vapor)

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear splash goggles.

Skin/Body

- Wear appropriate chemical resistant gloves.

General Industrial Hygiene Considerations

- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift. Wash contaminated clothing prior to reuse.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	White liquid with slight odor.
Color	White	Odor	Slight
Odor Threshold	Data lacking		

General Properties			
Boiling Point	212 F(100 C)	Melting Point	0 C(32 F)
Decomposition Temperature	Data lacking	pH	7.5 to 9
Specific Gravity/Relative Density	1 Water=1	Density	Data lacking
Water Solubility	Soluble	Solvent Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizer.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	> 1 Air=1
Evaporation Rate	Data lacking		
Flammability			
Flash Point	> 100 C(> 212 F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Do not allow this product to freeze. Avoid contact with water sensitive materials and strong oxidizers.

10.5 Incompatible materials

- Incompatible Materials: Water sensitive materials

10.6 Hazardous decomposition products

- Burning will produce smoke, carbon monoxide, and carbon dioxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Aspiration Hazard	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met

Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-SE	**EU/CLP** • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation **OSHA HCS 2012** • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**EU/CLP** • Eye Irritation 2 **OSHA HCS 2012** • Eye Irritation 2A

Route(s) of entry/exposure
- Inhalation, Skin, Eye, Ingestion/Oral

Medical Conditions Aggravated by Exposure
- Kidney disorders (via accidental ingestion). Pre-existing skin conditions.

Potential Health Effects

Inhalation

Acute (Immediate)
- May cause respiratory irritation.

Chronic (Delayed)
- No data available.

Skin

Acute (Immediate)
- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)
- Prolonged or repeated skin contact may cause irritation.

Eye

Acute (Immediate)
- Causes serious eye irritation.

Chronic (Delayed)
- No data available.

Ingestion

Acute (Immediate)
- May cause gastrointestinal irritation and central nervous system depression if accidentally ingested.

Chronic (Delayed)
- Lactic acidosis, stupor and seizures from chronic ingestion only.

Carcinogenic Effects
- The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Key to abbreviations

LD = Lethal Dose
MLD = Mild
MOD = Moderate

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA

14.6 Special precautions for user
- None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications
- Acute

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Butadiene Styrene Copolymer	NDA	No	No	No
Water	7732-18-5	No	No	No
1,2-Propanediol	57-55-6	No	Yes	Yes

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**EU EINECS**	**EU ELNICS**	**TSCA**
Butadiene Styrene Copolymer	NDA	No	No	No	No	No
Water	7732-18-5	Yes	No	Yes	No	Yes
1,2-Propanediol	57-55-6	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- 1,2-Propanediol 57-55-6 Uncontrolled product according to WHMIS classification criteria
- Water 7732-18-5 Uncontrolled product according to WHMIS classification criteria

Canada - WHMIS - Ingredient Disclosure List

- 1,2-Propanediol 57-55-6 1 %
- Water 7732-18-5 Not Listed

Environment

Canada - CEPA - Priority Substances List

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• 1,2-Propanediol	57-55-6	Not Listed
• Water	7732-18-5	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• 1,2-Propanediol	57-55-6	Not Listed
• Water	7732-18-5	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• 1,2-Propanediol	57-55-6	Not Listed
• Water	7732-18-5	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date
- 19/June/2013

Preparation Date
- 09/February/2009

Disclaimer/Statement of Liability
- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: **Cellulose Insulation, Stabilized Blended Formula**

PRODUCT NAME: INS500, INS500-CAN Insulation

MANUFACTURER: US GreenFiber, LLC
2500 Distribution Street, Suite 200, Charlotte, NC 28203, USA
Emergency Telephone Number: 800.228.0024 (8am - 5pm EST Mon-Fri)

SECTION 2 – COMPOSITION AND INGREDIENT INFORMATION

COMPONENT/CAS #	% BY WEIGHT	EXPOSURE LIMITS	CANCER DESIGNATION
Newsprint (Cellulose Fiber) #9004-34-6	Not less than 85%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) ***PNOR - Particulates Not Otherwise Regulated or Nuisance Dust*** OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=10mg/m³ total dust (PNOR) ACGIH TLV-TWA=10mg/m³ inhalable (PNOS) ***PNOS – Particulates Not Otherwise Specified*** ACGIH TLV-TWA=3mg/m³ respirable (PNOS)	None
Boric Acid H_3BO_3 #10043-35-3	Not more than 10%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=5mg/m³ ACGIH TLV-TWA=2mg/m³ ACGIH TLV-STEL=6mg/m³ (inhalable fraction – Borate Compounds, inorganic)	None
Ammonium Sulfate $(NH_4)_2SO_4$ #7783-20-2	Not more than 11%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=10mg/m³ total dust (PNOR) ACGIH TLV-TWA=10mg/m³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m³ respirable (PNOS)	None
Mono-Ammonium Phosphate $NH_4H_2PO_4$ #7722-76-1	Not more than 2%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=10mg/m³ total dust (PNOR) ACGIH TLV-TWA=10mg/m³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m³ respirable (PNOS)	None
Zinc Sulfate $ZnSO_4$-H_2O #7446-19-7	Not more than 2%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=10mg/m³ total dust (PNOR) ACGIH TLV-TWA=10mg/m³ inhalable (PNOS)3 ACGIH TLV-TWA=3mg/m³ respirable (PNOS)	None
Unmodified Starch #9005-25-8	Not more than 3%	OSHA PEL-TWA=15mg/m³ total dust (PNOR) OSHA PEL-TWA=5mg/m³ respirable fraction (PNOR) Cal OSHA PEL=10mg/m³ total dust (PNOR) ACGIH TLV-TWA=10mg/m³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m³ respirable (PNOS)	None

Refer to Sections 3 and 11 for details on hazards.

HMIS Rating		**National Fire Protection Association (NFPA)**	
Health	1	Red (Flammability)	1
Flammability	1	Yellow (Reactivity)	0

Reactivity	0	Blue (Acute Health)	1*
Personal Protection	E	*Chronic Effects	

SECTION 3 – HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Avoid extreme heat and open flame. May emit carbon monoxide gas, boric acid and other hazardous particulates during thermal decomposition. This product is a finely divided, light gray / brown material with no perceptible odor. It presents no unusual hazard if involved in a fire.

Physical Characteristics	
Boiling Point (F)	Not applicable
Vapor Pressure (mm Hg)	Not applicable
Vapor Density	Not applicable
Solubility in Water	Insoluble; dispersible
Specific Gravity (H_20=1)	Not applicable
Reactivity in Water	None
Melting Point	Not applicable

Potential Health Effects	
Inhalation	Slightly irritating to upper respiratory system. Persons with respiratory problems should avoid breathing dust.
Eyes	Slight irritant. In case of eye contact, flush with water.
Ingestion	Small amounts are not likely to cause harm. Ingestion of large amounts may cause rash, diarrhea, nausea.
Skin	Does not normally irritate skin. In case of broken skin, wear gloves and wash dust from skin with soap and plenty of water. Large amounts absorbed into bloodstream may cause rash, skin peeling, diarrhea, nausea, dizziness.
Acute	Not anticipated as discussed above.
Chronic	None.
Cancer	Neither the end product nor any of its components.

SECTION 4 –FIRST AID

Eyes	For dust exposure, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
Skin	If skin is exposed, wash with soap and large amounts of water. If irritation persists, seek medical attention.
Inhalation	If irritation or difficulty in breathing occurs, remove to fresh air. Seek medical attention if condition persists.
Ingestion	Symptoms may include diarrhea, nausea and vomiting. Seek medical attention if material was ingested and symptoms occur.
Note to Physicians	Exposure to dust may aggravate symptoms of persons with pre-existing respiratory tract conditions and may cause skin and gastrointestinal symptoms.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point (Method Used)	Not applicable
Combustible	Material may decompose on contact with extreme temperatures and open flames.

Flammable Limits	LEL: Not applicable UEL: Not applicable
Autoignition Temperature	Not determined
Explosion Hazard	None expected for product based on particle size. Note: Airborne concentrations of combustible dust, when combined with an ignition source, can create an explosion hazard if the dust concentration exceeds 15 mg/m³.
Extinguishing Media	Water, dry chemical and other agents rated for a wood fire (Type A fire). Use Type A rated extinguisher.
Fire Fighting Instructions	Evacuate the area and notify the fire department. If possible, isolate the fire by moving other combustible materials. If the fire is small, use a hose-line or extinguisher rated for a Type A fire. If possible, dike and collect water used to fight fires. Fire-fighters should wear normal protective equipment (full bunker gear) and positive-pressure, self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Contains water-soluble inorganic mineral salts which may damage trees or vegetation exposed to large quantities. **Land**: shovel, sweep or vacuum product. Place in disposal container. Avoid bodies of water. **Water**: large quantities may cause localized contamination of surrounding waters depending on the quantity spilled. At high concentrations may damage localized vegetation, fish and other aquatic life. This product is a non-hazardous waste when spilled or disposed of as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). Refer to regulatory information in Section 15 for additional information regarding EPA and California regulations.

SECTION 7 – HANDLING AND STORAGE

General	No special handling is required. Storage of sealed bags in a dry, indoor location is recommended. To maintain product integrity, handle on a “first-in-first-out” basis. Use good housekeeping and engineering controls so that dust levels are below the exposure limits listed in Section 2.
Storage Temperature	Ambient
Storage Pressure	Atmospheric
Special Sensitivity	None

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

General Exposure Controls	No specific controls are needed. Use standard good housekeeping practices and engineering controls to minimize nuisance levels.
Respiratory Protection	If housekeeping and engineering controls do not maintain nuisance levels below regulatory limits or dust concentration is unknown, use a NIOSH-approved mask.
Eye Protection	Wear ANSI-approved eye protection if environment is excessively dusty.
Hand Protection	If skin is broken or sensitive, use gloves
Other Protective Clothing	None
Ventilation	Normal and adequate ventilation
Work/Hygienic Practices	Standard hygienic practices
Occupational Exposure Limits	***This product is listed/regulated by OSHA and Cal/OSHA as “Particulates Not Otherwise Regulated” or “Nuisance Dust.” This product is list by ACGIH as “Particulates Not Otherwise Specified.”***

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray / Brown, odorless fiber	**Boiling/Melting Point**	Not applicable
Bulk Density	9 lb/ft³ compressed	**Flash Point**	Not applicable
Vapor Pressure	Negligible @ 20° C	**pH**	<8.2 (2.0% suspension @ 25° C
Solubility in Water	Product is not soluble	**Viscosity**	Not applicable

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Conditions and Materials to Avoid: Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard. Keep away from strong oxidizers, such as concentrated nitric acid, hydrogen peroxide and chlorine.

SECTION 11 – TOXICOLOGICAL INFORMATION

BORIC ACID	
Eye	Draize test in rabbits produced mild eye irritation effects. No adverse eye effects anticipated.
Skin	Low acute dermal toxicity, LD50 in rabbits is greater than 2,000 mg/kg of body weight. Boric Acid is poorly absorbed through skin.
Ingestion	Low acute oral toxicity, LD50 in rats is 3,500 to 4,100 mg/kg of body weight
Inhalation	Low acute inhalation toxicity; LC50 in rats is greater than 2.0 mg/L (or g/m³).
Reproduction	Animal feeding studies in several species, at high doses, have demonstrated effects on fertility testes[10]. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust. A recent epidemiology study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility[11].
Mutagenicity	No mutagenic activity was observed for boric acid in a battery of short-term mutagenicity assays.

AMMONIUM SULFATE	
Eye	None listed
Skin	None listed
Ingestion	TDLo, oral, human, 1500 mg/kg, diarrhea, nausea, vomiting, LD50, oral, rat, 2840 mg/kg
Inhalation	None reported
Subchronic	None reported
Chronic	None reported
Teratology	None reported
Reproduction	None reported
Mutagenicity	None reported

MONOAMMONIUM PHOSOPHATE	
Eye	Irritation with the extent of damage depending on duration of contact
Skin	Contact dermatitis may follow repeated skin contact
Ingestion	With large doses there is the possibility of diuresis and systemic poisoning
Inhalation	None reported
Subchronic	None reported
Chronic	None reported

Teratology	None reported
Reproduction	None reported
Mutagenicity	None reported.

ZINC SULFATE	
Eye	Dose-420 ug; moderate (rabbit)
Acute Exposure	LD 50: 1710 mg/kg, oral, rat LD 50: 245 mg/kg, oral, mouse
Chronic	No known ingestion reaction anticipated
Teratology	May cause inhalation reflex brochoconstruction

STARCH	
Eye	None reported.
Skin	None reported
Ingestion	None reported
Inhalation	None reported
Chronic	None reported
Teratology	None reported
Reproduction	None reported
Mutagenicity	None reported.

SECTION 12 – ECOLOGICAL INFORMATION

BORIC ACID	
Ecotoxicity	Daphnia magna, 48-hr LC50=133 mg B/L. Trout, 32-day LC50=100 mg B/L
Chemical Fate Information	Boron is naturally occurring and ubiquitous in the environment. Boric Acid decomposes in the environment to natural borate. Boric Acid is soluble in water and is leachable through normal soil.

AMMONIUM SULFATE	
Ecotoxicity	TLm, Daphnia magna, 423 mg/L/24H.
Chemical Fate Information	Not listed.

ZINC SULFATE	
Ecotoxicity	LC 50 rainbow trout: 4.76 MG/L/48 HR, hard water / continuous flow conditions LC 50 rainbow trout: 4.6 ppm/96 hr/fresh water / conditions of bioassay not specified
Chemical Fate Information	No data available for degradability, Log Bioconcentration Factor or Log Octanol/Water partition coefficient

13 – DISPOSAL CONSIDERATIONS

Dispose as a non-hazardous waste.

SECTION 14 – TRANSPORT INFORMATION

May be shipped normally as a non-hazardous material.

SECTION 15 – REGULATORY INFORMATION

Superfund: CERCLA/SARA. This product is not listed under the Comprehensive Environmental Response Compensation and Liability Act(CERCLA) or its 1986 amendments, the Superfund Amendments and Reauthorization Act (SARA), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARA Extremely Hazardous Substances, 42 USC 11002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.

RCRA: This product is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.).

Safe Drinking Water Act: This product is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron and ammonia.
California Proposition 65: This product is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.

OSHA Carcinogen: Not listed.

Clean Water Act (Federal Water Pollution Control Act): 33 USC 1251 et seq.: This product is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314. This product is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 116. This product is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

TSCA No.: This product does not appear on the EPA TSCA inventory list. Ammonium sulfate and boric acid appear on the EPA TSCA inventory list under the CAS Nos. 7783-20-2 and 10043-35-3 respectively.

OSHA/Cal/OSHA: This MSDS document meets the requirements of both OSHA and Cal/OSHA hazard communication standards. Refer to Section 8 for regulatory exposure limits.

IARC: The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize this product as a carcinogen.

NTP Annual Report on Carcinogens: Not listed.

SECTION 16 – OTHER INFORMATION

INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED DEPENDABLE AND IS ACCURATE AND RELIABLE TO THE BEST OF OUR KNOWLEDGE AND BELIEF, BUT IS NOT GUARANTEED TO BE SO. NOTHING HEREIN IS TO BE CONSTRUED AS RECOMMENDING ANY PRACTICE OR ANY PRODUCT IN VIOLATION OF ANY PATENT OR IN VIOLATION OF ANY LAW OR REGULATION. THE USER IS RESPONSIBLE TO DETERMINE THE SUITABILITY OF ANY MATERIAL FOR A SPECIFIC PURPOSE AND ADOPT NECESSARY SAFETY PRECAUTIONS. WE MAKE NO WARRANTY AS TO RESULTS TO BE OBTAINED IN USING ANY MATERIAL AND, SINCE CONDITIONS OR USE ARE NOT UNDER OUR CONTROL, WE MUST NECESSARILY DISCLAIM ALL LIABILITY WITH RESPECT TO USE OF ANY MATERIAL SUPPLIED BY US.

ABBREVIATIONS

CAS	Chemical Abstract Services (identifies specific chemical)	**OSHA**	Occupational Safety and Health Administration
mg/m^3	Milligrams per cubic meter	**PNOR**	Particulates Not Otherwise Regulated
LCLo	Lethal concentration low	**PNOS**	Particulates Not Otherwise Specified
LDLo	Lethal dose low	**PEL**	OSHA Permissible Exposure Limit
LC50	Lethal concentration 50%	**ppm**	Parts per million
LD50	Lethal dose 50%	**RfD**	Reference Dose

LOAEL	Lowest Observed Adverse Effect Level	**RTECS**	Registry of Toxic Effects of Chemical Substances
mg/l/H	Milligrams per liter per hour	**TDLo**	Toxic dose low
mg/kg	Milligrams per kilogram	**TLV**	ACGIH Threshold Limit Value
mg/m^3	Milligrams per cubic meter	**TWA**	8 hour Time Weighted Average exposure

BIBLIOGRAPHY

1. The Guide to Occupational Exposure Values, American Conference of Governmental Industrial Hygienists, 1997.
2. Registry of Toxic Effects of Chemical Substances, National Institute of Occupational Safety and Health, Q-1, 1998.
3. Dangerous Properties of Industrial Materials, Sax's, 1997 CD-Folio.
4. Hazardous Substances Data Bank, Canadian Centre for Occupational Health and Safety, Q-1, 1998.
5. Integrated Risk Information System, EPA, on-line.
6. Toxicological Profiles, Agency for Toxic Substances and Disease Registry, U.S. Public Health Service, 1997.
7. TLVs and other Occupational Exposure Values, American Conference of Governmental Industrial Hygienists, 2010.
8. 29 CFR 1910.1000 TABLE Z-1 and Z-3
9. California OSHA Title 8, Section 5155, Table AC-1
10. Weir RJ & Fisher RS (1972). Toxicol. Appl. Pharmacol. 23: 351-364.
11. Whorton et al. (1994). Occup. Environ. Med. 51: 761-767.

US GreenFiber (USGF) does not provide architectural, inspection, engineering or building science services and disclaims any responsibility with respect thereto. USGF does not guarantee, warrant or attempt to determine whether a building structure, design or the use of material therein complies with any applicable codes, standards, guidelines or standards of workmanship. Adding insulation to any part of a home's envelope will cause changes in air, heat and moisture flow. The user must understand how the use of insulation will change the performance of a dwelling prior to installation. The user maintains the full and complete responsibility to comply with all codes, laws and regulations applicable to the safe and proper use, handling and installation of the product and should consult with an architect, engineer, building scientist, and/or a rater/energy specialist for all construction, design and performance related questions. The information contained herein is believed to be accurate as of the time of preparation. However, USGF makes no warranty concerning the accuracy of this information. USGF will not be liable for claims relating to the use of information contained herein, regardless of whether it is claimed that the information or recommendations are inaccurate, incomplete or incorrect.

Setting Compounds

Safety Data Sheet*

Date of issue: 06/19/2015 Revision date: 06/19/2015 Supersedes: 10/23/2012 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Drywall Joint and Patching Compounds

Quick Identifier Common Name (on label / list)	**Packaging**	**Product Code**
Fast Set 20	25 lb (11.3 kg) bag	895900000713
Fast Set 40	25 lb (11.3 kg) bag	895900000720
Fast Set 90	25 lb (11.3 kg) bag	895900000744
Fast Set 5 Lite	18 lb (8.2 kg) bag	895900000768
Fast Set 20 Lite	18 lb (8.2 kg) bag	895900000775
Fast Set 20 Lite	18 lb (8.2 kg) bag	895900000904
Fast Set 40 Lite	18 lb (8.2 kg) bag	895900000782
Fast Set 40 Lite	18 lb (8.2 kg) bag	895900000904
Fast Set 40 Lite	20 kg (44.1 lb) bag	895900000836
Fast Set 90 Lite	18 lb (8.2 kg) bag	895900000799
Fast Set 90 Lite	18 kg (39.7 lb) bag	895900000843
Fast Set 180 Lite	18 lb (8.2 kg) bag	895900000805
Fast Set 180 Lite	18 kg (39.7 lb) bag	895900000850
Smooth Set 20 Lite Sand	18 lb (8.2 kg) bag	895900000812
Smooth Set 40 Lite Sand	18 lb (8.2 kg) bag	895900000904
Smooth Set 90 Lite Sand	18 lb (8.2 kg) bag	895900000911
Super Set Lite 20	18 lb (8.2 kg) bag	895900000621
Super Set Lite 40	18 lb (8.2 kg) bag	895900000638
Super Set Lite 60	18 lb (8.2 kg) bag	895900000645
Super Set Lite 90	18 lb (8.2 kg) bag	895900000652
Super Set 20	25 lb (11.3 kg) bag	895900000256
Super Set 40	25 lb (11.3 kg) bag	895900000263
High Density 15	25 lb (11.3 kg) bag	895900000812
High Density 20	25 lb (11.3 kg) bag	895900000676
High Density 40	25 lb (11.3 kg) bag	895900000683
High Density 90	25 lb (11.3 kg) bag	895900000706
Fast Set 5 Lite	4.5 lb (2 kg) box	895900000355
Fast Set 20 Lite	4.5 lb (2 kg) box	895900000379
Pro-Patch 5 Lite	8.2 kg (18.1 lb) bag	000516221807
Pro-Patch 20 Lite	8.2 kg (18.1 lb) bag	000516221852
Super Set Lite 20	18 lb (8.2 kg) bag	000516221241
Super Set Lite 40	18 lb (8.2 kg) bag	000516221258
Super Set Lite 60	18 lb (8.2 kg) bag	000516221265
Super Set Lite 90	18 lb (8.2 kg) bag	000516221272
Ultra-Fill	15 kg (33.1 lb) bag	895900000591
Ultra-Ceil	15 kg (33.1 lb) bag	895900000737

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Drywall Joint Compound – for finishing and repair

1.3. Details of the supplier of the safety data sheet

Hamilton Drywall Products
295 N. Pekin Road
Phone number: 1-800-871-4998
Fax number: 1-800-871-5007

Woodland, WA, 98674 Website: www.hamiltonnw.com

1.4. Emergency telephone number

Emergency number : Chemtrec: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance

Classification (GHS-US)
Carc. 1A H350
STOT RE 2 H373
Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US) :

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H350 - May cause cancer (Inhalation)
H373 - May cause damage to organs (lungs/respiratory system) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, mist, spray, vapors
P280 - Wear appropriate PPE (See Section 8)
P308 + P313 - If exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P405 - Store locked up
P501 - Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification : Other constituents in this product are considered nuisance particles or dust. Exposure to dusts, mists or powders may cause mechanical irritation of the respiratory system, eyes, and skin. . Particulates Not Otherwise Regulated (Respirable Fraction) has an OSHA PEL of 5 mg/m^3 (15 mppcf) TWA and ACGIH Guideline of 3 mg/m^3 TWA. Particulates Not Otherwise Regulated (Total Dust) has an OSHA PEL of 15 mg/m^3 (50 mppcf) TWA and ACGIH Guideline of 10 mg/m^3 TWA.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Crystalline Silica *(as an impurity of other ingredients/constituents)*	(CAS No) 14808-60-7	< 5	Eye Irrit. 2A, H319 Carc. 1A, H350 STOT SE 3, H335 STOT RE 2, H373

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
First-aid measures after inhalation	:	Move the affected person away from the contaminated area and remove to fresh air. If breathing problems occur, a certified professional should administer oxygen or CPR if indicated. Seek immediate medical attention.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	:	Immediately rinse with water for a prolonged period while holding the eyelids wide open. If eye irritation or pain persists: Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Do NOT induce vomiting. Seek medical advice in case of persistent discomfort. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	:	There are potential chronic health effects to consider.
Symptoms/injuries after inhalation	:	May cause cancer by inhalation. Long-term dust, mist, or spray exposure may aggravate pre-existing respiratory disease. Persons who develop silicosis have greatly increased risks of developing tuberculosis and workers who are exposed to crystalline silica and smoke have increased risks of lung damage.
Symptoms/injuries after skin contact	:	Direst contact may cause irritation, rash, or dry skin. Rubbing may intensify symptoms and create abrasions.
Symptoms/injuries after eye contact	:	Particulate matter may scratch the cornea or cause other mechanical injury to the eye. Scratching or physical damage to the eyes can cause irritation, redness, pain, tear formation, blurred vision, and light sensitivity.
Symptoms/injuries after ingestion	:	Not expected to be a significant route of entry. If ingestion occurs, mild temporary stomach discomfort may result.
Chronic symptoms	:	Repeated inhalation of respirable crystalline silica over a number of years can cause lung disease (silicosis) and increase the risks of developing respiratory cancer. Silicosis is a progressive fibrotic pneumoconiosis which greatly decreases the ability of the lungs to provide oxygen (decreased pulmonary capacity). The disease may progress even if the worker is removed from exposure. The extent and severity of lung injury depends on a variety of factors including particle size, percentage of silica, natural resistance, dust concentration and length of exposure. Symptoms of silicosis include phlegm, coughing, and characteristic x-rays.

4.3. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Any. Use media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Not flammable.
Reactivity	:	Not reactive under normal use and conditions.

5.3. Advice for firefighters

Protection during firefighting	:	Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Evacuate area. Ensure adequate air ventilation.

6.1.1. For non-emergency personnel

Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip clean-up crew with proper protection.
Emergency procedures : Stay upwind. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment

6.3. Methods and material for containment and cleaning-up

For containment : Stop leak if you can do it without risk. Contain/dike material for later disposal. Do not touch or walk through spilled material.

Methods for cleaning up : Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas. If necessary (to allow for easy clean-up), absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

In dry/powder state, completely remove dusts to prevent recirculation of crystalline silica. For small spills, clean with a vacuum with a filtration system sufficient to remove and prevent dust recirculation. For large spills, use a fine spray or mist to control dust creation and carefully scoop or shovel into clean, dry container for later reuse or disposal. DO NOT USE DRY SWEEPING OR COMPRESSED AIR TO CLEAN SPILLS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Combustion may produce carbon monoxide and other harmful substances.

Precautions for safe handling : Avoid dust, mist, and spray inhalation. DO NOT use compressed air or dry sweeping to remove dust from work area. Dusts should be removed using an appropriately equipped vacuum. If an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. wet sweeping, misting, etc.). Moisture should be added as necessary to reduce exposure to airborne respirable dust.

Hygiene measures : Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered. Do not take silica contaminated clothing home.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Containers should be stored in room at ambient temperature and pressure. Keep container closed when not in use.

7.3. Specific end use(s)

Drywall Joint Compound – for finishing and repair

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Crystalline Silica (14808-60-7)		
USA – ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ A2
USA – ACGIH	Remark (ACGIH)	Lung Cancer; Silicosis
USA – OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³ %SiO2+2
USA – OSHA	OSHA PEL (TWA) (ppm)	250 mppcf %SiO2+2
USA – OSHA	Remark (US OSHA)	(3) See Table Z-3.

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Enclosed processes used in combination with local exhaust ventilation as necessary to control air contaminants at or below acceptable exposure guidelines. Collection systems must be designed and maintained to prevent the accumulation and recirculation of respirable silica into the workplace.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : None required. Polymeric gloves are recommended to prevent irritation. Nitrile construction materials appear to offer the best protection against the ingredients of the product.

Eye protection	:	Chemical goggles or safety glasses.
Skin and body protection	:	Under dusty, misty, spray conditions or when excessive skin contact is likely, wear coveralls or other suitable work clothing.
Respiratory protection	:	Wear NIOSH/MSHA approved respirator equipped with particulate cartridges when dusty, misty, or spraying in poorly ventilated areas, and if exposure limits are exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. For exposures of crystalline silica up to 0.5 mg/m³ TWA, NIOSH recommends wearing any particulate respirator equipped with an N95, R95, or P95 filter, except quarter-mask respirators.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Fine powder
Color	:	Off-white
Odor	:	Mild
Odor threshold	:	No data available
pH	:	Not applicable *(pH 7.5 – 10 when mixed with water)*
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	Not applicable
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	0.9 – 2.0 (water = 1)
Solubility	:	Less than 5%
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content (VOC of material)	:	0 g/L
VOC content for the South Coast Air Quality Management District (SCAQMD) – Regulatory VOC (less water and exempts)	:	0 g/L

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive under normal use and conditions.

10.2. Chemical stability

Stable at normal temperatures and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid generating dust, mist, or spray.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Combustion may produce carbon monoxide and other harmful substances.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified; pH 7.5-10 when mixed with water
Serious eye damage/irritation	:	Not classified; pH 7.5-10 when mixed with water
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	May cause cancer (inhalation).

Crystalline Silica (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	May cause damage to organs (lungs/respiratory system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	:	Not classified
Symptoms/injuries after inhalation	:	May cause cancer by inhalation. Long-term dust exposure may aggravate pre-existing respiratory disease. Persons who develop silicosis have greatly increased risks of developing tuberculosis and workers who are exposed to crystalline silica and smoke have increased risks of lung damage.
Symptoms/injuries after skin contact	:	Direct contact may cause irritation, rash, or dry skin. Rubbing may intensify symptoms and create abrasions.
Symptoms/injuries after eye contact	:	Particulate matter may scratch the cornea or cause other mechanical injury to the eye. Scratching or physical damage to the eyes can cause irritation, redness, pain, tear formation, blurred vision, and light sensitivity.
Symptoms/injuries after ingestion	:	Practically non-toxic. Ingestion is not anticipated under normal working conditions.
Chronic symptoms	:	Repeated inhalation of respirable crystalline silica over a number of years can cause lung disease (silicosis) and increase the risks of developing respiratory cancer. Silicosis is a progressive fibrotic pneumoconiosis which greatly decreases the ability of the lungs to provide oxygen (decreased pulmonary capacity). The disease may progress even if the worker is removed from exposure. The extent and severity of lung injury depends on a variety of factors including particle size, percentage of silica, natural resistance, dust concentration and length of exposure. Symptoms of silicosis include phlegm, coughing, and characteristic x-rays.

SECTION 12: Ecological information

12.1. Toxicity

Not expected to be ecotoxic.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of as inert solid in landfill. Dispose of waste material according to Local, State and Federal environmental regulations. Never discharge directly into sewers or surface waters. Slurry may plug drains.

SECTION 14: Transport information

In accordance with DOT, not regulated for transport.

Additional information

Other information : No supplementary information available.

ADR

No additional information available.

Transport by sea

No additional information available.

Air transport

No additional information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Crystalline Silica (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available.

EU - Regulations

No additional information available.

Classification according to Regulations (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc. Cat. 2; R22; R43; R49
Full text of R-phrases: see section 16

15.2.2. National regulations

Emergency procedures : Evacuate unnecessary personnel.

Crystalline Silica (14808-60-7)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

*According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

California – Proposition 65
This product may contain substances known to the State of California to cause cancer: Crystalline silica (airborne particulates of respirable size). Attapulgite Clay >5µm in length.

Crystalline Silica (14808-60-7)
U.S. – Idaho – Non-Carcinogenic Toxic Air Pollutants – Acceptable Ambient Concentrations
U.S. – New Jersey – Right to Know Hazardous Substance List
U.S. – Washington – Permissible Exposure Limits – TWA's
U.S. – Massachusetts – Right to Know List
U.S. – Pennsylvania – Right to Know List
U.S. – Rhode Island – Right to Know List

SECTION 16: Other information

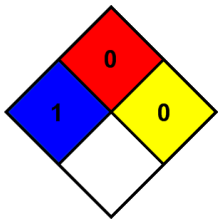
Data sources : ChemADVISOR, Inc.[https://www.chemadvisor.com]. GESTIS DNEL Database [http://dnel-en.itrust.de/nxt/gateway.dll/dnel_en/000000.xml?f=templates$fn=default.htm$vid=dneleng:ddbeng$3.0/].

Full text of H-phrases: see section 16:

Acute Tox.3 (Dermal)	Acute Toxicity (dermal) Category 3
Acute Tox.3 (Inhalation)	Acute Toxicity (inhalation) Category 3
Acute Tox.3 (Oral)	Acute Toxicity (oral) Category 3
Acute Tox.4 (Dermal)	Acute Toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 2 (Inhalation: gas)	Acute toxicity (inhalation: gas) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable Liquids Category 2
Muta. 2	Germ cell mutagenicity Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H 341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H402	Harmful to aquatic life
R22	Harmful if swallowed
R43	May cause sensitization by skin contact
R49	May cause cancer by inhalation

NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating	:
Health	: 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard
Personal Protection	: E



SDS US (GHS HazCom 2012)

This information is furnished without warranty, expressed, or implied, except that it is accurate to the best knowledge of Hamilton Drywall Products. The data on this sheet relates only to the specific material designed herein. Hamilton Drywall Products assumes no legal responsibility for the use or reliance on this data.

SAFETY DATA SHEET

B54Y37

Section 1. Identification

Product name : Industrial Enamel
Safety Yellow

Product code : B54Y37

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 41.4%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
May cause an allergic skin reaction.
Suspected of damaging the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Contaminated work clothing must not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	≥25 - <50	64742-88-7
Titanium Dioxide	≥10 - <25	13463-67-7
Methyl Ethyl Ketoxime	≥0.3 - <1	96-29-7
Methyl Isobutyl Ketone	≥0.1 - <0.3	108-10-1
Ethylbenzene	≥0.1 - <0.3	100-41-4
2-(2-Methoxyethoxy)-ethanol	≥0.1 - <0.3	111-77-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths

skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Methyl Ethyl Ketoxime	**AIHA WEEL (United States, 10/2011). Skin sensitizer.** TWA: 10 ppm 8 hours.
Methyl Isobutyl Ketone	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
2-(2-Methoxyethoxy)-ethanol	None.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 148°C (298.4°F)

Flash point : Closed cup: 38°C (100.4°F) [Pensky-Martens Closed Cup]

Evaporation rate : 0.13 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1%
Upper: 6%

Vapor pressure : 0.023 kPa (0.169 mm Hg) [at 20°C]

Vapor density : 5 [Air = 1]

Relative density : 1.03

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 18.27 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Methyl Isobutyl Ketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
2-(2-Methoxyethoxy)-ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

	Eyes - Moderate irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Methyl Isobutyl Ketone	-	2B	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Isobutyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-(2-Methoxyethoxy)-ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Methyl Isobutyl Ketone	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
2-(2-Methoxyethoxy)-ethanol	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Methyl Isobutyl Ketone	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
2-(2-Methoxyethoxy)-ethanol	Acute EC50 >930 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 7500000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methyl Isobutyl Ketone	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. **Special provisions** Not Applicable **ERG No.**	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). **Special provisions** Not Applicable **ERG No.**	**Special provisions** (ERG#128) **ERG No.**	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Section 14. Transport information

	128	128	128		

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Sens. 1, H317	Calculation method
Carc. 2, H351	Calculation method
Repr. 2, H361 (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method

History

Date of printing : 11/5/2015

Section 16. Other information

Date of issue/Date of revision	:	11/5/2015
Date of previous issue	:	10/10/2015
Version	:	1.07
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Revised 10/10

Product Information

2.15

Product Description

INDUSTRIAL ENAMEL is a medium oil/alkyd all-purpose enamel. Designed for interior and exterior use.

- Dries fast and allows equipment to be placed back in service quickly
- Impact and abrasion resistant
- Chip and flake resistant
- High gloss makes it resistant to dirt
- Apply down to 40°F (4.5°C)
- Good exterior durability
- Excellent application properties

Product Characteristics

Finish:	Gloss
Color:	Wide range of colors available including safety colors
Volume Solids:	43% ± 2%, may vary by color
Weight Solids:	58% ± 2%, may vary by color
VOC (calculated):	<450 g/L; 3.75 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112)	**9.0** (225)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**175** (4.3)	**350** (8.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**690** (16.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.6 mils wet (115 microns):

	@ 50°F/10°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1-2 hours	30 minutes
Tack free:	8 hours	4-5 hours	4 hours
To recoat:	12 hours	8 hours	3 hours
To cure:	7 days	7 days	3 days

Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	101°F (38°C), PMCC
Reducer:	Not recommended
Clean Up:	Mineral Spirits, R1K4

Recommended Uses

For use over prepared substrates in industrial environments:

- Exterior/interior all-purpose maintenance enamel
- Safety and pipe marking enamel
- Economical machinery and equipment finish
- Interior wall and ceiling enamel
- Equipment
- Fire escapes
- Safety markings
- Steel supports
- Channels
- Fixtures
- Window frames
- Wood floors
- Blowers
- Pipe identification
- Conveyors
- Pumps
- Railings
- Pipe racks
- Bracing
- Conforms to AWWA D102, OCS #1
- Acceptable for use in high performance architectural applications.
- Suitable for use in USDA inspected facilities

Performance Characteristics

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Kem Kromik Universal Metal Primer @ 3.0-4.0 mils (75-100 microns) dft
1 ct. Industrial Enamel @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance (topcoat only)	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	180 mg loss
Adhesion	ASTM D4541	290 psi
Corrosion Weathering	ASTM D5894, 6 cycles, 2016 hours	Rating 10 per ASTM D610 for rusting ; Rating 10 per ASTM D714 for blistering
Direct Impact Resistance	ASTM D2794	68 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Flexibility	ASTM D522, 180° bend, 3/16" mandrel	Passes
Pencil Hardness	ASTM D3363	3B

Provides performance comparable to products formulated to federal specifications:

DOD-E-115C
MIL-E-15090

continued on back

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Product Information

2.15

Recommended Systems

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Concrete Block:			
1 ct.	Heavy Duty Block Filler	10.0-18.0	(250-450)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Concrete Floors:			
1 ct.	Concrete and Terrazzo Sealer (reduced as needed)		
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Galvanized Metal:			
1 ct.	Galvite HS	3.0-4.5	(75-112)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Wood, including floors:			
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Interior Plaster and Poured Concrete Walls:			
1ct.	PrepRite Masonry Primer	3.0	(75)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)

The systems listed above are representative of the product's use, other systems may be appropriate.

Disclaimer

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

* Iron & Steel: SSPC-SP2
* Aluminum: SSPC-SP1
* Galvanizing: SSPC-SP1
* Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2, CSP 1-3
* Wood, interior: Clean, smooth, dust free

*Primer required

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Tinting

Tint with Blend-A-Color Toner or Maxitoner Colorant at 75% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

Application Conditions

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

Ordering Information

Packaging: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 8.82 ± 0.2 lb/gl, 1.06 Kg/L may vary with color

Safety Precautions

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Warranty

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Revised 10/10

Application Bulletin

2.15

Surface Preparations

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel
Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide, and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.

Galvanized Steel
Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. Primer required.

Masonry and Concrete
For surface preparation, refer to SSPC-SP13/NACE 6 or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F. Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with a cement patching compound. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Laitance must be removed. Primer required.

Wood
Surface must be clean, dry, and sound. Paint as soon as possible. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed. All nail holes or small openings must be properly caulked. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile. Self priming.

Previously Painted Surfaces
If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Application Conditions

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Application Equipment

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer .....Not recommended

Clean Up .....Mineral Spirits, R1K4

Airless Spray
Pressure.....2500 psi
Hose.....1/4" ID
Tip .....015"
Filter .....100 mesh

Conventional Spray
Gun .....Binks 95
Fluid Nozzle 66
Air Nozzle.....63PB
Atomization Pressure.....50 psi
Fluid Pressure.....20-25 psi

Brush
Brush.....Natural Bristle

Roller
Cover .....3/8" woven solvent resistant core

If specific application equipment is not listed above, equivalent equipment may be substituted.

continued on back

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Application Bulletin

2.15

Application Procedures

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112)	**9.0** (225)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**175** (4.3)	**350** (8.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**690** (16.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.6 mils wet (115 microns):

	@ 50°F/10°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1-2 hours	30 minutes
Tack free:	8 hours	4-5 hours	4 hours
To recoat:	12 hours	8 hours	3 hours
To cure:	7 days	7 days	3 days

Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Clean Up Instructions

Clean spills and spatters immediately with Mineral Spirits, R1K4. Clean tools immediately after use with Mineral Spirits, R1K4. Follow manufacturer's safety recommendations when using any solvent.

Disclaimer

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

Performance Tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Mineral Spirits, R1K4.

Deep tinted colors may exhibit burnishing characteristics.

Refer to Product Information sheet for additional performance characteristics and properties.

Safety Precautions

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Warranty

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

INNERBOND GP70S KITCHEN & BATH SEALANT
Translucent colors

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

DATE: June 1, 2015 — Date of last alteration:

MANUFACTURER'S NAME: INLAND, INC.
ADDRESS: P. O. BOX 644 (42702)
209 PETERSON DRIVE
ELIZABETHTOWN, KY 42701
TELEPHONE NUMBER: 270-737-6757

EMERGENCY CONTACT: CHEMTREC 800-424-9300

NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
HEALTH (NFPA): 2 **FLAMMABILITY (NFPA):** 1 **REACTIVITY (NFPA):** 0
CAS NO: MIXTURE
INLAND, INC. WARNING CODE: NOT USED
GENERIC DESCRIPTION: SILICONE

SECTION 2: HAZARDS IDENTIFICATION

Eyes:
Direct contact may cause moderate irritation
Skin:
May cause moderate irritation.
Inhalation:
Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor/aerosol concentrations are attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.
Oral:
Low ingestion hazard in normal use
Medical Conditions Aggravated by Exposure:
No known applicable information

SECTION 3: HAZARDOUS COMPONENTS

CAS Number	Substance	Wt. %
17689-77-9	Ethyltriacetoxysilane	1.0 – 5.0
4253-34-3	Methyltriacetoxysilane	1.0 – 5.0

The above components are hazardous as defined in 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES

Eyes: Flush with water for 15 minutes. Get medical attention.
Skin: Wipe off and wash with soap and water. Get medical attention if irritation develops.
Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or vapor/mist/dust/fumes are generated, care should be taken to prevent inhalation. In case of exposure to vapor/mist/dust/fumes, move to fresh air.
Oral: No first aid should be needed.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point (Method Used):	Closed Cup, Above 212°F/100°C
Autoignition:	Not Determined
Flammability Limits in Air:	Not Determined
Extinguishing Media:	On large fires, use dry chemical, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray. Water can be used to cool fire exposed containers.
Special Fire Fighting Procedures:	Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards:	None
Hazardous Decomposition Products:	Carbon oxides and traces of incompletely burned carbon compounds, silicon dioxide & formaldehyde

SECTION 6: ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Use all personal protection equipment recommendations described in Sections 5 and 8. Scrape up spilled material and contain for salvage or disposal. Keep spills away from sewers and open bodies of water. Dispose of saturated cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable.

Note: See section 8 for personal protective equipment for spills.

SECTION 7 : HANDLING AND STORAGE

Ensure adequate ventilation or use respiratory protection. Acetic acid (HOAc) is formed when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid prolonged skin contact. Do not take internally. Avoid breathing vapor. Use reasonable care and store away from oxidizing materials. Keep container closed and protect against moisture.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

CAS Number	Substance	Exposure Limits
17689-77-9	Ethyltriacetoxysilane	See Comments
4253-34-3	Methyltriacetoxysilane	See Comments

Comments: Acetic acid is formed when exposed to water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION Cont.

PERSONAL PROTECTION EQUIPMENT FOR ROUTINE HANDLING (PPE)

Respiratory Protection:	Use respirator protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. If vapor/mist/dust/fumes are generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.
Hand Protection:	Nitrile Rubber or Butyl Rubber protective gloves
Eye Protection:	Safety glasses with side shields
Skin Protection:	Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse.

PERSONAL PROTECTION EQUIPMENT FOR SPILLS (PPE)

Respiratory Protection:	Respiratory protection recommended. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown or any other circumstance where air purifying respirators may not provide adequate protection.
Eye Protection:	Use full face respirator
Skin Protection:	Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Use Nitrile Rubber or Butyl Rubber protective gloves
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Do not take internally. Avoid breathing vapor. Keep container closed. Use reasonable care.
Comments:	Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. When heated to temperatures above 150°C (300°F) in the presence of air, product may form formaldehyde vapors.
Note:	These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Paste
Odor:	Acetic Acid-like
Specific Gravity (at 77°F/25°C):	1.007
Viscosity:	Not determined
Boiling Point:	Not determined
Freezing/Melting Point:	Not determined
Vapor Pressure (at 77°F/25°C):	Not determined
Vapor Density:	Not determined
Solubility in Water:	Not determined
pH:	Not determined
Percent Volatile by Weight:	Not determined

The above information is not intended for use in preparing product specifications.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable
Hazardous Polymerization: Hazardous polymerization will not occur
Conditions to Avoid: None
Materials to Avoid: Oxidizing materials can cause a reaction. Water, moisture or humid air can cause hazardous vapors to form as described in Section 8.

SECTION 11: TOXICOLOGICAL INFORMATION

No known applicable information.

SECTION 12: ECOLOGICAL INFORMATION

Complete information is not yet available.

SECTION 13: DISPOSAL CONSIDERATION

According to 40 CFR 261, this material is not classified as a hazardous waste. State and local laws may impose additional regulatory requirements regarding disposal.

SECTION 14: TRANSPORT INFORMATION

US DOT & Canada TDG Surface: Not regulated
Transport by sea IMDG-Code: Not regulated
Air transport ICAO-TI/IATA-DGR: Not regulated

SECTION 15: REGULATORY INFORMATION

FEDERAL REGULATIONS:

TSCA inventory status and TSCA information:
All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
TSCA 12 (b) Export Notification:
This material does not contain any TSCA 12 (b) regulated chemicals.
CERCLA Regulated Chemicals:
This material does not contain any CERCLA regulated chemicals.
SARA 302 EHS Chemicals:
This material does not contain any SARA extremely hazardous substances.
SARA 311/312 Hazard Class:
Immediate (acute) health hazard.
SARA 313 Chemicals:
This material does not contain any SARA 313 chemicals above the minimum levels
HAPS:
This material does not contain any hazardous air pollutants.

SECTION 15: REGULATORY INFORMATION Cont.

U.S. STATE REGULATIONS:

California Proposition 65:
This material does not contain any chemicals known to the state of California to cause cancer or reproductive effects.

Massachusetts Substance List:

7631-86-9	Silica, amorphous	7.0-13.0%
New Jersey		
70131-67-8	Dimethyl siloxane, hydroxy-terminated	>60.0%
7631-86-9	Silica, amorphous	7.0-13.0%
64742-46-7	Hydrotreated middle petroleum distillates	<=7.0%
17689-77-9	Ethyltriacetoxysilane	1.0-5.0%
4253-34-3	Methyltriacetoxysilane	1.0-5.0%
Pennsylvania		
70131-67-8	Dimethyl Siloxane, hydroxy-terminated	>60.0%
7631-86-9	Silica, amorphous	7.0-13.0%
64742-46-7	Hydrotreated middle petroleum distillates	<=7.0%

SECTION 16: OTHER INFORMATION

This data is offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

IPEX

GHS SAFETY DATA SHEET

IPEX 636 CLR Low VOC Primer for PVC and CPVC Plastic Pipe

Date Revised: **JUN 2013**
Supersedes: **JAN 2012**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **IPEX 636 CLR Low VOC Primer for PVC and CPVC Plastic Pipe**

PRODUCT USE: Low VOC Primer for PVC and CPVC Plastic Pipe

SUPPLIER: IPEX Inc.
807 Pharmacy Avenue
Scarborough, Ontario M1L 3K2, CAN

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2B				

GHS LABEL: **OR**

Signal Word: **Danger**

WHMIS CLASSIFICATION: CLASS B, DIVISION 2

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H332: Harmful if inhaled	P280: Wear protective gloves/protective clothing/eye protection/face protection
H335: May cause respiratory irritation	P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
H336: May cause drowsiness or dizziness	P403+P233: Store in a well ventilated place. Keep container tightly closed
EUH019: May form explosive peroxides	P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	45 - 59
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	19 - 29
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	5 - 20
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	5 - 15

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon and smoke

	HMIS	NFPA	
			0-Minimal
Health	2	2	1-Slight
Flammability	3	3	2-Moderate
Reactivity	0	0	3-Serious
PPE	B		4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (111°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL:
Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	
Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	
Cyclohexanone	20 ppm	50 ppm	50 ppm	
Acetone	500 ppm	750 ppm	1000 ppm	

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, thin liquid		
Odor:	Ethereal	**Odor Threshold:**	0.88 ppm (Cyclohexanone)
pH:	Not Applicable		
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	**Boiling Range:**	56°C (133°F) to 156°C (313°F)
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	**Evaporation Rate:**	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) TCC based on Acetone	**Flammability:**	Category 2
Specific Gravity:	0.858 @23°C (73°F)	**Flammability Limits:**	**LEL:** 1.1% based on Cyclohexanone
Solubility:	Solvent portion soluble in water. Resin portion separates out.		**UEL:** 12.8% based on Acetone
Partition Coefficient n-octanol/water:	Not Available	**Vapor Pressure:**	190 mm Hg @ 20°C (68°F) Acetone
Auto-ignition Temperature:	321°C (610°F) based on THF	**Vapor Density:**	>2.0 (Air = 1)
Decomposition Temperature:	Not Applicable	**Other Data: Viscosity:**	Water-thin
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤ 550 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon and smoke.
Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: None known to humans

Toxicity:	LD_{50}	LC_{50}
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m^3 (rat)
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m^3 (rat)
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m^3 (rat)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known
Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 550 g/l.
Degradability: Biodegradable
Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Flammable Liquid, n.o.s. (Acetone, Tetrahydrofuran)
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1993
Packing Group: PG II
Label Required: Class 3 Flammable Liquid
Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 1L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	Flammable Liquid, n.o.s. (Acetone, Tetrahydrofuran)
UN NUMBER/PACKING GROUP:	UN 1993, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant
Symbols: F, Xi
Risk Phrases: R11: Highly flammable.
R20: Harmful by inhalation.
R36/37: Irritating to eyes and respiratory system.
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapors may cause drowsiness and dizziness

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

Safety Phrases: S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33: Take precautionary measures against static discharges.
S46: If swallowed, seek medical advise immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information: All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Department issuing data sheet: Safety Health & Environmental Affairs
Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 6/11/2013 / Updated GHS Standard Format
Intended Use of Product: Primer for PVC and CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

MATERIAL SAFETY DATA SHEET

R7K320
09 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
R7K320
PRODUCT NAME
HAPS Compliant Lacquer Thinner
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.oem.sherwin-williams.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
12	**64742-89-8**	**Lt. Aliphatic Hydrocarbon Solvent**		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
31	**64742-89-8**	**V. M. & P. Naphtha**		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
5	**108-88-3**	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
17	**67-63-0**	**2-Propanol**		
		ACGIH TLV	200 PPM	33 mm
		ACGIH TLV	400 PPM STEL	
		OSHA PEL	400 PPM	
2	**111-76-2**	**2-Butoxyethanol**		
		ACGIH TLV	20 PPM	0.88 mm
		OSHA PEL	25 PPM	
9	**67-64-1**	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
3	**78-93-3**	**Methyl Ethyl Ketone**		
		ACGIH TLV	200 PPM	70 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
3	**110-43-0**	**Methyl n-Amyl Ketone**		
		ACGIH TLV	50 PPM	3.855 mm
		OSHA PEL	100 PPM	
14	**110-19-0**	**Isobutyl Acetate**		
		ACGIH TLV	150 PPM	12.5 mm
		OSHA PEL	150 PPM	
4	**97-85-8**	**Isobutyl Isobutyrate**		
		ACGIH TLV	Not Available	3.2 mm
		OSHA PEL	Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes	
Health	2
Flammability	3
Reactivity	0

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the hematopoietic (blood-forming) system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
5 °F PMCC	0.9	12.8	RED LABEL -- Extremely Flammable, Flash below 21 °F (-6 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are EXTREMELY FLAMMABLE. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.52 lb/gal	781 g/l
SPECIFIC GRAVITY	0.78	
BOILING POINT	132 - 343 °F	55 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

6.51 lb/gal	780 g/l	Less Water and Federally Exempt Solvents
5.92 lb/gal	710 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Methyl Ethyl Ketone may increase the nervous system effects of other solvents.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-89-8	**Lt. Aliphatic Hydrocarbon Solvent**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	**V. M. & P. Naphtha**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	**Toluene**			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-63-0	**2-Propanol**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5045 mg/kg
111-76-2	**2-Butoxyethanol**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		470 mg/kg
67-64-1	**Acetone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
78-93-3	**Methyl Ethyl Ketone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
110-43-0	**Methyl n-Amyl Ketone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		1670 mg/kg
110-19-0	**Isobutyl Acetate**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		13400 mg/kg
97-85-8	**Isobutyl Isobutyrate**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D
Larger Containers are Regulated as:
UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Toluene 1000 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.
UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (-15 C c.c.), EmS
F-E, S-E, ADR (D/E)

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG II

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	5	
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MOMENTIVE™

Print Date 15-JUN-2015

260 Hudson River Road
Waterford NY 12188
(518) 237-3330

10851 Energy Highway
Friendly WV 26146
+1-800-295-2392

DAVE CARTER AND ASSOCIATES - BOISE
550 E AMITY
BOISE Idaho 83716

Dear Customer,

Enclosed please find the most current Safety Data Sheet (SDS) for the product you have recently purchased or in which you have expressed an interest. This document supersedes any previous SDS for this product.

L200-1 12C-L/H ACRY/PLUS SILC-CGE (1.1LBS-0.501KG) WHITE

It is Momentive's policy to communicate the health and safety information pertinent to the safe handling and use of our products. We cannot anticipate all end uses to which our products may be applied. Hence we urge you to seek advice to determine whether or not your safety programs and warnings are adequate in light of your operations and the intended product use.

Please be aware that the hazard information contained in the SDS must be communicated to your workers and any other users. Please forward this information to the individuals within your organization responsible for the safe handling of this product and take all appropriate steps to insure that this information is provided to your employees and customers.

Additionally, pursuant to Title III, Section 313 of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986), we are informing you as required by Subpart C of 40 CFR Part 372 that this product may contain chemicals subject to the reporting requirements of Section 313. All chemicals in this product that are subject to Section 313 reporting requirements are clearly indicated in Section 15 of the SDS.

Also, please be advised that we are in the midst of upgrading the current Safety Data Sheet system. During this transition you may receive SDSs in both the old and new format. We thank you for your patience during this transition period.

If you have any questions or require additional information, please contact us as instructed in Section 1 of the SDS or via your Momentive Sales Representative.

Kind regards,

Product Safety & Regulatory Compliance

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

L200-1 12C-L/H ACRY/PLUS SILC-CGE (1.1LBS-0.501KG) WHITE

Section 1. Product and company identification

Product name	:	L200-1 12C-L/H ACRY/PLUS SILC-CGE (1.1LBS-0.501KG) WHITE
Chemical name	:	Not available
Manufacturer/Importer/ Distributor Information	:	Momentive Performance Materials - Daytona 703 South Street New Smyrna Beach FL 32168
Contact person	:	4information@momentive.com
Telephone	:	General information +1-800-295-2392
Emergency telephone number Supplier	:	CHEMTREC 1-800-424-9300

Section 2. Hazards identification

Classification of the substance or mixture	:	Not classified.

GHS label elements

Signal word	:	No signal word.
Hazard statements	:	No known significant effects or critical hazards.

Precautionary statements

General	:	Not applicable.
Prevention	:	Not applicable.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Other hazards which do not result in classification	:	Uncured product is irritating to eyes, skin, and respiratory system.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Not available

Hazardous ingredients	% by weight	CAS number
Plasticizer Polymer Additive	5 - 10	Trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first aid personnel : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media : water jet

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this

material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Large spill : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see section 8 of SDS).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid
Color : White

Odor : ammonia
Odor threshold : Not available
pH : Not available

Melting point	:	Not applicable.
Boiling point	:	Not applicable.
Flash point	:	93.3 °C (199.94 °F) (Estimated.)
Burning time	:	Not available
Burning rate	:	Not available
Evaporation rate	:	Not available
Flammability (solid, gas)	:	Not available
Lower and upper explosive (flammable) limits	:	**Lower:** Not applicable. **Upper:** Not applicable.
Vapor pressure	:	Not applicable.
Vapor density	:	Not applicable.
Relative density	:	Not available
Solubility	:	Not available
Solubility in water	:	Not available
Partition coefficient: n-octanol/water	:	Not available
Auto-ignition temperature	:	Not applicable.
Decomposition temperature	:	Not available
SADT	:	Not available
Viscosity	:	**Dynamic:** Not available **Kinematic:** Not available
Volatile organic content	:	0.35 % (w/w) 36.98 g/l

Other information

No additional information.

Section 10. Stability and reactivity

Reactivity	:	Stable under normal conditions.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Conclusion/Summary	:	Not determined

Irritation/Corrosion

Conclusion/Summary

Skin	:	Not determined
eyes	:	Not determined
Respiratory	:	Not determined

Sensitization

Conclusion/Summary

Skin	:	Not determined
Respiratory	:	Not determined

Mutagenicity

Conclusion/Summary : Not determined

Carcinogenicity

Conclusion/Summary : Not determined

Reproductive toxicity

Conclusion/Summary : Not determined

Teratogenicity

Conclusion/Summary : Not determined

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available
Potential delayed effects : Not available

Potential chronic health effects

Conclusion/Summary : Not determined

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available

Section 12. Ecological information

Ecotoxicity

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Mobility in soil

Soil/water partition coefficient (KOC) : Not available
Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable

products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Special precautions for user : This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15.Regulatory information

United States

U.S. Federal regulations : **United States - TSCA 12(b) - Chemical export notification:** None required.
United States - TSCA 5(a)2 - Final significant new use rules: Not listed
United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed
United States - TSCA 5(e) - Substances consent order: Not listed

SARA 311/312

Classification : Not applicable.

California Prop. 65: : WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

International regulations

International lists : **Australia inventory (AICS):** Not determined.
Canada inventory: At least one component is not listed in DSL but all such components are listed in NDSL.
Japan inventory: Not determined.
China inventory (IECSC): Not determined.
Korea inventory: Not determined.
New Zealand Inventory (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
United States inventory (TSCA 8b): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System III (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

Full text of abbreviated H statements : Not applicable.

History

Date of printing : 06/15/2015
Date of issue/Date of revision : 04/10/2015
Date of previous issue : 04/06/2015
Version : 1.2
Prepared by : Product Safety Stewardship
Key to abbreviations :
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations
References : Not available

Notice to reader

Unless otherwise specified in section 1, Momentive Products are intended for industrial application only. They are not intended for specific medical applications, neither for long-lasting (> 30 days) implantation into the human body, injected or directly ingested, nor for the manufacture of multiple usable contraceptives
Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet

Revision Number: 001.3 **Issue date:** 11/14/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOC PL520 MIR VOC 10OZ=295MLBEI**
Product type: Assembly adhesive, solvent
Restriction of Use: None identified
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 1650979
Region: United States
Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
DANGER:	ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE. HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)

Precautionary Statements

Prevention:

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response:

If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place.

Keep cool. Store locked up.

Disposal:

Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Acetone	67-64-1	10 - 30
Kaolin	1332-58-7	10 - 30
Methyl acetate	79-20-9	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1
Quartz (SiO2)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area. Do not allow product to enter sewer or waterways.

Clean-up methods: Use noncombustible absorbent material such as sand. Use non-sparking tools for clean-up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

7. HANDLING AND STORAGE

Handling: Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage: For safe storage, store between -20 °C (-4°F) and 50 °C (122°F)
Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m3) PEL	None	None
Kaolin	2 mg/m3 TWA Respirable fraction.	15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction.	None	None
Methyl acetate	200 ppm TWA 250 ppm STEL	200 ppm (610 mg/m3) PEL	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Tan
Odor:	Strong, Solvent
Odor threshold:	Not available.
pH:	7
Vapor pressure:	Not available.
Boiling point/range:	56 - 57 °C (132.8 - 134.6 °F)
Melting point/ range:	< 0 °C (< 32°F)
Specific gravity:	1.39
Vapor density:	2.0
Flash point:	-17 °C (1.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	14.4
Solubility in water:	Slightly soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.25 %; 7.5 g/l (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
Viscosity:	270,000 mPa.s
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects/Symptoms

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
Kaolin	Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 5,000 mg/kg	Nuisance dust
Methyl acetate	Oral LD50 (RABBIT) = 3.7 g/kg	Blood, Central nervous system, Eyes, Irritant
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Acetone	No	No	No
Kaolin	No	No	No
Methyl acetate	No	No	No
Titanium dioxide	No	Group 2B	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Dispose of according to Federal, State and local governmental regulations.
Hazardous waste number:	Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II
DOT Hazardous Substance(s):	Acetone

International Air Transportation (ICAO/IATA)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

Water Transportation (IMO/IMDG)

Proper shipping name:	ADHESIVES
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Fire, Immediate Health, Delayed Health
CERCLA/SARA Section 313:	None above reporting de minimis
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: This Safety Data Sheet contains changes from the previous version in Section(s):
7

Prepared by:	Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
Issue date:	11/14/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates (“Henkel”) does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user’s responsibility to determine the suitability of Henkel’s products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel’s products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel’s products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

SAFETY DATA SHEET

1. Identification

Product identifier **MAP-Pro™ Premium Hand Torch Fuel**

Other means of identification

SDS number WC001

Product code Varies

Recommended use Hand Torch Fuel

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St., Chilton, WI 5301
United States

Contact person Ann Stiefvater

E-mail address Ann.Stiefvater@worthingtonindustries.com

Telephone number 1-920-849-1740

Emergency telephone number 1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards Flammable gases — Category 1
Gases under pressure — Compressed gas

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) May displace oxygen and cause rapid suffocation.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Propylene		115-07-1	99.5 - 100

Impurities

Chemical name	CAS number	%
Propane	74-98-6	0 - 0.5

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Ingestion is not a typical route of exposure for gases or liquefied gases.
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, CO2, water spray, fog, or foam.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move container from fire area if it can be done without risk. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away. Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).
Methods and materials for containment and cleaning up	Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel. For waste disposal, see Section 13 of the SDS.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

7. Handling and storage

Precautions for safe handling	Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.
Conditions for safe storage, including any incompatibilities	Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Impurities	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Propylene (CAS 115-07-1)	TWA	500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Impurities	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Follow standard monitoring procedures.

Appropriate engineering controls Provide adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear protective clothing appropriate for the risk of exposure.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance Colorless liquefied gas.

Physical state Gas.

Form Compressed liquefied gas.

Color Colorless

Odor Hydrocarbon or mercaptan if odorized.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point -301 °F (-185 °C)

Flash point -162.0 °F (-107.8 °C)

Evaporation rate Not applicable.

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2 %

Flammability limit - upper (%) 11 %

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 109.73 PSIG (21°C)

Vapor density 1.5 (0°C)

Relative density	0.52 (liquid)
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	927 °F (497.22 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
VOC (Weight %)	100 %

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Information on toxicological effects

Acute toxicity	High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Components	**Species**	**Test Results**
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Not classified.

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	May cause central nervous system effects.

12. Ecological information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	The product is readily biodegradable.
Bioaccumulative potential	The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propylene (CAS 115-07-1)	1.77
Propane (CAS 74-98-6)	2.36

Mobility in soil	May evaporate quickly.
Mobility in general	May evaporate quickly.
Other adverse effects	None known.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1

Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	99.5 - 100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. New Jersey Worker and Community Right-to-Know Act

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

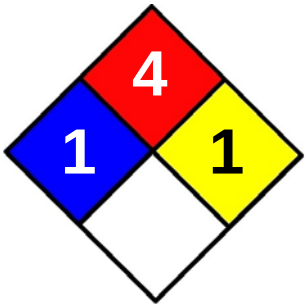
Issue date 07-December-2012

Revision date 28-April-2014

Version # 02

Further information HMIS® is a registered trade and service mark of the NPCA.
HMIS Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard.
Health: 1. Flammability: 4. Physical hazard: 1.

NFPA Ratings



Disclaimer All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

SAFETY DATA SHEET

SDS 0581

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Metacaulk MC 150+

HMIS CODES	
Health	1
Flammability	0
Reactivity	0
PPI	B

PRODUCT CODES
66382, 66383, 66385, 66389, 66648

CHEMICAL FAMILY
Organic/Inorganic

USE
Firestopping Sealant

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800)424-9300 USA
(703)527-3887 International

DATE OF VALIDATION
January 23, 2015

TECHNICAL SERVICE TELEPHONE NO.
(800)231-3345 or (713)263-8001

DATE OF PREPARATION
March 21, 2011

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION
PHYSICAL HAZARDS: None
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS
Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements
Pictogram: None
Signal Word: None
Hazard Statements: None
Precautionary Statements:
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
LABELING SYMBOLS: None
RISK R-PHRASES: NOne

SAFETY S-PHRASES:
S2 : Keep out of the reach of children.

SUMMARY OF ACUTE HAZARDS
May cause skin irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION
Not a respiratory irritant.

EYE CONTACT
Contact may cause eye irritation.

SKIN CONTACT
Contact may cause skin irritation.

INGESTION
Possible irritation to mucous membranes of the mouth, throat, and stomach.

SUMMARY OF CHRONIC HAZARDS
None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Persons with pre-existing skin conditions or chemical allergies may be more susceptible to contact effects of the cured elastomer.

==========

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.			

==========

Section 4 -- FIRST AID MEASURES

If INHALED:	Not a respiratory irritant.
If on SKIN:	Wash with soap and water. If irritation occurs, seek medical attention.
If in EYES:	Immediately flush with large amounts of water. If irritation occurs, seek medical attention.
If SWALLOWED:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

==========

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUSING MEDIA
Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up and rupture closed containers.

==========

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

==========

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. To prevent freezing and possible rupture of container, do not store below 35 F.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all product precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.
VENTILATION - LOCAL EXHAUST: N/A
SPECIAL: N/A
MECHANICAL (GENERAL): N/A
OTHER: N/A
PROTECTIVE GLOVES: None required.
EYE PROTECTION: None required.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None required.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	212 F (100 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	1.5
VAPOR PRESSURE (mm Hg):	17 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	>1
APPEARANCE/ODOR:	Red Paste/Mild Odor
SOLUBILITY IN WATER:	Soluble
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	<1% or <10 g/L
FLASH POINT	None
LOWER EXPLOSION LIMIT	None
UPPER EXPLOSION LIMIT	None

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None known.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

None

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

None

Food Chain Concentration Potential	N/A
WATERFOWL TOXICITY	N/A
BOD	N/A
AQUATIC TOXICITY	N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT:	Non-Regulated
OCEAN (IMDG):	Non-Regulated
AIR (IATA):	Non-Regulated
WHMIS (CANADA):	Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

None

SARA 313	N/A
TSCA Inventory	All components listed
CERCLA RQ	N/A
RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

SAFETY DATA SHEET

B72W1

Section 1. Identification

Product name : Moisture Vapor Barrier Primer/Finish

Product code : B72W1

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 1A

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 12.6%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥5 - <10	13463-67-7
Styrene-Butadiene Polymer	≥1 - <3	9003-55-8
Cristobalite	≥0.1 - <0.3	14464-46-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Section 4. First aid measures

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Styrene-Butadiene Polymer	None.
Cristobalite	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / 2 x (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Respirable TWA: 30 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8.8

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.23

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 0.947 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Styrene-Butadiene Polymer	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Styrene-Butadiene Polymer	-	3	-
Cristobalite	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
Styrene-Butadiene Polymer	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Carc. 1A, H350	Calculation method

History

Date of printing : 11/27/2015

Date of issue/Date of revision : 11/27/2015

Date of previous issue : 10/20/2015

Version : 1.04

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the

Section 16. Other information

product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

NS 6850 P

NEO SOLUTIONS INC.

MATERIAL SAFETY DATA

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **6850 P**

SYNONYMS: None

CHEMICAL FAMILY: Anionic polyacrylamide polymer

MOLECULAR FORMULA: Polymer

MOLECULAR WGT: Polymer

EARTH CHEM, INC., P.O. Box 466 Beaver. PA

EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call 1-800/764-5726.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS. NO.	%	TWA/CEILING	REFERENCE
No Permissible Exposure Limits (PEL/TLV) have been established by OSHA or ACGIH				

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Off-white granular solid; odorless

STATEMENTS OF HAZARD:

IMPORTANT! SPILLS OF THIS PRODUCT ARE VERY SLIPPERY WHEN WET

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE:

The acute oral (rat) and acute dermal (rabbit) LD50 values for this product are >5.0 g/kg and >10.0 g/kg, respectively. The acute 4-hour LC50 (rat) value is estimated to be greater than 20 mg/L. Direct contact with this material may cause minimal eye and skin irriation.

4. FIRST AID MEASURES

In case of skin contact, wash affected areas of skin with soap and water.

In case of eye contact, immediately irrigate with plenty of water for 15 minutes.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Not applicable

FLAMMABLE LIMITS

(% BY VOL): Not applicable

AUTOIGNITION TEMP: Not available

DECOMPOSITION TEMP: Not available

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

As with many solids, any dust that is generated may be explosive if mixed with air in critical proportions and in the presence of a source of ignition. Use water, carbon dioxide or dry chemical to extinguish fires. Wear self-contained, positive pressure breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Spilled material becomes very slippery when wet. Sweep up spills and place in a waste disposal container. Flush the area thoroughly with water and scrub to remove residue. if slipperiness remains, apply more dry-sweeping compound. Do not flush large quantities of the material to sewer.

7. HANDLING AND STORAGE

Spills should be scooped up or wiped up immediately and the spill area fluched with water.
Maintain good housekeeping to control dust accumulations.
To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Engineering controls are not usually necessary if good hygiene practices are followed. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Avoid unnecessary skin contact. Impervious gloves are recommended to prevent prolonged skin contact. For operations where eye or face contact can occur, eye protection is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Off-white granular solid; odorless
BOILING POINT: Not applicable
MELTING POINT: Not applicable
VAPOR PRESSURE: Not applicable
SPECIFIC GRAVITY: 0.65 - 0.85
VAPOR DENSITY: Not applicable
% VOLATILE (BY WT): 7 - 12; (water)
pH: Not applicable
SATURATION IN AIR (% BY VOL): Not available
EVAPORATION RATE: Not applicable
SOLUBILITY IN WATER: Limited by viscosity

10. STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known
POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: None known
INCOMPATIBLE MATERIALS: Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide; carbon dioxide; ammonia; and/or oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3, HAZARDS IDENTIFICATION. Toxicological information on the OSHA regulated components of this product is as follows: This product contains no OSHA regulated (hazardous) components.

12. ECOLOGICAL INFORMATION

No aquatic LC50, BOD, or COD data available.

OCTANOL/H2O PARTITION COEF: Not available

13. DISPOSAL CONSIDERATIONS

Disposal must be made in accordance with applicable governmental regulations.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	D.O.T. SHIPPING INFORMATION	IMO SHIPPING INFORMATION
SHIPPING NAME:	Not applicable/not regulated	Not applicable/not regulated
HAZARD CLASS/ PACKING GROUP:	Not applicable	Not applicable
UN NUMBER:	Not applicable	Not applicable
IMDG PAGE:	Not applicable	Not applicable
D.O.T. HAZARDOUS SUBSTANCES:	(PRODUCT REPORTABLE QUANTITY) Not applicable	Not applicable
TRANSPORT LABEL REQUIRED:	None required	None required

	ICAO/IATA	TRANSPORT CANADA
SHIPPING NAME:	Not applicable/not regulated	Not applicable/not regulated
HAZARD CLASS:	Not applicable	Not applicable
SUBIDIARY CLASS:	Not applicable	Not applicable
UN/ID NUMBER:	Not applicable	Not applicable
PACKING GROUP:	(PRODUCT REPORTABLE QUANTITY) Not applicable	Not applicable
TRANSPORT LABEL REQUIRED:	None required	None required
PACKING INSTR:	PASSENGER Not applicable	Not applicable

	CARGO	Not applicable	
MAX NET QTY:	PASSENGER	Not applicable	Not applicable
	CARGO	Not applicable	

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): Not applicable

15. REGULATORY INFORMATION

INVENTORY INFORMATION

US TSCA: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C.

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

EEC EINECS: All components of this product are included on the European Inventory of Existing Chemical Substances [EINECS] in compliance with Council Directive 67/548/EEC, Amended 79/831/EEC.

OTHER ENVIRONMENTAL INFORMATION

The following components are defined as toxic chemicals subject to reporting requirements of Section 313 of Title III and of 40 CFR 372 or subject to other EPA regulations.

COMPONENT	CAS. NO.	%	TPQ(lbs)	RQ(lbs)	S313	RCRA	TSCA 12B
This product does not contain any components regulated under these sections of the EPA.							

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA
Not applicable under SARA TITLE III

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

Fire 1	FIRE: Materials that must be preheated before ignition can occur
Health 0 0 Reactivity	HEALTH: Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.
-- Special	REACTIVITY: Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

REASON FOR ISSUE:

New Product

Earth Chem, Inc.

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered soley for your consideration, investigation and verification. Before using any product, read its label.

SAFETY DATA SHEET

SDS 0656

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Nokorode Regular Paste Flux

HMIS CODES	
Health	1
Flammability	1
Reactivity	0
PPI	B

PRODUCT CODES
14000, 14003, 14010, 14020, 14030

CHEMICAL FAMILY
Organic/Inorganic

USE
Soldering Flux

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800)424-9300 USA
(703)527-3887 International

DATE OF VALIDATION
January 23, 2015

TECHNICAL SERVICE TELEPHONE NO.
(800)231-3345 or (713)263-8001

DATE OF PREPARATION
May 2, 2012

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
OSHA Hazards
Irritant

GHS CLASSIFICATION
PHYSICAL HAZARDS: None
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS
Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements
Pictogram: Irritant

Signal Word: Warning
Hazard Statements:
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Precautionary Statements:
P102 - Keep out of reach of children.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P281 Use personal protective equipment as required.

SUMMARY OF ACUTE HAZARDS

Irritation to respiratory system from fumes evolved during soldering. Eye contact may cause intense irritation and injury.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Irritation to respiratory system from fumes evolved during soldering.

EYE CONTACT

Contact may cause intense irritation and injury.

SKIN CONTACT

May cause skin irritation.

INGESTION

Nausea, vomiting, irritation to digestive system.

SUMMARY OF CHRONIC HAZARDS

Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

==========

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Zinc Chloride
PERCENTAGE BY WEIGHT: 10-25
CAS#: 7646-85-7
EC#: 231-592-0

INGREDIENT: Ammonium Chloride
PERCENTAGE BY WEIGHT: 10-25
CAS#: 12125-02-9
EC#: 235-186-4

INGREDIENT: Petrolatum
PERCENTAGE BY WEIGHT: 70-90
CAS#: 8009-03-8
EC#: 232-373-2

==========

Section 4 -- FIRST AID MEASURES

If INHALED:	If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN:	Immediately wash with soap and water. Remove and wash

any contaminated clothing.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUSING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing.

Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT		UNITS
Zinc Chloride		
	ACGIH TLV	1 mg/m3
	OSHA PEL	1 mg/m3
Ammonium Chloride		
	ACGIH TLV	10 mg/m3
	OSHA PEL	10 mg/m3
Petrolatum		
	ACGIH TLV	N/D
	OSHA PEL	N/D

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during soldering operations until fumes have dissipated.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: N/A

MECHANICAL (GENERAL): Acceptable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Safety glasses (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed

areas thoroughly before eating, drinking, smoking, or leaving work area.
Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	N/A
SPECIFIC GRAVITY (H20 = 1):	1.06
VAPOR PRESSURE (mm Hg):	< 0.01 @ 68 F (20 C)
MELTING POINT:	120-150 F (52-66 C)
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	N/A
APPEARANCE/ODOR:	Tan / Petroleum Odor
SOLUBILITY IN WATER:	Insoluble
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	0% or (0 g/L)
Flash POINT	>400 F (204 C) SETA CC
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): None known
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Zinc Chloride
Oral-Rat LD50:350 mg/kg
Inhalation-Rat LCLo:1960 mg/m3/10M
Ammonium Chloride
Oral-Rat LD50:1650 mg/kg
Inhalation-Rat LC50:N/D
Petrolatum
Oral-Rat LD50:N/D
Inhalation-Rat LC50:N/D

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Zinc Chloride

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	None
AQUATIC TOXICITY: 7.2 ppm/96 hr/medium bluegill/TLm	

Ammonium Chloride

Food Chain Concentration Potential	None
WATERFOWL TOXICITY	N/A
BOD	N/A
AQUATIC TOXICITY: 6 ppm/96 hr/sunfish TLm	

Petrolatum

Food Chain Concentration Potential	N/D
WATERFOWL TOXICITY	N/D
BOD	N/D
AQUATIC TOXICITY:	N/D

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT:	Non-Regulated
OCEAN (IMDG):	Non-Regulated
AIR (IATA):	Non-Regulated
WHMIS (CANADA):	Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

Zinc Chloride

SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	1000 lb.
RCRA Code	N/A

Ammonium Chloride

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Petrolatum

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further
information: (713) 263-8001

Safety Data Sheet

Revision Number: 002.2 **Issue date:** 10/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **OSI® QB-300 Multi-Purpose Construction Adhesive**
Product type: Solvent based adhesive
Restriction of Use: None identified
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 827628
Region: United States
Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
DANGER:	ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE. HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A

PICTOGRAM(S)

Precautionary Statements

Prevention:

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection.

Response:

If on skin (or hair): Take off immediately all contaminated clothing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Naphtha, petroleum, hydrotreated light	Proprietary	10 - 30
Pentaerythritol ester of rosin	Proprietary	10 - 30
Kaolin	1332-58-7	5 - 10
CP Styrene, butadiene, divinylbenzene	Proprietary	5 - 10
n-Hexane	110-54-3	1 - 5
Quartz (SiO2)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice. If breathing is difficult, give oxygen.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If skin irritation persists, call a physician.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Do not induce vomiting, seek medical advice immediately.

Symptoms: See Section 11.

Notes to physician: Treat symptomatically and supportively.Aspiration may cause pulmonary edema or aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.

Unusual fire or explosion hazards: Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area. Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling: During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Do not cut, grind, weld, or drill on or near this container. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8. Keep out of the reach of children. Containers should be grounded and bonded to the receiving container.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Naphtha, petroleum, hydrotreated light	None	None	None	None
Pentaerythritol ester of rosin	None	None	None	None
Kaolin	2 mg/m3 TWA Respirable fraction.	15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction.	None	None
CP Styrene, butadiene, divinylbenzene	None	None	None	None
n-Hexane	50 ppm TWA (SKIN)	500 ppm (1,800 mg/m3) PEL	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:	Use a NIOSH approved supplied air respirator with an organic cartridge if the potential to exceed established exposure limits exists.
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Beige
Odor:	Slightly, mineral-oil-like
Odor threshold:	Not available.
pH:	not applicable
Vapor pressure:	155 mm hg (20 °C (68°F))
Boiling point/range:	57 - 74 °C (134.6 - 165.2 °F) no method
Melting point/ range:	Not available.
Specific gravity:	1.369
Vapor density:	Heavier than air.
Flash point:	-17.80 °C (0.04 °F) no method
Flammable/Explosive limits - lower:	1 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not available.
Evaporation rate:	4.4 Greater than butyl acetate., (Butyl acetate = 1)
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	20 %; 280 g/l (calculated)
Viscosity:	280,000 - 400,000 mPa.s
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects/Symptoms

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Naphtha, petroleum, hydrotreated light	None	Central nervous system, Irritant, Kidney, Lung
Pentaerythritol ester of rosin	None	Irritant
Kaolin	Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 5,000 mg/kg	Nuisance dust
CP Styrene, butadiene, divinylbenzene	None	No Records
n-Hexane	Oral LD50 (RAT) = 24 mg/kg Oral LD50 (RAT) = 43.5 mg/kg Oral LD50 (RAT) = 28,710 mg/kg Dermal LD50 (RABBIT) = > 2,000 mg/kg Inhalation LC50 (RAT, 4 h) = 73860 ppm	Developmental, Irritant, Lung, Nervous System, Reproductive
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Naphtha, petroleum, hydrotreated light	No	No	No
Pentaerythritol ester of rosin	No	No	No
Kaolin	No	No	No
CP Styrene, butadiene, divinylbenzene	No	No	No
n-Hexane	No	No	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: None expected.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Dispose of according to Federal, State and local governmental regulations.
Hazardous waste number:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24. If discarded, this product is considered a RCRA ignitable waste, D001.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

International Air Transportation (ICAO/IATA)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

Water Transportation (IMO/IMDG)

Proper shipping name:	ADHESIVES
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health, Fire
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). n-Hexane (CAS# 110-54-3).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/10/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

SILICONE SEALANT ACETOXY EXTENDED CLEAR

SECTION 1. IDENTIFICATION

Product name : SILICONE SEALANT ACETOXY EXTENDED CLEAR

Product code : 6005-12

Manufacturer or supplier's details

Company name of supplier : HI-TEC Industries

Address : 6100 S Fairfax Rd.
Bloomington, IN 47401

Telephone : (812) 824-8000

Emergency telephone : AAPCC: 1(800)222-1222

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive, binding agents

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Precautionary Statements : **Prevention:**
P271 Use only outdoors or in a well-ventilated area.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone elastomer

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Distillates (petroleum), hydrotreated middle	64742-46-7	>= 20 - < 30
Silicon dioxide	7631-86-9	>= 5 - < 10
Titanium dioxide	13463-67-7	>= 0.1 - < 1
Carbon black	1333-86-4	>= 0.1 - < 1

SILICONE SEALANT ACETOXY EXTENDED CLEAR

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	None known.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Silicon oxides Formaldehyde
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so.

SILICONE SEALANT ACETOXY EXTENDED CLEAR

		Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Materials to avoid	:	Do not store with the following product types: Strong oxidizing agents

SILICONE SEALANT ACETOXY EXTENDED CLEAR

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated middle	64742-46-7	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Mist)	5 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
Silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH
Carbon black	1333-86-4	TWA	3.5 mg/m3	NIOSH REL
		TWA	3.5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m3	ACGIH

Engineering measures : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Material : Impervious gloves

SILICONE SEALANT ACETOXY EXTENDED CLEAR

Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety glasses
Skin and body protection	:	Skin should be washed after contact.
Hygiene measures	:	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Color	:	in accordance with the product description
Odor	:	Acetic acid
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flash point	:	> 100 ℃ Method: closed cup
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	Not applicable

Relative vapor density	:	No data available
Relative density	:	0.96
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	200,000 mPa.s
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Acetic acid is formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products		
Thermal decomposition	:	Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : Acute toxicity estimate: 8.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Ingredients:

Distillates (petroleum), hydrotreated middle:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1.78 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information taken from reference works and the literature.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Carbon black:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.0046 mg/l
Exposure time: 4 h

Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:
Result: No skin irritation
Remarks: Information taken from reference works and the literature.

Titanium dioxide:
Species: Rabbit
Result: No skin irritation

Carbon black:
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:
Result: No eye irritation
Remarks: Information taken from reference works and the literature.

Titanium dioxide:
Species: Rabbit
Result: No eye irritation

Carbon black:
Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Ingredients:

Silicon dioxide:
Assessment: Does not cause skin sensitization.

Test Type: Skin: test type not specified
Species: Guinea pig
Remarks: No known sensitising effect.
Information taken from reference works and the literature.

Titanium dioxide:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact

Species: Mouse
Result: negative

Carbon black:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Silicon dioxide:

Genotoxicity in vitro	:	Result: negative Remarks: Information taken from reference works and the literature.
Genotoxicity in vivo	:	Application Route: Ingestion Result: negative Remarks: Information taken from reference works and the literature.
Germ cell mutagenicity - Assessment	:	Animal testing did not show any mutagenic effects.

Titanium dioxide:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Species: Mouse Result: negative

Carbon black:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Titanium dioxide:
Species: Rat
Application Route: inhalation (dust/mist/fume)
Exposure time: 24 Months
Method: OECD Test Guideline 453
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.
The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in inhalation studies with animals.

Carbon black:
Species: Rat
Application Route: Inhalation
Exposure time: 2 Years
Result: positive
Target Organs: Lungs
Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment	:	Sufficient evidence of carcinogenicity in inhalation studies with animals

IARC	Group 2B: Possibly carcinogenic to humans	
	Titanium dioxide	13463-67-7
	Carbon black	1333-86-4
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.	

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Carbon black:
Routes of exposure: inhalation (dust/mist/fume)
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Ingredients:

Titanium dioxide:
Species: Rat
NOAEL: 24,000 mg/kg
Application Route: Ingestion
Exposure time: 28 d

Species: Rat
NOAEL: 10 mg/m3
Application Route: inhalation (dust/mist/fume)
Exposure time: 2 y
Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carbon black:
Species: Rat
NOAEL: 1 mg/m3
LOAEL: 7 mg/m3
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: 90 d
Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Aspiration toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), hydrotreated middle:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Titanium dioxide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l Exposure time: 72 h
Toxicity to bacteria	:	EC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Carbon black:

Toxicity to fish	:	LC0 (Danio rerio (zebra fish)): 1,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): > 5,600 mg/l

aquatic invertebrates		Exposure time: 24 h Method: OECD Test Guideline 202
Toxicity to algae	:	NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA)	:	This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.
Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

SILICONE SEALANT ACETOXY EXTENDED CLEAR

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic acid	64-19-7	5000	*
Acetic anhydride	108-24-7	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
10,10-Oxydiphenoxarsine	58-36-6	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Dimethyl siloxane, hydroxy-terminated	70131-67-8	50 - 70 %
Distillates (petroleum), hydrotreated middle	64742-46-7	20 - 30 %
Silicon dioxide	7631-86-9	5 - 10 %
Aluminium	7429-90-5	0 - 0.1 %
Acetic acid	64-19-7	0 - 0.1 %
Acetic anhydride	108-24-7	0 - 0.1 %

New Jersey Right To Know

Dimethyl siloxane, hydroxy-terminated	70131-67-8	50 - 70 %
Distillates (petroleum), hydrotreated middle	64742-46-7	20 - 30 %
Silicon dioxide	7631-86-9	5 - 10 %
Carbon black	1333-86-4	0.1 - 1 %

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

Cobalt titanite green spinel 68186-85-6

The ingredients of this product are reported in the following inventories:

IECSC : All ingredients listed or exempt.

SILICONE SEALANT ACETOXY EXTENDED CLEAR

DSL	:	This product contains one or more substances which are not on the Canadian Domestic Substances List (DSL). Import of this product into Canada has volume limitations. For volume limits please consult Dow Corning Regulatory Compliance.
REACH	:	Consult your local Dow Corning office.
TSCA	:	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

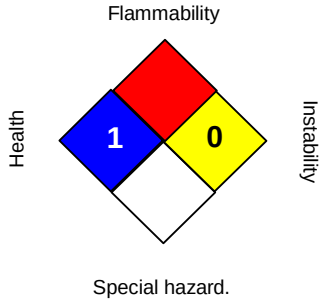
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

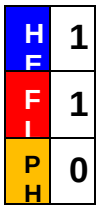
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:



0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

SILICONE SEALANT ACETOXY EXTENDED CLEAR

OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average
Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	02/12/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Ready Mix Texture

Safety Data Sheet*

Date of issue: 07/27/2015 Revision date: 07/27/2015 Supersedes: 19/06/2015 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Ready Mix Texture

Quick Identifier Common Name (on label / list)	Packaging	Product Code
Ready Tex (1257)	3.5 gal (13.2 L) box	895900000126
Ready Tex – White (1257)	3.5 gal (13.2 L) box	895900000126

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Ready-Mixed Wall Texture

1.3. Details of the supplier of the safety data sheet

Hamilton Drywall Products
295 N. Pekin Road
Woodland, WA, 98674

Phone number: 1-800-871-4998
Fax number: 1-800-871-5007
Website: www.hamiltonnw.com

1.4. Emergency telephone number

Emergency number : Chemtrec: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance

Classification (GHS-US)
Carc. 1A H350
STOT RE 2 H373
Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US) :

GHS08

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H350 - May cause cancer (Inhalation)
H373 - May cause damage to organs (lungs/respiratory system) through prolonged or repeated exposure (Inhalation)
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, mist, spray, vapor
P280 - Wear appropriate PPE (See Section 8)
P308 + P313 - If exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P405 - Store locked up
P501 - Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification : Traces of formaldehyde and vinyl acetate monomer may be present. These materials are not added to this product. They may be present as residual trace chemicals in some commonly used raw materials. Any exposure to these chemicals during product use is expected to remain well below both ACGIH and OSHA limits. Other ingredients may be considered nuisance dusts regulated as Particulates Otherwise Not Regulated.

: Other constituents in this product are considered nuisance particles or dust. Exposure to dusts, mists, sprays or powders may cause mechanical irritation of the respiratory system, eyes, and skin. Particulates Not Otherwise Regulated (Respirable Fraction) has an OSHA PEL of 5 mg/m^3 (15 mppcf) TWA and ACGIH Guideline of 3 mg/m^3 TWA. Particulates Not Otherwise Regulated (Total Dust) has an OSHA PEL of 15 mg/m^3 (50 mppcf) TWA and ACGIH Guideline of 10 mg/m^3 TWA.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Crystalline Silica *(as an impurity of other ingredients/constituents)*	(CAS No) 14808-60-7	< 2	Eye Irrit. 2A, H319 Carc. 1A, H350 STOT SE 3, H335 STOT RE 2, H373

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

First-aid measures after inhalation : Move the affected person away from the contaminated area and remove to fresh air. If breathing problems occur, a certified professional should administer oxygen or CPR if indicated. Seek immediate medical attention.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. If eye irritation or pain persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Seek medical advice in case of persistent discomfort. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : There are potential chronic health effects to consider.

Symptoms/injuries after inhalation : May cause cancer by inhalation. Long-term dust, mist, or spray exposure may aggravate pre-existing respiratory disease. Persons who develop silicosis have greatly increased risks of developing tuberculosis and workers who are exposed to crystalline silica and smoke have increased risks of lung damage.

Symptoms/injuries after skin contact : Direct contact may cause irritation, rash, or dry skin. Rubbing may intensify symptoms and create abrasions.

Symptoms/injuries after eye contact : Particulate matter may scratch the cornea or cause other mechanical injury to the eye. Scratching or physical damage to the eyes can cause irritation, redness, pain, tear formation, blurred vision, and light sensitivity.

Symptoms/injuries after ingestion : Not expected to be a significant route of entry. If ingestion occurs, mild temporary stomach discomfort may result.

Chronic symptoms : Repeated inhalation of respirable crystalline silica over a number of years can cause lung disease (silicosis) and increase the risks of developing respiratory cancer. Silicosis is a progressive fibrotic pneumoconiosis which greatly decreases the ability of the lungs to provide oxygen (decreased pulmonary capacity). The disease may progress even if the worker is removed from exposure. The extent and severity of lung injury depends on a variety of factors including particle size, percentage of silica, natural resistance, dust concentration and length of exposure. Symptoms of silicosis include phlegm, coughing, and characteristic x-rays.

4.3. Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Any. Use media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.
Reactivity : Not reactive under normal use and conditions.

5.3. Advice for firefighters

Protection during firefighting : Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ensure adequate air ventilation.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip clean-up crew with proper protection.
Emergency procedures : Stay upwind. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment

6.3. Methods and material for containment and cleaning-up

For containment : Stop leak if you can do it without risk. Contain/dike material for later disposal. Do not touch or walk through spilled material.

Methods for cleaning up : Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements or confined areas. If necessary (to allow for easy clean-up), absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

In dry/powder state, completely remove dusts to prevent recirculation of crystalline silica. For small spills, clean with a vacuum with a filtration system sufficient to remove and prevent dust recirculation. For large spills, use a fine spray or mist to control dust creation and carefully scoop or shovel into clean, dry container for later reuse or disposal. DO NOT USE DRY SWEEPING OR COMPRESSED AIR TO CLEAN SPILLS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Combustion may produce carbon monoxide and other harmful substances.

Precautions for safe handling : Avoid dust, mist, and spray inhalation. DO NOT use compressed air or dry sweeping to remove dust from work area. Dusts should be removed using an appropriately equipped vacuum. If an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. wet sweeping, misting, etc.). Moisture should be added as necessary to reduce exposure to airborne respirable dust.

Hygiene measures : Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered. Do not take silica contaminated clothing home.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Containers should be stored in room at ambient temperature and pressure. Keep container closed when not in use.

7.3. Specific end use(s)

Ready-Mixed Wall Texture

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Crystalline Silica (14808-60-7)		
USA – ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ A2
USA – ACGIH	Remark (ACGIH)	Lung Cancer; Silicosis
USA – OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³ %SiO2+2
USA – OSHA	OSHA PEL (TWA) (ppm)	250 mppcf %SiO2+2
USA – OSHA	Remark (US OSHA)	(3) See Table Z-3.

8.2. Exposure controls

Appropriate engineering controls	:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Enclosed processes used in combination with local exhaust ventilation as necessary to control air contaminants at or below acceptable exposure guidelines. Collection systems must be designed and maintained to prevent the accumulation and recirculation of respirable silica into the workplace.
Personal protective equipment	:	Avoid all unnecessary exposure.
Hand protection	:	None required. Polymeric gloves are recommended to prevent irritation. Nitrile construction materials appear to offer the best protection against the ingredients of the product.
Eye protection	:	Chemical goggles or safety glasses.
Skin and body protection	:	Under dusty, misty, spray conditions or when excessive skin contact is likely, wear coveralls or other suitable work clothing.
Respiratory protection	:	Wear NIOSH/MSHA approved respirator equipped with particulate cartridges when dusty, misty, or spraying in poorly ventilated areas, and if exposure limits are exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. For exposures of crystalline silica up to 0.5 mg/m³ TWA, NIOSH recommends wearing any particulate respirator equipped with an N95, R95, or P95 filter, except quarter-mask respirators.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Semi-solid
Appearance	:	Paste
Color	:	Off-white
Odor	:	Mild characteristic
Odor threshold	:	No data available
pH	:	7.5 – 10
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	0 °C (32ºF)
Boiling point	:	~ 100 °C (212ºF)
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	1.4 – 1.8 (water = 1)
Solubility	:	Insoluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity	:	300 - 800 Brabender Units

Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content (VOC of material)	:	< 3 g/L
VOC content for the South Coast Air Quality Management District (SCAQMD) – Regulatory VOC (less water and exempts)	:	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive under normal use and conditions.

10.2. Chemical stability

Stable at normal temperatures and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid generating dust, mist, or spray.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Combustion may produce carbon monoxide and other harmful substances.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified; pH 7.5-10
Serious eye damage/irritation	:	Not classified; pH 7.5-10
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	May cause cancer (inhalation).

Crystalline Silica (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	May cause damage to organs (lungs/respiratory system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	:	Not classified
Symptoms/injuries after inhalation	:	May cause cancer by inhalation. Long-term dust, mist, or spray exposure may aggravate pre-existing respiratory disease. Persons who develop silicosis have greatly increased risks of developing tuberculosis and workers who are exposed to crystalline silica and smoke have increased risks of lung damage.
Symptoms/injuries after skin contact	:	Direct contact may cause irritation, rash, or dry skin. Rubbing may intensify symptoms and create abrasions.
Symptoms/injuries after eye contact	:	Particulate matter may scratch the cornea or cause other mechanical injury to the eye. Scratching or physical damage to the eyes can cause irritation, redness, pain, tear

formation, blurred vision, and light sensitivity.

Symptoms/injuries after ingestion : Practically non-toxic. Ingestion is not anticipated under normal working conditions.

Chronic symptoms : Repeated inhalation of respirable crystalline silica over a number of years can cause lung disease (silicosis) and increase the risks of developing respiratory cancer. Silicosis is a progressive fibrotic pneumoconiosis which greatly decreases the ability of the lungs to provide oxygen (decreased pulmonary capacity). The disease may progress even if the worker is removed from exposure. The extent and severity of lung injury depends on a variety of factors including particle size, percentage of silica, natural resistance, dust concentration and length of exposure. Symptoms of silicosis include phlegm, coughing, and characteristic x-rays.

SECTION 12: Ecological information

12.1. Toxicity

Not expected to be ecotoxic.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of as inert solid in landfill. Dispose of waste material according to Local, State and Federal environmental regulations. Never discharge directly into sewers or surface waters. Slurry may plug drains.

SECTION 14: Transport information

In accordance with DOT, not regulated for transport.

Additional information

Other information : No supplementary information available.

ADR

No additional information available.

Transport by sea

No additional information available.

Air transport

No additional information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Crystalline Silica (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available.

EU - Regulations

No additional information available.

Classification according to Regulations (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc. Cat. 2; R22; R43; R49
Full text of R-phrases: see section 16

15.2.2. National regulations

Emergency procedures : Evacuate unnecessary personnel.

Crystalline Silica (14808-60-7)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California – Proposition 65
This product may contain substances known to the State of California to cause cancer: Crystalline silica (airborne particulates of respirable size) and traces of formaldehyde and vinyl acetate monomer. Attapulgite Clay >5µm in length.

Crystalline Silica (14808-60-7)
U.S. – Idaho – Non-Carcinogenic Toxic Air Pollutants – Acceptable Ambient Concentrations
U.S. – New Jersey – Right to Know Hazardous Substance List
U.S. – Washington – Permissible Exposure Limits – TWA's
U.S. – Massachusetts – Right to Know List
U.S. – Pennsylvania – Right to Know List
U.S. – Rhode Island – Right to Know List

SECTION 16: Other information

Data sources : ChemADVISOR, Inc.[https://www.chemadvisor.com]. GESTIS DNEL Database [http://dnel-en.itrust.de/nxt/gateway.dll/dnel_en/000000.xml?f=templates$fn=default.htm$vid=dneleng:ddb eng$3.0/].

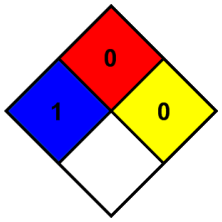
Full text of H-phrases: see section 16:

Acute Tox.3 (Dermal)	Acute Toxicity (dermal) Category 3
Acute Tox.3 (Inhalation)	Acute Toxicity (inhalation) Category 3
Acute Tox.3 (Oral)	Acute Toxicity (oral) Category 3
Acute Tox.4 (Dermal)	Acute Toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 2 (Inhalation: gas)	Acute toxicity (inhalation: gas) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable Liquids Category 2
Muta. 2	Germ cell mutagenicity Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2

Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H 341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H402	Harmful to aquatic life
R22	Harmful if swallowed
R43	May cause sensitization by skin contact
R49	May cause cancer by inhalation

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating :
Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard
Personal Protection : E



SDS US (GHS HazCom 2012)

This information is furnished without warranty, expressed, or implied, except that it is accurate to the best knowledge of Hamilton Drywall Products. The data on this sheet relates only to the specific material designed herein. Hamilton Drywall Products assumes no legal responsibility for the use or reliance on this data.

SAFETY DATA SHEET

SDS 0011

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
RectorSeal No. 5

HMIS CODES

Health	1
Flammability	2
Reactivity	0
PPI	B

PRODUCT CODES
25112, 25191, 25271, 25300, 25431, 25551, 25552, 25631, 25633, 25780, 25790, 25793

CHEMICAL FAMILY
Organic

USE
Pipe Thread Sealant

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800)424-9300 USA
(703)527-3887 International

DATE OF VALIDATION
January 23, 2015

TECHNICAL SERVICE TELEPHONE NO.
(800)231-3345 or (713)263-8001

DATE OF PREPARATION
January 9, 2013

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
OSHA Hazards
Combustable
TARGET ORGANS
Not Classified
GHS CLASSIFICATION
PHYSICAL HAZARDS
Combustable liquid (Category 4)
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Skin Sensitization: Not Classified
Respiratory Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: See Section 11
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

GHS Label elements, including precautionary statements
Pictogram: Harmful / Irritant
Signal Word: Warning
Hazard Statements
H303 - May be harmful if swallowed.
H313 - May be harmful in contact with skin.
H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness.
Precautionary Statements
P102 - Keep out of reach of children.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/Bond container and receiving equipment
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362 - Take off contaminated clothing and wash before reuse.
EUH066 - Repeated exposure may cause skin dryness or cracking
Precautionary Statements - EU No. 1272/2008

SUMMARY OF ACUTE HAZARDS

Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT

Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT

Irritation, dermatitis.

INGESTION

Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS

Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

==========

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Diacetone Alcohol
PERCENTAGE BY WEIGHT: 20-30
CAS NUMBER: 123-42-2
EC# : 204-626-7

==========

Section 4 -- FIRST AID MEASURES

If INHALED:	If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN:	Wash with soap and water. If irritation occurs, seek medical attention.
If in EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

==========

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUSING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point.

Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	UNITS
Diacetone Alcohol	
ACGIH TLV	50 ppm
OSHA PEL	50 ppm

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: Explosion-proof equipment.
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	322 F (161 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	1.38
VAPOR PRESSURE (mm Hg):	0.3 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	1.1
EVAPORATION RATE (ETHYL ACETATE = 1):	0.14
APPEARANCE/ODOR:	Yellow Paste/Mild Odor
SOLUBILITY IN WATER:	23%
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	23% or (317 g/L)
Flash POINT	150 F (65 C) SETA CC
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing.

Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredients in this product is an IARC, NTP or OSHA Lister carcinogen.

TOXICOLOGY DATA

Ingredient Name		
Diacetone Alcohol		
	Oral-Rat	LD50:4000 mg/kg
	Inhalation-Human	TCLo: 100 ppm

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name		
Diacetone Alcohol		
	Food Chain Concentration Potential	N/A
	WATERFOWL TOXICITY	N/A
	BOD	N/A
	AQUATIC TOXICITY	N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT:	Non-Regulated
OCEAN (IMDG):	Non-Regulated
AIR (IATA):	Non-Regulated
WHMIS (CANADA):	Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name		
Diacetone Alcohol		
	SARA 313	N/A
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

SAFETY DATA SHEET

B54R38

Section 1. Identification

Product name : Industrial Enamel
Safety Red

Product code : B54R38

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 89.2%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Flammable liquid and vapor.
May cause an allergic skin reaction.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Contaminated work clothing should not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	42.2	64742-88-7
Calcium Carbonate	6.6	471-34-1
Titanium Dioxide	3.0	13463-67-7
Methyl Ethyl Ketoxime	0.3	96-29-7
Methyl Isobutyl Ketone	0.2	108-10-1
Ethylbenzene	0.1	100-41-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Calcium Carbonate	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Titanium Dioxide	**ACGIH TLV (United States, 4/2014).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Methyl Ethyl Ketoxime	**AIHA WEEL (United States, 10/2011). Skin sensitizer.** TWA: 10 ppm 8 hours.
Methyl Isobutyl Ketone	**ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 148°C (298.4°F)

Flash point : Closed cup: 40°C (104°F) [Pensky-Martens Closed Cup]

Evaporation rate : 0.13 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1%
Upper: 6%

Vapor pressure : 0.023 kPa (0.169 mm Hg) [at 20°C]

Vapor density : 5 [Air = 1]

Relative density : 0.99

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Aerosol product

Heat of combustion : 0.00001848 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium Carbonate	LD50 Oral	Rat	6450 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Calcium Carbonate	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Methyl Isobutyl Ketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Section 11. Toxicological information

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Methyl Isobutyl Ketone	-	2B	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Isobutyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Methyl Isobutyl Ketone	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Calcium Carbonate	Acute LC50 >56000 ppm Fresh water Chronic NOEC 61 mg/g Fresh water	Fish - Gambusia affinis - Adult Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 28 days
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Methyl Isobutyl Ketone	Acute LC50 505000 µg/l Fresh water Chronic NOEC 78 mg/l Fresh water Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas Daphnia - Daphnia magna Fish - Pimephales promelas - Embryo	96 hours 21 days 33 days

Section 12. Ecological information

Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methyl Isobutyl Ketone	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	UN1263	UN1263	UN1263
UN proper shipping name	-	-	PAINT	PAINT	PAINT

Section 14. Transport information

Transport hazard class(es)	-	-	3	3	3
Packing group	-	-	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Nov 5, 2015

18 00 [0975]

PRODUCT NUMBER
B54R38
PRODUCT NAME
Industrial Enamel, Safety Red
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight
8.28 lb/gal

Specific Gravity
1.00

FLASH POINT
104 °F PMCC

Hazard Category (for SARA 311.312)
| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Med. Aliphatic Hydrocarbon Solvent 64742-88-7	N	N	N	N	42	54
Ethylbenzene 100-41-4	N	Y	Y	Y	0.1	< 1

Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)

A.	**Coating Density**			8.28 lb/gal	992 g/l
B.	**Total Volatiles**			43.8 % by wt.	56.2 % by vol.
C.	**Federally exempt solvents:**				
		Water		0.0 % by wt.	0.0 % by vol.
D.	**Organic Volatiles**			43.8 % by wt.	56.2 % by vol.
E.	**Percent Non-Volatile**			56.2 % by wt.	43.8 % by vol.
F.	**VOC Content**	3.62 lb/gal	434 g/l	total	
	1.	3.62 lb/gal	434 g/l	less exempt solvents	
	2.	8.28 lb/gal	992 g/l	of solids	
		0.77 lb/lb	0.77 kg/kg	of solids	

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

Volatile HAPS	0.01	lb/gal	0.001	kg/l
	0.02	lb/gal	0.003	kg/l of solids
	0.00	lb/lb	0.00	kg/kg of solids

Air Quality Data

Density of Organic Solvent Blend
6.45 lb/gal
Photochemically Reactive
No
Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)
0.37
Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)
0.44

Waste Disposal

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Addition of reducers or other additives to this product may substantially alter the above data. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Revised 10/10

Product Information

2.15

Product Description

INDUSTRIAL ENAMEL is a medium oil/alkyd all-purpose enamel. Designed for interior and exterior use.

- Dries fast and allows equipment to be placed back in service quickly
- Impact and abrasion resistant
- Chip and flake resistant
- High gloss makes it resistant to dirt
- Apply down to 40°F (4.5°C)
- Good exterior durability
- Excellent application properties

Product Characteristics

Finish:	Gloss
Color:	Wide range of colors available including safety colors
Volume Solids:	43% ± 2%, may vary by color
Weight Solids:	58% ± 2%, may vary by color
VOC (calculated):	<450 g/L; 3.75 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112)	**9.0** (225)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**175** (4.3)	**350** (8.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**690** (16.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.6 mils wet (115 microns):

	@ 50°F/10°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1-2 hours	30 minutes
Tack free:	8 hours	4-5 hours	4 hours
To recoat:	12 hours	8 hours	3 hours
To cure:	7 days	7 days	3 days

Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	101°F (38°C), PMCC
Reducer:	Not recommended
Clean Up:	Mineral Spirits, R1K4

Recommended Uses

For use over prepared substrates in industrial environments:

- Exterior/interior all-purpose maintenance enamel
- Safety and pipe marking enamel
- Economical machinery and equipment finish
- Interior wall and ceiling enamel
- Equipment
- Fire escapes
- Safety markings
- Steel supports
- Channels
- Fixtures
- Window frames
- Wood floors
- Blowers
- Pipe identification
- Conveyors
- Pumps
- Railings
- Pipe racks
- Bracing
- Conforms to AWWA D102, OCS #1
- Acceptable for use in high performance architectural applications.
- Suitable for use in USDA inspected facilities

Performance Characteristics

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct. Kem Kromik Universal Metal Primer @ 3.0-4.0 mils (75-100 microns) dft
1 ct. Industrial Enamel @ 3.0 mils (75 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance (topcoat only)	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	180 mg loss
Adhesion	ASTM D4541	290 psi
Corrosion Weathering	ASTM D5894, 6 cycles, 2016 hours	Rating 10 per ASTM D610 for rusting ; Rating 10 per ASTM D714 for blistering
Direct Impact Resistance	ASTM D2794	68 in. lbs.
Dry Heat Resistance	ASTM D2485	200°F (93°C)
Flexibility	ASTM D522, 180° bend, 3/16" mandrel	Passes
Pencil Hardness	ASTM D3363	3B

Provides performance comparable to products formulated to federal specifications:

DOD-E-115C
MIL-E-15090

continued on back

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Product Information

2.15

Recommended Systems

		Dry Film Thickness / ct. Mils	(Microns)
Steel:			
1 ct.	Kem Kromik Universal Metal Primer	3.0-4.0	(75-100)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Aluminum:			
1 ct.	DTM Wash Primer	0.7-1.3	(18-32)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Concrete Block:			
1 ct.	Heavy Duty Block Filler	10.0-18.0	(250-450)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Concrete Floors:			
1 ct.	Concrete and Terrazzo Sealer (reduced as needed)		
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Galvanized Metal:			
1 ct.	Galvite HS	3.0-4.5	(75-112)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Wood, including floors:			
2 cts.	Industrial Enamel	2.0-4.0	(50-100)
Interior Plaster and Poured Concrete Walls:			
1ct.	PrepRite Masonry Primer	3.0	(75)
2 cts.	Industrial Enamel	2.0-4.0	(50-100)

The systems listed above are representative of the product's use, other systems may be appropriate.

Disclaimer

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

* Iron & Steel: SSPC-SP2
* Aluminum: SSPC-SP1
* Galvanizing: SSPC-SP1
* Concrete & Masonry: SSPC-SP13/NACE 6 or ICRI No. 310.2, CSP 1-3
* Wood, interior: Clean, smooth, dust free

*Primer required

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Tinting

Tint with Blend-A-Color Toner or Maxitoner Colorant at 75% strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

Application Conditions

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

Ordering Information

Packaging: 1 gallon (3.78L) and 5 gallon (18.9L) containers

Weight: 8.82 ± 0.2 lb/gl, 1.06 Kg/L may vary with color

Safety Precautions

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Warranty

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Revised 10/10

Application Bulletin

2.15

Surface Preparations

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel
Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Aluminum
Remove all oil, grease, dirt, oxide, and other foreign material by Solvent Cleaning per SSPC-SP1. Primer required.

Galvanized Steel
Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. Primer required.

Masonry and Concrete
For surface preparation, refer to SSPC-SP13/NACE 6 or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F. Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with a cement patching compound. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Laitance must be removed. Primer required.

Wood
Surface must be clean, dry, and sound. Paint as soon as possible. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed. All nail holes or small openings must be properly caulked. Sand to remove any loose or deteriorated surface wood and to obtain a proper surface profile. Self priming.

Previously Painted Surfaces
If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Sa 3	Sa 3	SP 5	1
Near White Metal		Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast		Sa 2	Sa 2	SP 6	3
Brush-Off Blast		Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	C St 2	SP 2	-
	Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	C St 3	SP 3	-
	Pitted & Rusted	D St 3	D St 3	SP 3	-

Application Conditions

Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Application Equipment

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer .....Not recommended

Clean Up .....Mineral Spirits, R1K4

Airless Spray
Pressure.....2500 psi
Hose.....1/4" ID
Tip .....015"
Filter .....100 mesh

Conventional Spray
Gun .....Binks 95
Fluid Nozzle 66
Air Nozzle.....63PB
Atomization Pressure.....50 psi
Fluid Pressure.....20-25 psi

Brush
Brush.....Natural Bristle

Roller
Cover .....3/8" woven solvent resistant core

If specific application equipment is not listed above, equivalent equipment may be substituted.

continued on back

Protective & Marine Coatings

INDUSTRIAL ENAMEL

B54 Series

Application Bulletin

2.15

Application Procedures

Surface preparation must be completed as indicated.

Mixing Instructions: Mix paint thoroughly to a uniform consistency with low speed power agitation prior to use.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**4.5** (112)	**9.0** (225)
Dry mils (microns)	**2.0** (50)	**4.0** (100)
~Coverage sq ft/gal (m^2/L)	**175** (4.3)	**350** (8.6)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**690** (16.9)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.6 mils wet (115 microns):

	@ 50°F/10°C	@ 77°F/25°C *50% RH*	@ 110°F/43°C
To touch:	3 hours	1-2 hours	30 minutes
Tack free:	8 hours	4-5 hours	4 hours
To recoat:	12 hours	8 hours	3 hours
To cure:	7 days	7 days	3 days

Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Clean Up Instructions

Clean spills and spatters immediately with Mineral Spirits, R1K4. Clean tools immediately after use with Mineral Spirits, R1K4. Follow manufacturer's safety recommendations when using any solvent.

Disclaimer

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

Performance Tips

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Mineral Spirits, R1K4.

Deep tinted colors may exhibit burnishing characteristics.

Refer to Product Information sheet for additional performance characteristics and properties.

Safety Precautions

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

Warranty

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Product Finishes

CC-B32

SHER-KEM®

High Gloss Metal Finishing Enamel

Raven Black	F75BC14	Extra White Base	F75WC7	Deep Base	F75WC8
Ultra Deep Base	F75CC2	Implement Orange	F75EC9	Equipment Blue	F75LC14
International Red	F75RC7	Enviro Green	F75GC19	Implement Yellow	F75YC18
Equipment Yellow	F75YC19	Semi-Gloss Black	F75BC17	Low Gloss Ultra Deep Base	F75TC1

DESCRIPTION

SHER-KEM® High Gloss Metal Finishing Enamel is a direct-to-metal coating designed to give a factory applied finish and provide the brilliant color and performance required by the large agricultural and construction equipment and trailer manufacturers. It can also be used in the general metal finishing market when a premium, long lasting finish is needed.

Advantages:

- 8 Package colors provide quick hiding and color clarity needed to achieve OEM finishes
- Excellent, long lasting color and gloss retention, adding value to the life of finished products
- Superior distinctness of image reflecting deep color clarity and mirror-like finish
- Full range of more than 60 pre-formulated custom colors available for fast in-store color matching
- One coat direct-to-metal protection
- Excellent chemical resistance including engine coolant, oil, diesel fuel and unleaded gasoline
- Easy to apply by simply reducing with a variety of readily available industrial solvents
- Ideal for coating large components due to longer open time allowing for rewetting
- For improved hardness, better overnight hardness use V66V1020 Hardener at an 8:1 ratio. Eliminates recoat window
- Covers quickly due to increased volume solids
- Easy to apply with many types of spray equipment

CHARACTERISTICS

Gloss:
Semi-Gloss Black 45-55 units @ 60°
Low Gloss Clear 15-20 units @ 60°
All Others 90+ units at 60°
80+ units at 20°

Volume Solids: 36-39 ± 2%
may vary by color

Viscosity:
20-60 seconds #5 Zahn Cup

Recommended film thickness:
Mils Wet 3.0 - 4.0
Mils Dry 1.0 - 1.2

Spreading Rate (no application loss)
480-625 sq. ft./gal @ 1.0-1.2 mils dft

Drying (1.0-1.2 mils dft, 77°F,50% RH):
To Touch: 20-40 minutes
Tack Free: 2-3 hours
To Handle 6-8 hours
Through Dry Time 19-21 hours
To Recoat apply second coat before 2 hours or after 21 hours
Force Dry: 20-30 minutes at 140-180°F

Critical recoat period may fluctuate depending on drying conditions and film thickness. Test a small area first.

Catalyzed Product Dry Time:
To Touch 30-40 minutes
Tack Free 2-4 hours
To Handle 6-8 hours
Through Dry Time 6-11 hours
Potlife: 2 hours maximum at room temperature

Flash Point: 80°F, PMCC

Package Life:
Enamel 12 months, unopened
V66V1020 23 months, unopened

Air Quality Data:
- Photochemically reactive
- Volatile Organic Compounds (VOC) theoretical as packaged, maximum, less exempt solvents: 4.20 lb/gal, 504 g/L

An Environmental Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com.

SPECIFICATIONS

General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.

Aluminum: If untreated, prime with RoHS Compliant Wash Primer, P60G10 or Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G522. Over "pre-treated" aluminum, check adhesion before use as the proprietary pretreatment may change from supplier to supplier which may have an effect on the final adhesion.

Steel or Iron: Remove rust, mill scale, and oxidation products. **For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection. Recommended for all direct to metal applications.**

For improved corrosion protection, priming is recommended. Prime with Kem® 400 Primer for best hold-out or Kem-Flash® Primers.

Testing: Due to the wide variety of substrates, surface preparation methods, and application methods and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full-scale application.

continued on back

APPLICATION

Typical Setups

Reduction: Reduce with Xylene, R2K4, 10-20% by volume. For more flow and open time, use Aromatic Naphtha 100 Flash, R2K5. **For faster dry time use Acetone, R6K9.**

Conventional Spray:
Air Pressure.....55 psi
Reduction .....10-20% by volume
Airless Spray:
Fluid Pressure ..... 2100-2700 psi
Tip .....413"
Reduction .....5-10% by Volume
Air Assisted Airless:
Air Pressure..... 15 psi
Fluid Pressure .....1500-1800 psi
Air Cap AA-4
Fluid Tip..... 1308
Reduction Rate.....5-10% by volume
HVLP:
Gun.....DeVilbiss EXL
Pressure at the cap ..... 10 psi max.
Fluid Pressure ..... 10-25 psi
Air Cap 2000
Fluid Tip.....FF (.055)
Reduction .....10-20% by volume

Cleanup:
Clean tools/equipment immediately after use with 100 Flash, R2K5, Xylene, R2K4, or Acetone, R6K9.

Follow manufacturer's safety recommendations when using any solvent.

Tintable with Following Systems:
-BAC Colorants up to 8 ounces per gallon
-844 Colorants up to 8 ounces per gallon
-MaxiToner Colorants up to 8 ounces per gallon
***High Hide White base tint load is up to 2 oz per gallon**.

Performance Test Results
Product tested on Bonderite 1000 steel (iron phosphate) panels.
Salt Spray Test - Corrosion
ASTM B117 .....200-250 hours
Humidity - Corrosion
ASTM D2247, 100°F, 100% RH.....Pass200 hours
Conical Mandrel - Flexibility
ASTM D633..... passes 1/8" mandrel
Impact Resistance - Direct
ASTM D2794..... 40 in lb
Impact Resistance - Reverse
ASTM D2794.....4 in lb
Pencil Hardness without Hardener
ASTM D3363.....2B
Pencil Harness with Hardener
ASTM D3363..... HB
Chip Resistance 5A
1 year 45°S Florida exposurePasses. No loss of gloss.

ADDITIONAL INFORMATION

- Apply at least 1.0 mils DFT on direct to metal applications for good film integrity and good corrosion resistance.
- For improved corrosion resistance and to maintain high distinctness of image use Kem® 400 Primer.
- For better corrosion resistance use Kem-Flash® Prime. There will be a loss of distinctness of image when using Kem-Flash® Prime.
- Initial dry times are slightly slower when BAC colorants are used. No loss of dry time observed when 844 or MaxiToner colorants are used.
- Blocking or sticking may occur when flat surfaces are stacked before adequate dry.
- Apply at temperatures above 60°F.
- Drying time is dependent on film thickness and atmospheric conditions. Heavier film thickness causes slow drying.
- Not recommended for dip application.
- For increased chemical and abrasion resistance, improved hardness and better gloss and color retention SHER-KEM High Gloss Metal Finishing Enamel may be catalyzed at an 8 to 1 ratio with Hardener, V66V1020, prior to reduction. Dry times are slightly slower. Read label cautions before use.
- Addition of Hardener, V66V1020, eliminates the critical recoat window. Hardener contains isocyanates.
- Working pot life of catalyzed product is 2 hours maximum at room temperature.
- Caution should be exercised when recoating with products containing aromatics, esters or ketone solvents as they may result in lifting or dulling of gloss.
- Maximum tint load is 8 ounces per gallon except for the High Hide White, which is 2 ounces per gallon.
- The Ultra Deep Base and Low Gloss Clear must be tinted for use as a final product. They are not designed for use as clear coats.
- To quickly obtain a hard, mar-proof finish, force dry 20 minutes at 140-180°F.
- F75EC9 and F75RC7 contain organic pigments and should not be force dried above 160°F because they tend to bronze above this temperature.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Safety Data Sheet (SDS) for safety and cautions prior to using this product.

A Safety Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com.

Please direct any questions or comments to your local Sherwin-Williams facility.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.

SAFETY DATA SHEET

F75BC17

Section 1. Identification

Product name : SHER-KEM™ Semi-Gloss Metal Finishing Enamel Jet Black

Product code : F75BC17

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 39.5%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Contaminated work clothing must not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	≥25 - <50	64742-88-7
1,2,4-Trimethylbenzene	≥2 - <3	95-63-6
Xylene	≥1 - <2	1330-20-7
Light Aromatic Hydrocarbons	≥1 - <2	64742-95-6
Toluene	≥1 - <1.6	108-88-3
Carbon Black	≥1 - <3	1333-86-4
Methyl Ethyl Ketoxime	≥0.3 - <1	96-29-7
Cumene	≥0.3 - <1	98-82-8

Section 3. Composition/information on ingredients

Pentamethyliperidyl Sebacate	≥0.3 - <1	41556-26-7
Ethylbenzene	≥0.1 - <0.3	100-41-4
Cobalt 2-Ethylhexanoate	≥0.1 - <0.3	136-52-7
2-(2-Methoxyethoxy)-ethanol	≥0.1 - <0.3	111-77-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
1,2,4-Trimethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
Xylene	**ACGIH TLV (United States, 3/2015).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Light Aromatic Hydrocarbons	None.
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours.
Carbon Black	**NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2015).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
Methyl Ethyl Ketoxime	**AIHA WEEL (United States, 10/2011). Skin sensitizer.**

	TWA: 10 ppm 8 hours.
Cumene	**ACGIH TLV (United States, 3/2015).** TWA: 50 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** TWA: 50 ppm 10 hours. TWA: 245 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 245 mg/m³ 8 hours.
Pentamethyliperidyl Sebacate	None.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Cobalt 2-Ethylhexanoate	**ACGIH TLV (United States, 3/2015).** TWA: 0.02 mg/m³, (as Co) 8 hours.
2-(2-Methoxyethoxy)-ethanol	None.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 105°C (221°F)

Flash point : Closed cup: 27°C (80.6°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.7%
Upper: 7%

Vapor pressure : 0.39 kPa (2.933 mm Hg) [at 20°C]

Vapor density : 3.1 [Air = 1]

Relative density : 0.94

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 22 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,2,4-Trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Cumene	LC50 Inhalation Vapor	Rat	39000 mg/m³	4 hours
	LD50 Oral	Rat	1400 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Light Aromatic Hydrocarbons	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	86 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
2-(2-Methoxyethoxy)-ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Toluene	-	3	-
Carbon Black	-	2B	-
Cumene	-	2B	Reasonably anticipated to be a human carcinogen.
Ethylbenzene	-	2B	-
Cobalt 2-Ethylhexanoate	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2,4-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aromatic Hydrocarbons	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Cumene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-(2-Methoxyethoxy)-ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
1,2,4-Trimethylbenzene	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Light Aromatic Hydrocarbons	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Cumene	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
2-(2-Methoxyethoxy)-ethanol	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
1,2,4-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Cumene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	17326.4 mg/kg
Inhalation (gases)	163529.3 ppm
Inhalation (vapors)	406 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
1,2,4-Trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pectenicrus - Adult	48 hours
	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours

	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7400 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
2-(2-Methoxyethoxy)-ethanol	Acute EC50 >930 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 7500000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily
Toluene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1,2,4-Trimethylbenzene	-	243	low
Xylene	-	8.1 to 25.9	low
Light Aromatic Hydrocarbons	-	10 to 2500	high
Toluene	-	90	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low
Cumene	-	94.69	low
Cobalt 2-Ethylhexanoate	-	15600	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable **ERG No.** 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). **Special provisions** Not Applicable **ERG No.** 128	**Special provisions** (ERG#128) **ERG No.** 128	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Sens. 1, H317	Calculation method
Carc. 2, H351	Calculation method
Repr. 2, H361 (Fertility)	Calculation method
Repr. 2, H361 (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method

History

Date of printing : 11/27/2015

Date of issue/Date of revision : 11/27/2015

Date of previous issue : 10/15/2015

Version : 1.03

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

B30WF3045

Section 1. Identification

Product name : SherScrub® Supreme Interior Latex Flat Kilim Beige SW6106

Product code : B30WF3045

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 24.3%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May cause cancer.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not breathe vapor.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Section 2. Hazards identification

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥5 - <10	13463-67-7
Quartz	≥5 - <10	14808-60-7
Cristobalite	≥1 - <3	14464-46-1
Ethylene Glycol	≥1 - <3	107-21-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Quartz	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust
Cristobalite	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / 2 x (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Respirable TWA: 30 MG/M3 / 2 x (%SiO2+2) 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust
Ethylene Glycol	**ACGIH TLV (United States, 3/2015).** C: 100 mg/m³ Form: Aerosol

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9.3

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 3.2%
Upper: 15.3%

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.35

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 1.591 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethylene Glycol	LD50 Oral	Rat	4700 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Ethylene Glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Quartz	-	1	Known to be a human carcinogen.
Cristobalite	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Ethylene Glycol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Ethylene Glycol	Category 2	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	196806.9 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Ethylene Glycol	Acute LC50 6900000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 41000000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethylene Glycol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.
Ship type : Not available.
Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Carc. 1A, H350	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 11/5/2015

Date of issue/Date of revision : 11/5/2015

Date of previous issue : 11/3/2015

Version : 1.09

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Oct 10, 2015

02 00 [3384]

PRODUCT NUMBER
F75B203

PRODUCT NAME
SHER-KEM™ Fast Dry Metal Finishing Enamel, Jet Black

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight
7.65 lb/gal

Specific Gravity
0.92

FLASH POINT
40 °F PMCC

Hazard Category (for SARA 311.312)
| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Lt. Aliphatic Hydrocarbon Solvent 64742-89-8	N	N	N	N	27	33
Med. Aliphatic Hydrocarbon Solvent 64742-88-7	N	N	N	N	2	2
Toluene 108-88-3	N	Y	Y	Y	6	7
Ethylbenzene 100-41-4	N	Y	Y	Y	1	1
Xylene 1330-20-7	N	Y	Y	Y	6	6
2-Methyl-1-propanol 78-83-1	N	Y	N	N	10	11
Diacetone Alcohol 123-42-2	N	N	N	N	10	10

Regulated Compounds

	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Cobalt Compound	N	N	Y	N	0.2	

Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)

A.	**Coating Density**			7.65 lb/gal	917 g/l
B.	**Total Volatiles**			62.1 % by wt.	71.0 % by vol.
C.	**Federally exempt solvents:**				
		Water		0.0 % by wt.	0.0 % by vol.
D.	**Organic Volatiles**			62.1 % by wt.	71.0 % by vol.
E.	**Percent Non-Volatile**			37.9 % by wt.	29.0 % by vol.
F.	**VOC Content**	4.75 lb/gal	569 g/l	total	
	1.	4.75 lb/gal	569 g/l	less exempt solvents	
	2.	16.36 lb/gal	1960 g/l	of solids	
		1.63 lb/lb	1.63 kg/kg	of solids	

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

Volatile HAPS	1.01	lb/gal	0.121	kg/l
	3.49	lb/gal	0.418	kg/l of solids
	0.34	lb/lb	0.34	kg/kg of solids

Air Quality Data

Density of Organic Solvent Blend
6.70 lb/gal
Photochemically Reactive
Yes
Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)
1.37
Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)
1.35

Waste Disposal

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Addition of reducers or other additives to this product may substantially alter the above data. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

F75B203

Section 1. Identification

Product name : SHER-KEM™ Fast Dry Metal Finishing Enamel
Jet Black

Product code : F75B203

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 62.2%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Highly flammable liquid and vapor.
Harmful if swallowed.
Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Lt. Aliphatic Hydrocarbon Solvent	26.5	64742-89-8
Diacetone Alcohol	9.9	123-42-2
2-Methyl-1-propanol	9.5	78-83-1
Toluene	6.4	108-88-3
Xylene	5.8	1330-20-7
Med. Aliphatic Hydrocarbon Solvent	2.0	64742-88-7
Carbon Black	1.1	1333-86-4
Ethylbenzene	1.0	100-41-4
Cobalt 2-Ethylhexanoate	0.2	136-52-7
Manganese 2-Ethylhexanoate	0.1	15956-58-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. May cause burns to mouth, throat and stomach.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers

Section 7. Handling and storage

retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Diacetone Alcohol	**ACGIH TLV (United States, 4/2014).** TWA: 50 ppm 8 hours. TWA: 238 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 240 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.
2-Methyl-1-propanol	**ACGIH TLV (United States, 4/2014).** TWA: 50 ppm 8 hours. TWA: 152 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 150 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours.
Xylene	**ACGIH TLV (United States, 4/2014).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).**

	TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Carbon Black	**NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
Ethylbenzene	**ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Manganese 2-Ethylhexanoate	**NIOSH REL (United States, 10/2013).** TWA: 1 mg/m³, (as Mn) 10 hours. Form: Fume STEL: 3 mg/m³, (as Mn) 15 minutes. Form: Fume **ACGIH TLV (United States, 4/2014).** TWA: 0.1 mg/m³, (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.02 mg/m³, (as Mn) 8 hours. Form: Respirable fraction **OSHA PEL (United States, 2/2013).** CEIL: 5 mg/m³, (as Mn)

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 105°C (221°F)

Flash point : Closed cup: 4°C (39.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 10.9%

Vapor pressure : 0.39 kPa (2.933 mm Hg) [at 20°C]

Vapor density : 2.55 [Air = 1]

Relative density : 0.92

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.07 cm^2/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm^2/s (<7 cSt)

Aerosol product

Heat of combustion : 0.00002346 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diacetone Alcohol	LD50 Dermal	Rabbit	13500 mg/kg	-
	LD50 Oral	Rat	2520 mg/kg	-
2-Methyl-1-propanol	LC50 Inhalation Vapor	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diacetone Alcohol	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-

				milligrams	
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Xylene	-	3	-
Carbon Black	-	2B	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Diacetone Alcohol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Methyl-1-propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Diacetone Alcohol	Category 2	Not determined	Not determined
2-Methyl-1-propanol	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
Manganese 2-Ethylhexanoate	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1935.7 mg/kg
Dermal	13493.5 mg/kg
Inhalation (gases)	32448.9 ppm
Inhalation (vapors)	76.2 mg/l

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Diacetone Alcohol	Acute LC50 420000 µg/l Marine water	Fish - Menidia beryllina	96 hours
2-Methyl-1-propanol	Acute LC50 600000 µg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1330000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Methyl-1-propanol	-	-	Readily
Toluene	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Toluene	-	90	low
Xylene	-	8.1 to 25.9	low
Cobalt 2-Ethylhexanoate	-	15600	high
Manganese 2-Ethylhexanoate	-	2.96	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Product Finishes

CC-B33

SHER-KEM® Fast Dry
Metal Finishing Enamel

Extra White.....F75W200
Jet Black.....F75B203
Safety Yellow.....F75Y204
Ultra Deep Base F75C201

DESCRIPTION

SHER-KEM® Fast Dry Metal Finishing Enamel is an air dry enamel with premium performance providing faster drying and direct to metal, one coat protection. Excellent spray application properties provide an ultra smooth appearance. Key market applications are General Metal and Metal Container. Specific customer types include Job Shops, metal fabricators, metal refurbishment, waste disposal equipment, fencing, and miscellaneous metal parts.

Advantages:
- Faster air dry for fast handling.
- Ideal for small parts needing fast air dry times
- Full Gloss
- Full color range available using BAC colorants, and Maxitoners
- Very good exterior durability - provides long lasting color and gloss
- Tough one coat protection
- Easy to apply by simply reducing 15-20%
- Addition of chromatic bases provides maximum coverage per gallon
- Quick dust-free times add up to an ultra smooth finish

Not stocked - Special order only:
Machinery Red …….F75R205

CHARACTERISTICS

Gloss: 85+ units @ 60 degrees
Volume Solids: 29 - 37 ± 2% varies by color
Weight Solids: 38 - 57 ± 2%
Viscosity:
20 - 25 seconds #3 Zahn Cup
Recommended film thickness:
Mils Wet 3.0 - 5.0
Mils Dry 0.9 - 1.2
Spreading Rate (no application loss)
490-660 sq ft/gal @ 0.9-1.2 mils DFT
Drying (mils dft, 77°F, 50% RH):
To Touch: 5 - 15 minutes
To Handle: 1 - 2 hours
Tack Free: 45 - 120 minutes
Open Time: Less than 5 minutes
To Recoat: before 2 hours or after 18 hours
To Pack: 24 hours
Force Dry: 20 minutes at 140°F
Critical recoat period may fluctuate depending on drying conditions, reducer and film thickness. Test small area first.

Flash Point: 40 - 45°F Pensky-Martens Closed Cup
Package Life: 3 years, unopened

Air Quality Data:
Photochemically reactive
Volatile Organic Compounds (VOC) theoretical as packaged, maximum, less exempt solvents:
4.80 lb/gal, 575 g/L

An Environmental Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com.

SPECIFICATIONS

General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.

Aluminum: If untreated, prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G522.

Galvanized Steel: Prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G522.

Steel or Iron: Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate to improve corrosion protection.

Wood (interior only)**:** Must be clean, dry, and finish sanded. Substrate should be free of grease, oil, dirt, fingerprints, and any contamination to ensure optimum adhesion and coating performance properties. Moisture content of wood should be 6 to 8%.

Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.

continued on back

APPLICATION

Typical Setups

May be applied by:
Conventional Spray
Airless Spray
Electrostatic Spray
HVLP

Conventional Spray:
Air Pressure.....45 -60 psi
Fluid Pressure .....20 - 25psi
Reducer: Aromatic Naphtha (R2K5), Acetone (R6K9), Xylene (R2K4).
Reduce as needed up to 20%.

Airless Spray:
Pressure ..... 2100-3000 psi
Tip ..... .011 - .017"
Reducer: Aromatic Naphtha (R2K5) or Xylene (R2K4) 10-15%. For better flow and leveling, reduce with Hi Flash Naphtha 150 (R2KT4) as needed up to 15%

Electrostatic Spray:
Reduce with Diacetone Alcohol (R6K24) for polarity. Reduction Rate 10 -20%. For better flow and leveling, reduce with Hi Flash Naphtha 150 (R2KT4) as needed up to 20%

HVLP:
Gun..... DeVilbiss DXL 520P
Atomizing Air Pressure ..... 8-10 psi
Fluid Pressure ..... 10-20 psi
Cap/Tip..... 2000 / 55
Reducer: Aromatic Naphtha (R2K5) 10-20% by volume.

Cleanup:
Clean tools/equipment immediately after use with 100 Flash Naphtha, R2K5, Xylene, R2K4, or Acetone, R6K9. Flush equipment with solvent to prevent rusting.

Follow manufacturer's safety recommendations when using any solvent.

Performance Tests
Substrate:.....Cold rolled steel panels
Salt Spray Test
ASTM B117 .....150-200 hours
Humidity
ASTM D2247, 100°F, 100% RH...120 hours
Impact Resistance, Direct
ASTM D2794..... 20 in lb
Pencil Hardness
ASTM D3363.....2B
9 months 45°S Florida exposure.....Passes 60 - 75% gloss retention.

ADDITIONAL INFORMATION

- A critical recoat will occur between 2 and 18 hours.
- **Tintable with the following bases/ colorants: Extra White, Machinery Red, Safety Yellow and Ultra Deep Base are tintable with:**
  - BAC Colorants up to 8 oz. per gallon
  - Maxitoners up to 8 oz. per gallon

  Jet Black is tintable with:
  - BAC Colorants up to 2 oz. per gallon
  - Maxitoners up to 2 oz. per gallon
- Blocking or sticking may occur when flat surfaces are stacked before adequate cure. Allow at least 24 hours before stacking.
- Use of BAC colorants will slow down tack free times.
- No loss of dry time observed when Maxitoner colorants used.
- Not recommended for use on extra large parts due to short open time of the wet film.
- Apply at least 1.0 mils DFT on direct to metal application for good film integrity and good corrosion resistance.
- For improved corrosion resistance and to maintain high distinctness of image use Kem® 400 Primer.
- For better corrosion resistance prime with Kem-Flash® Prime. There will be a loss of distinctness of image when using Kem-Flash® Prime.
- Drying time is dependant on film thickness, reducer and atmospheric conditions. Heavier film thickness will slow drying.
- Not recommended for dip application.
- The Ultra Deep Base must be tinted for use as a final product. It is not designed to be used as a clear coat.
- The use of the V66V1020 Hardener will not improve dry time or packaging time, however it may enhance exterior exposure properties. Add V66V1020 at an 8:1 ratio. The use of other hardeners and catalysts is not recommended.
- Over application of SHER-KEM® Fast Dry can cause significantly slower dry times and other potential film integrity issues.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Safety Data Sheet (SDS) for safety and cautions prior to using this product.

A Safety Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com.

Please direct any questions or comments to your local Sherwin-Williams facility.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.

SAFETY DATA SHEET

T77F57

Section 1. Identification

Product name : SHER-WOOD® Hi-Bild PreCat Lacquer
Medium Rubbed Effect

Product code : T77F57

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (inhalation) - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 19.7%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Highly flammable liquid and vapor.
Toxic if inhaled.
Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Contains Formaldehyde - a potential cancer hazard.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
n-Butyl Acetate	31.6	123-86-4
2-Methyl-1-propanol	7.7	78-83-1
Ethanol	7.0	64-17-5
Acetone	6.7	67-64-1
1-Butanol	4.1	71-36-3
2-Propanol	4.0	67-63-0
Isobutylated Urea-Formaldehyde Polymer	2.4	68002-18-6
Formaldehyde (max.)	0.0 - 0.2	50-00-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Section 4. First aid measures

Ingestion : Can cause central nervous system (CNS) depression. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Contains a formaldehyde-based resin which, under certain conditions of use, may release formaldehyde. Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
n-Butyl Acetate	**ACGIH TLV (United States, 4/2014).** TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours.
2-Methyl-1-propanol	**ACGIH TLV (United States, 4/2014).** TWA: 50 ppm 8 hours. TWA: 152 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 150 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.
Ethanol	**ACGIH TLV (United States, 4/2014).** STEL: 1000 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.
Acetone	**ACGIH TLV (United States, 4/2014).** TWA: 500 ppm 8 hours. TWA: 1188 mg/m³ 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
1-Butanol	**ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** CEIL: 50 ppm CEIL: 150 mg/m³

2-Propanol	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.
Formaldehyde (max.)	**ACGIH TLV (United States, 4/2014). Skin sensitizer.** C: 0.3 ppm C: 0.37 mg/m³ **OSHA PEL Z2 (United States, 2/2013).** TWA: 0.75 ppm 8 hours. STEL: 2 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 0.016 ppm 10 hours. CEIL: 0.1 ppm 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 0.75 ppm 8 hours. STEL: 2 ppm 15 minutes.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 55°C (131°F)

Flash point : Closed cup: -16°C (3.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1.2%
Upper: 19%

Vapor pressure : 3.2 kPa (23.998 mm Hg) [at 20°C]

Vapor density : 1.5 [Air = 1]

Relative density : 0.94

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Aerosol product

Heat of combustion : 0.00002034 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-Butyl Acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
2-Methyl-1-propanol	LC50 Inhalation Vapor	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Acetone	LD50 Oral	Rat	5800 mg/kg	-
1-Butanol	LC50 Inhalation Vapor	Rat	24000 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
2-Propanol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
Isobutylated Urea-Formaldehyde Polymer	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Formaldehyde (max.)	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-Butyl Acetate	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-

	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
1-Butanol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Mililiters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
2-Propanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Isobutylated Urea-Formaldehyde Polymer	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
Formaldehyde (max.)	Eyes - Mild irritant	Human	-	6 minutes 1 parts per million	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-
	Skin - Mild irritant	Human	-	72 hours 150 Micrograms Intermittent	-
	Skin - Severe irritant	Human	-	0.01 Percent	-
	Skin - Mild irritant	Rabbit	-	540 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
2-Propanol	-	3	-
Formaldehyde (max.)	+	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-Methyl-1-propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1-Butanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Formaldehyde (max.)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2-Methyl-1-propanol	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
Acetone	Category 2	Not determined	Not determined
1-Butanol	Category 2	Not determined	Not determined
2-Propanol	Category 2	Not determined	Not determined
Formaldehyde (max.)	Category 2	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	8864.3 mg/kg
Dermal	23229 mg/kg
Inhalation (gases)	992.1 ppm
Inhalation (vapors)	200.2 mg/l

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
n-Butyl Acetate	Acute LC50 32000 µg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-Methyl-1-propanol	Acute LC50 600000 µg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1330000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
1-Butanol	Acute EC50 1983000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-Propanol	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
Formaldehyde (max.)	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 0.788 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 5800 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.438 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 953.9 ppm Fresh water	Fish - Oncorhynchus tshawytscha - Egg	43 days

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-Butyl Acetate	-	-	Readily
2-Methyl-1-propanol	-	-	Readily
Ethanol	-	-	Readily
Acetone	-	-	Readily
1-Butanol	-	-	Readily
2-Propanol	-	-	Readily

Bioaccumulative potential

Not available.

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Product Finishes

CC-F57
SHER-WOOD® Hi-Bild PreCat Lacquer

Gloss..... T77C55
Bright Rubbed Effect T77F56
Medium Rubbed Effect..... T77F57
Dull Rubbed Effect..... T77F58
Catalyst..... V66V3

DESCRIPTION

Sher-Wood® Hi-Bild PreCat Lacquer is a fast drying, high performance, clear, conversion lacquer designed for the Kitchen and Bath Cabinetry and General Wood Finishing markets. After catalyzation it provides a 4 month pot life.

Advantages:

- 20% higher volume solids than traditional PreCat lacquers.
- Meets (KCMA) specifications as a self sealed system or over catalyzed Sher-Wood Vinyl Sealers, T67F3, T67F5 or T67F6
- Meets the Federal HAPS rule for wood finishes as packaged*
- Fast dry to sanding and packing.
- Contains UV absorber to significantly reduce the discoloration of natural wood from exposure to sunlight.
- Good resistance to household chemicals.
- Good flexibility - passes 20 KCMA cold check cycles.
- Versatile application – may be applied by conventional, airless, air-assisted airless spray.
- Pale water white color.
- Ideal for kitchen cabinets, vanities, chairs, office furniture, household furniture

*National Standards for Hazardous Air Pollutants (HAPS) Emissions for Wood Furniture Manufacturing Operations CFR40, Part 63, Subpart JJ

CHARACTERISTICS

Gloss (measured on black glass):

Gloss	85+ units
BRE	55-59 units
MRE	34-38 units
DRE	17-21 units

Volume Solids: 25 ± 2%
Weight Solids: 33 ± 2%
Viscosity:
25-30 seconds #2 Zahn Cup
Recommended film thickness:

Mils Wet	3.0 - 5.0
Mils Dry	0.75 - 1.25

Maximum dry film thickness of the total system should not exceed 4.0 mils
Spreading Rate (no application loss)
295-580 sq ft/gal @ 0.75-1.25 mil DFT
Drying (77°F, 50% RH):

To Touch:	10 - 15 minutes
To Handle:	15 - 20 minutes
To Sand:	30 - 45 minutes
To Recoat/Topcoat:	30 - 45 minutes
To Pack:	8 hour minimum
Force Dry:	5 - 10 minutes at 110 - 140°F, then air dry 1 hour minimum to pack

Flash Point: 4°F PMCC
Mixing Ratio:

1 gallon	Lacquer
3.0 ounces	Catalyst V66V3

Pot Life: 4 months
Package Life:

Uncatalyzed	2 years, unopened
Catalyzed	4 months

Air Quality Data (Theoretical):

- Non-photochemically reactive
- Volatile Organic Compounds (VOC) as packaged, less exempt solvents <5.35 lb/gal, 640 g/L
- Volatile Hazardous Air Pollutants (VHAPS) as packaged, no reportable VHAPS

An Environmental Data Sheet is available from your local Sherwin-Williams facility.

SPECIFICATIONS

Wood (interior only)**:** Must be clean, dry, and finish sanded. Substrate should be free of grease, oil, dirt, fingerprints, and any contamination to ensure optimum adhesion and coating performance properties. Moisture content of wood should be 6 to 8%.

Wood Finishing System:
THIS PRODUCT MUST BE CATALYZED.

1. Color Wood - Stain or tone as desired and dry thoroughly.

2. Seal - Apply Sher-Wood Hi-Bild PreCat Lacquer as a sealer or seal with catalyzed Sher-Wood Vinyl Sealers, T67F3, T67F5 or T67F6. (Consult corresponding data page for details). Spray a full wet coat. Air Dry 30 - 45 minutes.

3. Sand - Sand with 240 grit or equivalent. Remove sanding dust.

4. Topcoat - Spray a full wet coat of Sher-Wood Hi-Bild PreCat Lacquer at 3.0 - 5.0 mils wet.

5. For more depth or build, apply an additional coat. Do not exceed 4.0 mils DFT for the total system.

Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.

continued on back

APPLICATION

Typical Setups

THIS PRODUCT MUST BE CATALYZED
DETERMINE IF IT HAS BEEN CATALYZED. If not catalyzed, add 2.3% (3.0 oz/gal) Sher-Wood Hi-Bild PreCat Catalyst, V66V3. Potlife after catalyzation is 4 months. Record the catalyzation date on the container.

Reduction: Product is normally applied without reduction. If reduction is needed to optimize application, use 5-10% HAPS Compliant Lacquer Thinner R7K320, HAPS Free Reducer R7K305, or Acetone R6K9. Lacquer Thinner K120 or K22 may also be used, but are not HAPS compliant. To retard, use either MAK R6K30, at 5-10%, EEP R6K35 at 2-5% or Butyl Cellosolve R6K25, at 1-2% maximum.

Conventional Spray:
Air Pressure ..... 35 - 60 psi
Fluid Pressure..... 6 - 10 psi
Cap/Tip 797
Airless Spray:
Pressure..... 1500 - 1800 psi
Tip ..... .011 - .013"
Air Assisted Airless:
Air Pressure ..... 20 - 30 psi
Fluid Pressure..... 500 - 900 psi
Cap/Tip ..... .011 - .013
HVLP:
Gun .....Binks Mach 1
Atomizing Air Pressure at the cap...9 psi
Fluid Pressure.....12 psi
Cap/Tip ..... 97AP Blue Max/94

Cleanup:
Clean tools/equipment immediately after use with HAPS complying Lacquer Thinner, R7K320 . Lacquer Thinner K120 or K22 may also be used, but are not HAPS compliant.
Follow manufacturer's safety recommendations when using any solvent.

Performance Tests:
Household Chemicals Test
Using ANSI-KCMA A161.1-2012 test procedures, panels were cured by air drying and allowed to age 10 days at ambient conditions before testing. Tests were conducted on self-sealed (2 coat) finished panels at 2.0 mils total DFT. Materials were washed off with clear water after 24 hours and allowed to recover for 10 days then the finish was examined and the following results noted:
Vinegar.....no effect
Lemon Juice.....no effect
Orange Juice.....no effect
Grape Juice.....no effect
Tomato Catsup .....no effect
Coffee @ 115° F .....no effect
Olive Oil .....no effect
100 Proof Alcohol.....no effect
Water & Detergent .....no effect
Mustard (1 hour) .....no effect
Cold Checks 20 cycles..... Pass
Edge Soak ..... Pass

SPECIFICATIONS

Product Limitations:

- This product **must** be catalyzed with Sher-Wood Hi-Bild PreCat Catalyst, V66V3, before use at a level of 2.3% (3.0 oz/gal). Complete cross-linking and film properties will not be attained without catalyzation. Product will typically be catalyzed before delivery to the customer.
- This product should be used within 4 months after being catalyzed to obtain optimum properties. The catalyst causes a chemical reaction in the package and dissipates after 4 months and performance properties are downgraded. **Adding additional catalyst does not restore film properties.**
- Store at room temperature (under 80° F) after catalyzation. Higher temperatures will reduce the storage life.
- Self-seal or apply over catalyzed Sher-Wood Vinyl Sealers, T67F3, T67F5 or T67F6 to meet KCMA requirements.
- To achieve maximum performance properties a minimum of 2 mils DFT is required.
- Total film thickness of systems must not exceed 4 mils DFT because heavier films may show cracking and checking tendencies.
- For interior use only.
- Sher-Wood Hi-Bild PreCat Catalyst, V66V3 is an acid. To prevent acid corrosion and pitting, all equipment should be made of stainless steel. Containers should be stainless steel or plastic.
- Do not catalyze with other acid catalysts because of fast reactivity and pot life issues.
- Maximum cure and chemical resistance is attained after 10 days air drying.
- Natural wood will change color by itself and clear wood finishes will not keep this from occurring.
- To maintain HAPS compliance, only reduce with HAPS compliant reducers.
- Sher-Wood Hi-Bild PreCat Lacquer will yellow over time. With wood tone stains, this yellowing actually makes a warmer, softer appearance. Where white stains, pickled finishes, or white basecoats are used, nitrocellulose lacquer should not be used because of the yellowing of the sealer and topcoat may be considered objectionable. For these applications, Sher-Wood Acrylic Conversion Coating is recommended.

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Material Safety Data Sheet (MSDS) for safety and cautions prior to using this product.

A Material Safety Data Sheet is available from your local Sherwin-Williams facility.

Please direct any questions or comments to your local Sherwin-Williams facility.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams Company cannot make any warranties as to the end result.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
May 21, 2015

18 00 [3234]

PRODUCT NUMBER
S64R6
PRODUCT NAME
SHER-WOOD® Wiping Stain, Cherry
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight
7.04 lb/gal

Specific Gravity
0.85

FLASH POINT
80 °F PMCC

Hazard Category (for SARA 311.312)
| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Med. Aliphatic Hydrocarbon Solvent 64742-88-7	N	N	N	N	78	86
Ethylbenzene 100-41-4	N	Y	Y	Y	0.1	< 1

Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)

A.	**Coating Density**			7.04 lb/gal	843 g/l
B.	**Total Volatiles**			80.8 % by wt.	88.4 % by vol.
C.	**Federally exempt solvents:**				
		Water		0.1 % by wt.	0.1 % by vol.
D.	**Organic Volatiles**			80.7 % by wt.	88.3 % by vol.
E.	**Percent Non-Volatile**			19.2 % by wt.	11.6 % by vol.
F.	**VOC Content**	5.68 lb/gal	680 g/l	total	
	1.	5.68 lb/gal	681 g/l	less exempt solvents	
	2.	48.96 lb/gal	5867 g/l	of solids	
		4.19 lb/lb	4.19 kg/kg	of solids	

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

Volatile HAPS	0.01	lb/gal	0.001	kg/l
	0.09	lb/gal	0.011	kg/l of solids
	0.00	lb/lb	0.00	kg/kg of solids

Air Quality Data

Density of Organic Solvent Blend
6.43 lb/gal
Photochemically Reactive
No
Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)
0.64
Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)
0.66

Waste Disposal

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Addition of reducers or other additives to this product may substantially alter the above data. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

S64R14

Section 1. Identification

Product name : SHER-WOOD® Wiping Stain
Traditional Cherry

Product code : S64R14

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 82.6%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure. DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	16.4	64742-88-7
Mineral Spirits 140-Flash	14.3	64742-88-7
Diacetone Alcohol	5.7	123-42-2
Xylene	2.2	1330-20-7
Lt. Aliphatic Hydrocarbon Solvent	1.6	64742-89-8
Ethanol	1.3	64-17-5
Sulfonated Hydrocarbon Surfactant	1.1	577-11-7
Quartz	1.0	14808-60-7
Carbon Black	0.7	1333-86-4
Methyl Ethyl Ketoxime	0.4	96-29-7
Ethylbenzene	0.4	100-41-4
Cobalt 2-Ethylhexanoate	0.1	136-52-7
Manganese 2-Ethylhexanoate	0.1	15956-58-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Mineral Spirits 140-Flash	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Diacetone Alcohol	**ACGIH TLV (United States, 4/2014).** TWA: 50 ppm 8 hours. TWA: 238 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 50 ppm 10 hours. TWA: 240 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.
Xylene	**ACGIH TLV (United States, 4/2014).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Ethanol	**ACGIH TLV (United States, 4/2014).**

	STEL: 1000 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.
Quartz	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 4/2014).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust
Carbon Black	**NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
Methyl Ethyl Ketoxime	**AIHA WEEL (United States, 10/2011). Skin sensitizer.** TWA: 10 ppm 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Manganese 2-Ethylhexanoate	**NIOSH REL (United States, 10/2013).** TWA: 1 mg/m³, (as Mn) 10 hours. Form: Fume STEL: 3 mg/m³, (as Mn) 15 minutes. Form: Fume **ACGIH TLV (United States, 4/2014).** TWA: 0.1 mg/m³, (as Mn) 8 hours. Form: Inhalable fraction TWA: 0.02 mg/m³, (as Mn) 8 hours. Form: Respirable fraction **OSHA PEL (United States, 2/2013).** CEIL: 5 mg/m³, (as Mn)

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls :

Section 8. Exposure controls/personal protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 77°C (170.6°F)

Flash point : Closed cup: 10°C (50°F) [Pensky-Martens Closed Cup]

Evaporation rate : 1.6 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 19%

Vapor pressure : 0.78 kPa (5.866 mm Hg) [at 20°C]

Vapor density : 1.5 [Air = 1]

Section 9. Physical and chemical properties

Relative density : 1.15

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Aerosol product

Heat of combustion : 0.00001814 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diacetone Alcohol	LD50 Dermal	Rabbit	13500 mg/kg	-
	LD50 Oral	Rat	2520 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m^3	4 hours
	LD50 Oral	Rat	7 g/kg	-
Sulfonated Hydrocarbon Surfactant	LD50 Dermal	Rabbit	>10 g/kg	-
	LD50 Oral	Rat	1900 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diacetone Alcohol	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Sulfonated Hydrocarbon Surfactant	Eyes - Mild irritant	Rabbit	-	250 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 10 milligrams	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Ethanol	-	1	-
Quartz	-	1	Known to be a human carcinogen.
Carbon Black	-	2B	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Mineral Spirits 140-Flash	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Diacetone Alcohol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Mineral Spirits 140-Flash	Category 2	Not determined	Not determined
Diacetone Alcohol	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
Manganese 2-Ethylhexanoate	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Mineral Spirits 140-Flash	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Inhalation (gases)	5258.2 mg/kg 40337.5 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Diacetone Alcohol	Acute LC50 420000 µg/l Marine water	Fish - Menidia beryllina	96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
Sulfonated Hydrocarbon Surfactant	Acute EC50 43 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 28000 µg/l Fresh water	Fish - Oncorhynchus mykiss - Fingerling	96 hours
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Ethanol	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Xylene	-	8.1 to 25.9	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Sulfonated Hydrocarbon Surfactant	-	9.33	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low
Cobalt 2-Ethylhexanoate	-	15600	high
Manganese 2-Ethylhexanoate	-	2.96	low

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Nov 29, 2015

23 00 [3194]

PRODUCT NUMBER
B54A13
PRODUCT NAME
Industrial Enamel, Slate Gray
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Product Weight
8.67 lb/gal

Specific Gravity
1.04

FLASH POINT
102 °F PMCC

Hazard Category (for SARA 311.312)
| Acute | Chronic | Fire |

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Med. Aliphatic Hydrocarbon Solvent 64742-88-7	N	N	N	N	42	56
Ethylbenzene 100-41-4	N	Y	Y	Y	0.1	< 1

Volatile Organic Compounds (follows U.S. EPA VOC Data Sheet)

A.	**Coating Density**			8.67 lb/gal	1038 g/l
B.	**Total Volatiles**			43.2 % by wt.	58.1 % by vol.
C.	**Federally exempt solvents:**				
		Water		0.0 % by wt.	0.0 % by vol.
D.	**Organic Volatiles**			43.2 % by wt.	58.1 % by vol.
E.	**Percent Non-Volatile**			56.8 % by wt.	41.9 % by vol.
F.	**VOC Content**	3.74 lb/gal	448 g/l	total	
	1.	3.74 lb/gal	448 g/l	less exempt solvents	
	2.	8.92 lb/gal	1069 g/l	of solids	
		0.75 lb/lb	0.75 kg/kg	of solids	

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

Volatile HAPS	0.01	lb/gal	0.001	kg/l
	0.02	lb/gal	0.003	kg/l of solids
	0.00	lb/lb	0.00	kg/kg of solids

Air Quality Data

Density of Organic Solvent Blend
6.45 lb/gal
Photochemically Reactive
No
Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010)
0.36
Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009)
0.43

Waste Disposal

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Addition of reducers or other additives to this product may substantially alter the above data. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

B54A13

Section 1. Identification

Product name : Industrial Enamel
Slate Gray

Product code : B54A13

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 87.3%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Flammable liquid and vapor.
May cause an allergic skin reaction.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Contaminated work clothing should not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	41.8	64742-88-7
Titanium Dioxide	9.7	13463-67-7
Calcium Carbonate	9.2	471-34-1
Methyl Ethyl Ketoxime	0.3	96-29-7
Ethylbenzene	0.1	100-41-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	**OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Titanium Dioxide	**ACGIH TLV (United States, 4/2014).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Calcium Carbonate	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Methyl Ethyl Ketoxime	**AIHA WEEL (United States, 10/2011). Skin sensitizer.**

Ethylbenzene	TWA: 10 ppm 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Not available.
Odor	:	Not available.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	148°C (298.4°F)
Flash point	:	Closed cup: 39°C (102.2°F) [Pensky-Martens Closed Cup]
Evaporation rate	:	0.13 (butyl acetate = 1)
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Lower: 1% Upper: 6%
Vapor pressure	:	0.023 kPa (0.169 mm Hg) [at 20°C]
Vapor density	:	5 [Air = 1]
Relative density	:	1.04
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (room temperature): <0.07 cm^2/s (<7 cSt) Kinematic (40°C (104°F)): <0.07 cm^2/s (<7 cSt)

Aerosol product

Heat of combustion	:	0.00001812 kJ/g

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium Carbonate	LD50 Oral	Rat	6450 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Calcium Carbonate	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent Ethylbenzene	Category 2 Category 2	Not determined Not determined	Not determined Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent Ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Calcium Carbonate	Acute LC50 >56000 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Chronic NOEC 61 mg/g Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	28 days
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	UN1263	UN1263	UN1263
UN proper shipping name	-	-	PAINT	PAINT	PAINT
Transport hazard class(es)	-	-	3	3	3
Packing group	-	-	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Specialty Adhesives and Coatings, Inc..
3791 Air Park St.
Memphis, TN 38181 Phone: 1-800-728-9171
Fax: 1-901-794-9175
specialtyadhesives@specialtyadhesivesinc.com

SAFETY DATA SHEET (MSDS)

Emergency Medical Telephone Number: (901)794-8556

PRODUCT IDENTIFICATION

Specialty Adhesives Name: 1400 CLEAR/ 1400 GREEN
Product use: Paint
Generic description Synthetic resin based product in water

Possible Eye Irritant
Possible Skin Irritant

Safety Glasses

Gloves

2. Hazards Identification

Emergency overview: Contact with this material can cause irritation to the skin, eyes and mucous membranes.
Potential health effects

Eyes Direct eye contact with the product may cause irritation
Skin Prolonged or repeated contact with liquid product may cause irritations.
Inhalation Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, And respiratory tract.
Ingestion Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance. Do not ingest.
Fire & explosion This product will not ignite under normal situations but can be ignited in the extreme heat associated with a fire. In a fire situation, exposed containers may build up pressure and burst explosively spewing hot material. Irritating and potentially harmful vapors may be released in a fire or spill situation.

3. Composition / Information on Hazardous Ingredients

Component	CAS-No.	Concentration

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200. This SDS is prepared to comply with this OSHA standard. Unlisted ingredients are not hazardous and are considered to be trade secrets of Specialty Adhesives and Coatings, Inc., and are therefore strictly confidential.

4. First Aid Measures

First aid procedures

Eye contact If product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.
Skin contact If product contacts skin, wash affected area with soap and water. Seek medical attention if irritation develops or persists. Launder contaminated clothing before reuse.
Inhalation Move subject to fresh air in case of accidental inhalation of vapors or decomposition products. If symptoms persist, get medical attention promptly.
Ingestion If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to victim who is unconscious or is having convulsions.

5. Fire Fighting Measures

Hazardous combustion products

Incomplete combustion can yield carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam. Avoid using a direct stream of water.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Dust explosion hazard	None Known
Sensitivity to static discharge	None Known
Unusual fire & explosion hazards	There is the possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers/
Flash point	Non flammable

6. Accidental Release Measures

Emergency action	Wear appropriate protective equipment and clothing during clean-up. Follow all Local, State, Federal and Provincial regulations for disposal.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Dike, if necessary, contain spill with inert absorbent . Collect and contain for salvage or disposal. Keep spilled product from contaminating soil or from entering sewers, watersheds or water streams.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

For Commercial Use Only - Not Packaged or Labeled for Home Use!

Handling	Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing fumes if this product is used at high temperatures. Use this product with adequate ventilation.
Storage	Protect from freezing – product stability may be affected.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. In storage, monomer vapors will migrate from the emulsion and establish an equilibrium between the headspace in the storage container and the liquid emulsion. Levels in excess of acceptable exposures can accumulate in non –vented headspaces above the emulsion. All procedures appropriate for a confined space entry should be completed prior to performing any work in a bulk storage tank. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Exposure Limit(s) Exposure limits are listed below, if they exist

Component	Regulation	Type of Listing	Value

Engineering controls Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.

Safety Glasses

Gloves

Personal protective equipment

Eye protection	Wear safety glasses to reduce the potential for eye contact. Chemical safety goggles are appropriate if splashing is likely. Have eye washes available where eye contact can occur.
Skin and body Protection	Prevent prolonged or repeated contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.
Respiratory Protection	Not normally required. When fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.
General	Eye wash fountain and emergency showers are recommended.

9. Physical & Chemical Properties

Flash Point	Not Applicable/ non flammable
Upper Flammable Limit	Not Determined
Lower Flammable Limit	Not Determined
Autoignition Point	Not Determined
Explosion Data	Material does not have explosive properties
Vapor Pressure	NA
PH	7.0 – 10.0
Specific Gravity	1.09
Bulk Density	9.5 – 11.0 lbs/ gallon
Water Solubility	Miscible
Percent Solid	Approx. 30 - 40%
Percent Volatile	Approx. 60%
%Volatile Organic Compounds	Varies
Vapor Density	< 1 Air = 1
Evaporation Rate	< 1 Butyl Acetate = 1
Odor	Sweet, paint like
Appearance	White Liquid
Viscosity	Varies
Odor Threshold	Not Determined
Boiling Point	100*C, 212*F (Typical)
Pour Point Temperature	Not Determined
Melting / Freezing Point	~ 0*C, ~ 32*F

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted

10. Chemical Stability & Reactivity Information

Hazardous reactions/decompositions products
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous polymerization	Will not occur.
Conditions to avoid	Not established
Stability	Stable under normal conditions. This product may react with strong acids, bases and oxidizing agents.

11. Toxicological Information

-ACUTE EXPOSURE-

Eye Irritation	May cause eye irritation.
Skin Irritation	Not expected to be a primary skin irritant. Repeated or prolonged skin contact may cause irritation. Pre-existing skin conditions may be aggravated by prolonged or repeated exposure.
Respiratory Irritation	Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and Respiratory tract.
Dermal Toxicity	Not established
Inhalation Toxicity	Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and Respiratory tract.
Oral Toxicity	Not established. Ingestion of this material may cause gastrointestinal irritations

-CHRONIC EXPOSURE-

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity	No data available to indicate product may present a carcinogen hazard. There are no carcinogenic ingredients present at or over 0.1% in this material.
Mutagenicity	No data available to indicate product is mutagenic or genotoxic.
Reproductive Toxicity	No data available to indicate product may cause reproductive toxicity.
Tetratogenicity	No data available to indicate product may cause birth defects.

12. Ecological Information

There is no data available for this product

13. Disposal Considerations

Environmental precautions: CAUTION: keep spills and cleaning runoff out of municipal sewers and open bodies of water.

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

14. Transport Information

DOT
Not regulated as hazardous goods.

IATA
Not regulated as hazardous goods.

IMDG
Not regulated as hazardous goods.

15. Regulatory Information

Workplace Classification

OSHA: This product is considered non-hazardous under the OSHA Hazard Communiation Standard (29CFR1910.1200)

WHMIS: This product is not a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS)

SARA TITLE III: Section 311/312 Categorizations (40CFR370):
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA

SARA TITLE III: Section 313 Information (40CFR372):
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40CFR302.4):
Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liabillity Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304

US. Toxic Substances Control Act (TSCA):

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TCSA) Chemical Substance Inventory.

State regulations If this product contains any California Proposition 65 chemicals, they will be listed below. Unless a concentration is given, the chemicals listed below are present only in trace amounts (less than 0.1%)

Formaldehyde (CAS# 50-00-0)
Acrylamide (CAS# 79-06-1)
Vinyl Chloride (CAS# 75-01-4)

Restriction of Hazardous Substances (RoHS) The product(s) covered by this (M)SDS do not contain or are under the prescribed levels of prohibited substances listed under 2011/65/EU Hazardous Substances Restricted or Prohibited in Electrical Equipment, including lead (CAS # 7439-92-1), mercury (CAS # 7439-97-6), cadmium (CAS # 7440-43-9), hexavalent chromium (CAS # 7440-47-3), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

International regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

REACH

Substances of Very High Concern (SVHC)

The product(s) covered by this (M)SDS does include a substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA on the following dates:

- October 28, 2008
- August 31, 2009
- January 13, 2010
- March 8, 2010
- June 18, 2010
- October 14, 2010
- December 15, 2010
- June 20, 2011
- December 19, 2011
- February 17, 2012
- June 18, 2012
- December 19, 2012
- June 20, 2013

Component	CAS #	Concentration
Nonylphenol ethoxylate, branched	68412-54-4	< 0.3%

HMIS Ratings

Health:	1
Flammability:	0
Reactivity:	0
Personal protection:	B

16. Other Information

Issue date 2015

Prepared by Tim Myrick/ Vince Lauria/Larry Clark

All statements, information and data presented herein are to the best of our knowledge and belief accurate and reliable as of the date complied. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to determine the suitability and completeness of such information for their particular end use. We do not accept liability for any loss or damage that may occur from the use of this information.

Specialty Adhesives and Coatings, Inc.
3791 Air Park St.
Memphis, TN 38181 Phone: 1-800-728-9171
Fax: 1-901-794-9175
specialtyadhesives@specialtyadhesivesinc.com

G W H- 1
F-0
R- 0
PPE-B

SAFETY DATA SHEET (MSDS)

Emergency Medical Telephone Number: (901)794-8556

PRODUCT IDENTIFICATION

Specialty Adhesives Name: 1038

Product use: Adhesive
Generic description Polyvinyl alcohol/resin or polyvinyl alcohol/clay mixture in water

2. Hazards Identification

Emergency overview: Contact with this material can cause irritation to the skin, eyes and mucous membranes.

Potential health effects

Eyes Direct eye contact with the product may cause irritation
Skin Prolonged or repeated contact with liquid product may cause irritations.
Inhalation Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, And respiratory tract.
Ingestion Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance. Do not ingest.
Fire & explosion This product will not ignite under normal situations but can be ignited in the extreme heat associated with a fire. In a fire situation, exposed containers may build up pressure and burst explosively spewing hot material. Irritating and potentially harmful vapors may be released in a fire or spill situation.

3. Composition / Information on Hazardous Ingredients

Component	CAS-No.	Concentration

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First Aid Measures

First aid procedures

Eye contact If product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.
Skin contact If product contacts skin, wash affected area with soap and water. Seek medical attention if irritation develops or persists. Launder contaminated clothing before reuse.
Inhalation Move subject to fresh air in case of accidental inhalation of vapors or decomposition products. If symptoms persist, get medical attention promptly.

Ingestion If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to victim who is unconscious or is having convulsions.

5. Fire Fighting Measures

Hazardous combustion products

Incomplete combustion can yield carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam. Avoid using a direct stream of water.
Firefighting Equipment/Instructions	Firefighters should wear full protective clothing including self. contained breathing apparatus.
Dust explosion hazard	None Known
Sensitivity to Static Discharge	None Known
Unusual fire & explosion Hazards	There is the possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers/
Flash point	Non flammable

6. Accidental Release Measures

Emergency action	Wear appropriate protective equipment and clothing during clean-up. Follow all Local, State, Federal and Provincial regulations for disposal.
Containment procedures	Isolate spill area. Stop discharge if safe to do so. Dike, if necessary, contain spill with inert absorbent . Collect and contain for salvage or disposal. Keep spilled product from contaminating soil or from entering sewers, watersheds or water streams.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. Handling and Storage

For Commercial Use Only - Not Packaged or Labeled for Home Use!

Handling	Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing fumes if this product is used at high temperatures. Use this product with adequate ventilation.
Storage	Protect from freezing – product stability may be affected.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. In storage, monomer vapors will migrate from the emulsion and establish an equilibrium between the headspace in the storage container and the liquid emulsion. Levels in excess of acceptable exposures can accumulate in non –vented headspaces above the emulsion. All procedures appropriate for a confined space entry should be completed prior to performing any work in a bulk storage tank. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. Exposure Controls / Personal Protection

Exposure Limit(s) Exposure limits are listed below, if they exist

Component	Regulation	Type of Listing	Value

None

Engineering Controls Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.

Personal Protective Equipment

Eye Protection	Wear safety glasses to reduce the potential for eye contact. Chemical safety goggles are appropriate if splashing is likely. Have eye washes available where eye contact can occur.
Skin and Body Protection	Prevent prolonged or repeated contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.
Respiratory Protection	Not normally required. When fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.
General	Eye wash fountain and emergency showers are recommended.

9. Physical & Chemical Properties

Flash Point	Not Applicable/ non flammable
Upper Flammable Limit	Not Determined
Lower Flammable Limit	Not Determined
Auto ignition Point	Not Determined
Explosion Data	Material does not have explosive properties
Vapor Pressure	NA
PH	3.5 – 5.0
Specific Gravity	1.09
Bulk Density	9.1 lbs/ gallon
Water Solubility	Miscible
Percent Solid	Approx. 10 - 50%
Percent Volatile	Approx. 50%
%Volatile Organic Compounds	Less than 0.30% by weight
Vapor Density	< 1 Air = 1
Evaporation Rate	< 1 Butyl Acetate = 1
Odor	Slight
Appearance	White Liquid
Viscosity	Approx. 5000 cps. @ 80F
Odor Threshold	Not Determined
Boiling Point	100*C, 212*F (Typical)
Pour Point Temperature	Not Determined
Melting / Freezing Point	~ 0*C, ~ 32*F

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted

10. Chemical Stability & Reactivity Information

Hazardous reactions/decompositions products
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous polymerization	Will not occur.
Conditions to avoid	Not established
Stability	Stable under normal conditions. This product may react with strong acids, bases and oxidizing agents.

11. Toxicological Information

-ACUTE EXPOSURE-

Eye Irritation	May cause eye irritation.
Skin Irritation	Not expected to be a primary skin irritant. Repeated or prolonged skin contact may cause irritation. Pre-existing skin conditions may be aggravated by prolonged or repeated exposure.
Respiratory Irritation	Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and Respiratory tract.
Dermal Toxicity	Not established
Inhalation Toxicity	Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and Respiratory tract.
Oral Toxicity	Not established. Ingestion of this material may cause gastrointestinal irritations

-CHRONIC EXPOSURE-

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.

Carcinogenicity No data available to indicate product may present a carcinogenic hazard. There are no carcinogenic ingredients present at or over 0.1% in this material.

.

Mutagenicity No data available to indicate product is mutagenic or genotoxic.

Reproductive Toxicity No data available to indicate product may cause reproductive toxicity.

Tetratogenicity No data available to indicate product may cause birth defects.

12. Ecological Information

There is no data available for this product

13. Disposal Considerations

Environmental precautions: CAUTION: keep spills and cleaning runoff out of municipal sewers and open bodies of water.

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

14. Transport Information

DOT
Not regulated as hazardous goods.

IATA
Not regulated as hazardous goods.

IMDG
Not regulated as hazardous goods.

15. Regulatory Information

Workplace Classification

OSHA: This product is considered non-hazardous under the OSHA Hazard Communiation Standard (29CFR1910.1200)

WHMIS: This product is not a “controlled product” under the Canadian Workplace Hazardous Materials Information System (WHMIS)

SARA TITLE III: Section 311/312 Categorizations (40CFR370):
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA

SARA TITLE III: Section 313 Information (40CFR372):
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40CFR302.4):
Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liabillity Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304

US. Toxic Substances Control Act (TSCA):

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TCSA) Chemical Substance Inventory.

State regulations If this product contains any California Proposition 65 chemicals, they will be listed below. Unless a concentration is given, the chemicals listed below are present only in trace amounts (less than 0.1%)

Formaldehyde (CAS# 50-00-0)
Methanol (CAS #67-56-1)
Benzene (CAS # 71-43-2)

Restriction of Hazardous Substances (RoHS) The product(s) covered by this (M)SDS do not contain or are under the prescribed levels of prohibited substances listed under 2011/65/EU Hazardous Substances Restricted or Prohibited in Electrical Equipment, including lead (CAS # 7439-92-1), mercury (CAS # 7439-97-6), cadmium (CAS # 7440-43-9), hexavalent chromium (CAS # 7440-47-3), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

International regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

REACH

Substances of Very High Concern (SVHC)

The product(s) covered by this (M)SDS includes a substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA on the following dates:

- October 28, 2008
- August 31, 2009
- January 13, 2010
- March 8, 2010
- June 18, 2010
- October 14, 2010
- December 15, 2010
- June 20, 2011
- December 19, 2011
- February 17, 2012
- June 18, 2012
- December 19, 2012
- June 20, 2013
- June 18, 2014
- December 17, 2014

Component	CAS #	Concentration
Boric Acid	10043-35-3	Less than 1.0%

HMIS Ratings

Health: 1
Flammability: 0
Reactivity: 0
Personal protection: B

16. Other Information

Issue date 2015

Prepared by Tim Myrick/ Vince Lauria

All statements, information and data presented herein are to the best of our knowledge and belief accurate and reliable as of the date complied. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to determine the suitability and completeness of such information for the customer's particular end use. We do not accept liability for any loss or damage that may occur from the use of this information.

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Name: TRAP SHOOT

Application: Degreaser; Drain Treatment.

Product Number: 2091

UN-Number: N/A

Manufacturer Information

Sunrise Environmental Scientific
Remit: PO Box 10207 Reno, NV 89510
Physical: 1175 Industrial Way Sparks, NV 89431
Phone Number: 775-359-8494 or 800-648-1153
Web: SUNRISENV.COM

Emergency Phone No.
Chemtrec: 1-800-424-9300

Pages: 3

2. HAZARDS IDENTIFICATION

Emergency Overview:

Signal word: WARNING

Hazard statement: Cause serious eye irritation. May be harmful if swallowed

Potential Health Effects:

Inhalation: Exessive inhalation of vapors may result in irritation.

Skin Contact: Flush with water, remove soiled clothing.

Ingestion: Do not induce vomiting, see a physician immediately. Treat as Petroleum distillate ingestion. Aspiration hazard

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient:	CAS #	Component WT%	PEL	TLV	IDLH
Aliphatic Solvent	64742-47-8	N/A	400 ppm	N/A	N/A
Organic Solvent	68647-72-3	N/A	N/A	N/A	N/A
Isopropylamine	75-31-0	N/A	3 ppm	3 ppm	N/A

Comments: No OSHA-PEL or TLV values established for silicone oil, (consider inert).

4. FIRST AID MEASURES

Inhalation: Excessive inhalation of vapors can be harmful. Move to fresh air.

Skin Contact: Flush with water, remove soiled clothing.

Ingestion: Do not induce vomiting, see a physician immediately. Treat as Petroleum distillate ingestion. Aspiration hazard

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. See a physician.

Additional Information: None

5. FIRE FIGHTING MEASURES

Flash Point: 160°F COC

Upper Flammable Limit (UEL): N/A

Lower Flammable Limit (LEL): N/A

Flammable Limits: N/A

Auto Ignition: N/D

Rate of Burning: N/D

General Fire Hazards: Hot drum may explode.

Hazardous Combustion Product: Carbon Monoxide.

Extinguishing Media: Foam, Co2, dry chemicals, or other.

Fire Fighting Equipment/Instructions: May produce irritating fumes in fire, use SCBA equipment. Treat as Petroleum, use water spray only to cool.

NFPA Rating: (Flammability 2) (Health 1) (Reactivity 0)

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid spraying product into eyes.

Environmental Precautions: Avoid spraying product near ignition source.

Method for Cleanup & Containment: Eliminate ignition sources, isolate spill and absorb material with spill absorbent or like material.

Follow local regulations with regard to chemical spills.

Additional Information: Follow local and federal regulations with regard to chemical spills

7. HANDLING AND STORAGE

Handling Procedure: Avoid skin contact. Use gloves and wash up after use.

Storage Procedures: Store away from reactive chemicals in a cool, well ventilated area.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits:

ACGIH Components: Use ventilation adequate to maintain TLV.

OSHA Components: No

Engineering Measures: N/A

Personal Protective Equipment (PPE): Use goggles or a face shield and chemical resistant gloves. Apron and boots are optional.

Hygiene Recommendations: Use caution to combustible solvent based degreaser.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear

Physical State: Liquid

Vapor Pressure: N/A

Boiling Point: 349°F

Solubility (H20): Insoluble in water

Freezing Point: N/D

Odor: Citrus aroma

pH: N/D

Density: N/D

Evaporation Rate: N/A

Vapor Density: N/A

Melting Point: N/A

Specific Gravity: 0.825

VOC: 95.0%

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: N/A

Incompatibility: Oxidizers, strong chemicals.

Hazardous Decomposition: Carbon monoxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Route of Entry: Inhalation, skin and/or ingestion.

Acute Toxicity Data: May affect central nervous system on over exposure, dizziness, headache, possible skin irritation, dermatitis, possible hoarseness, cough, or respiratory irritation. Harmful if swallowed.

NTP: No

IARC Monographs: No

Carcinogenicity: No

Chronic Toxicity: None

12. ECOLOGICAL INFORMATION

Ecotoxicity: N/D

Persistence and Degradability: N/D

Bioaccumulative potential: N/D

Mobility in Soil: N/D

Other Adverse effects: N/A

13. DISPOSAL CONSIDERATIONS

Disposal Instructions: Follow local and federal disposal regulations for this material.

14. TRANSPORTATION INFORMATION

US DOT Information: NA 1993, COMBUSTIBLE LIQUID, N.O.S., (CONTAINS D-LIMONENE), PG III, CLASS 70

Marine Pollutant: N/D

Shipping Name: Trapshoot

Required Label: N/A

15. REGULATORY INFORMATION

Classification: Irritant

Hazard Symbol: Exclamation Point

US Federal Regulations:

OSHA'S Hazard Communication Rule, 29 CFR 1910.1200-Is an irritant. Harmful if ingested.

SARA Title III-This product does not contain chemicals component with known CAS number that exceed the threshold reporting levels established by SARA Title III, section 313.

State Regulations:

California Prop. 65-This product does not contain any chemicals known to state of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

SDS History

Date Prepared: 08/16/2006

Revision Date: 03/04/2015

Contact Information: Sunrise Environmental Scientific
Remit: PO Box 10207 Reno, NV 89510
Physical: 1175 Industrial Way Sparks, NV 89431
Phone Number: 775-359-8494 or 800-648-1153
Web: SUNRISENV.COM

This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subjected to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein and neither the provider nor the manufacturer are liable to any party for any damages or nature. Including direct, special or consequential damages arising out of or in connection with accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions. The recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Name: TWIN POWER

Application: Heavy duty cleaner, biodegradable, non-toxic, non-flammable & non-corrosive

Product Number: 2048

UN-Number: N/A

Manufacturer Information: Sunrise Environmental Scientific
Remit: PO Box 10207 Reno, NV 89510
Physical: 1175 Industrial Way Sparks, NV 89431
Phone Number: 775-359-8494 or 800-648-1153
Web: SUNRISENV.COM

Emergency Phone No.
Chemtrec: 1-800-424-9300

Pages: 3

2. HAZARDS IDENTIFICATION

Emergency Overview:

Signal Word: WARNING

Hazard Statement: Cause serious eye irritation. May be harmful if swallowed

Potential Health Effects:

Inhalation: Move to fresh air.

Skin Contact: Wash with soap and water.

Ingestion: Do not induce vomiting. Drink large quantities of water or milk, see a physician immediately.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient:	CAS #	Component WT%	PEL	TLV	IDLH
*2 Butoxyethanol	111-76-2	4%<15%	25 ppm	25 ppm	700 ppm
*Diethylene Glycol Monoethyl Ether	111-90-0	3%<11%	N/A	N/A	N/A
Nonylphenol Polyethylene Glycol Ether	127087-87-0	3%<15%	N/A	N/A	N/A

Comments: None.

4. FIRST AID MEASURES

Inhalation: Move to fresh air.

Skin Contact: Flush with soap and water.

Ingestion: Do not induce vomiting, drink a large quantity of water or milk and seek medical care immediately.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. See a physician.

Additional Information: None

5. FIRE FIGHTING MEASURES

Flash Point: Not flammable.

Upper Flammable Limit (UEL): N/A

Lower Flammable Limit (LEL): N/A

Flammable Limits: N/A

Auto Ignition: N/D

Rate of Burning: N/D

General Fire Hazards: N/A

Hazardous Combustion Product: May produce carbon monoxide or other toxic by-products in fire.

Extinguishing Media: Foam, Co2, dry chemicals, or others.

Fire Fighting Equipment/Instructions: May produce irritating fumes in fire, use SCBA equipment.

NFPA Rating: (Flammability 0) (Health 1) (Reactivity 1)

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid spraying product into eyes.

Environmental Precautions: Avoid spraying product near ignition source.

Method for Cleanup & Containment: Isolate spill, neutralize material with citric acid to an acceptable PH level, and absorb material with spill absorbent or like material. Follow local regulations with regard to chemical spills. PH neutralization with citric acid is recommended prior to disposal.

Additional Information: Follow local and federal regulations with regard to chemical spills.

7. HANDLING AND STORAGE

Handling Procedure: Avoid skin contact. Use gloves and wash up after use. *Contains a toxic chemical or chemicals subject to the reporting requirements of SARA Title III, Section 313. Diethylene Glycol Monoethyl Ether, <10%, Ethylene Glycol, <5%.

Storage Procedures: Store away from reactive chemicals in a cool, well ventilated area.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits:

ACGIH Components: Use ventilation adequate to maintain TLV.

OSHA Components: No

Engineering Measures: N/A

Personal Protective Equipment (PPE): Wear chemical resistant gloves and goggles or a face shield. Aprons and boots are optional.

Hygiene Recommendations: Use caution appropriate to strong alkaline detergent.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green liquid

Physical State: Liquid

Vapor Pressure: N/A

Boiling Point: 206°F

Solubility (H20): Soluble in water

Freezing Point: N/D

Odor: Mild aroma

pH: N/D

Density: N/D

Evaporation Rate: N/A

Vapor Density: N/A

Melting Point: N/A

Specific Gravity: 1.01

VOC: 5.4%

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: N/A

Incompatibility: Oxidizers, strong chemicals

Hazardous Decomposition: May produce carbon monoxide or other toxic by-products in fire.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Route of Entry: Inhalation, skin, eye, and/or ingestion.

Acute Toxicity Data: Respiratory irritation. Irritation to eyes and skin. Skin burns on prolonged contact. Dermatitis in some individuals. Vapors may cause dizziness. Gastrointestinal burns in ingested.

NTP: No

IARC Monographs: No

Carcinogenicity: No

Chronic Toxicity: N/A

12. ECOLOGICAL INFORMATION

Ecotoxicity: N/D

Persistence and Degradability: N/D

Bioaccumulative potential: N/D

Mobility in Soil: N/D

Other Adverse effects: N/D

13. DISPOSAL CONSIDERATIONS

Disposal Instructions: Follow local and federal disposal regulations for this material. PH neutralization with citric acid is recommended prior to disposal.

14. TRANSPORTATION INFORMATION

US DOT Information: LIQUID CLEANER CLASS 55

UN Number: N/A

Marine Pollutant: N/D

Shipping Name: Twin Power

Required Label: N/A

15. REGULATORY INFORMATION

Classification: Irritant

Hazard Symbol: Exclamation Point

US Federal Regulations:

OSHA'S Hazard Communication Rule, 29 CFR 1910.1200-Is an irritant. Harmful if ingested.

SARA Title III-This product does contain chemicals component with known CAS number that exceed the threshold reporting levels established by SARA Title III, section 313. 2 Butoxyethanol<10%. Diethylene Glycol Monoethyl Ether <3%.

State Regulations:

California Prop. 65-This product does not contain any chemicals known to state of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

SDS History

Date Prepared: 08/16/2006

Revision Date: 04/10/2015

Contact Information: Sunrise Environmental Scientific
Remit: PO Box 10207 Reno, NV 89510
Physical: 1175 Industrial Way Sparks, NV 89431
Phone Number: 775-359-8494 or 800-648-1153
Web: sunrisenv.com
Phone Number: 775-359-8494 or 800-648-1153
Web: SUNRISENV.COM

This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subjected to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein and neither the provider nor the manufacturer are liable to any party for any damages or nature. Including direct, special or consequential damages arising out of or in connection with accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions. The recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

TAYLOR

Safety Data Sheet

T&A TA9601 Contractors Choice Ceramic Tile Adhesive

Revision date: May 22, 2015

Version: 1

1. Identification

T&A TA9601 Contractors Choice Ceramic Tile Adhesive

Recommended use of the chemical and restriction on use: interior installation of flooring material over approved subfloors – ceramic wall and floor tiles

Details of the supplier of the safety data sheet

Company:
W.F.Taylor LLC
11545 Pacific Avenue
Fontana, CA 92337, USA

Telephone number: (951) 360-6677

Emergency Telephone Number: 1-800-535-5053

Other Means of Identification
Chemical Family: Acrylic latex blend

---

2. Hazards identification

According to regulation 2012 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

Classification of the Product:
No need for classification according to GHS criteria for this product.

Label Elements
This product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified
None known if used according to instructions. Irritation may occur when in contact with eyes and skin.

Emergency Overview

Caution:
May cause skin irritation if not removed after skin contact.
Use with Use with local exhaust ventilation.
Use protective equipment for eyes, skin protection.

---

3. Composition / Information on Ingredients

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

This product does not contain any components classified as hazardous under the referenced regulation.

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

CAS number	Content	Chemical Name
1357-85-3	50-60	Calcium Carbonate
Trade Secret	10-20	Acrylic latex
7732-18-5	10-20	Water
64742-47-8	1-2	Mineral Spirits

---

4. First Aid Measures

Description of First Aid measures

General Advice:
Upon contact, remove material from skin, eyes, and clothing. If irritation persists, seek medical attention.

If inhaled:
Remove individual to fresh air if needed.

If on Skin:

Wash with mild soap and water.

If in eyes:

Open eyelids and flush with running water for at least 15 minutes.

If Swallowed:

Do not induce vomiting. Seek medical help immediately.

Most Important symptoms and effects, both acute and delayed

Not expected due to non- classification of the product.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Symptomatic treatment

---

5. Fire-Fighting Measures

Extinguishing Media
None needed in wet state. Product is water based.
Dry material will burn. Use Water spray, foam, dry powder when needed.
Special hazards arising from the substance or mixture
Material is a mixture of organic compounds. Compounds of carbon may arise during burning.
Advice for fire-fighters
Wear self-contained breathing apparatus and turn out gear.
Further Information:
Dispose debris and contaminated clothing in accordance with regulations.

---

6. Accidental release measures

Further accidental release measures:

Slip hazard when spilled.

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Avoid contact with skin and eyes.

Environmental Precautions

Do not release spilled material into natural waters.

Methods and material for containment and cleaning up

Remove material using absorbents. Scrape off excess and place in closed DOT approved containers for disposal.

7. Handling and Storage

Precautions for Safe Handling

Do not puncture. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Keep from freezing. Avoid extreme temperatures.

---

8. Exposure Control/ Personal Protection

Advice on system design: Maintain proper ventilation.

Personal protective equipment:

Respiratory protection: NIOSH respirator if needed. Use local exhaust ventilation. Do not use closed air-circulating system.

Skin protection: chemical resistant gloves, apron, coveralls, and boots to prevent unnecessary contact.

Eye protection: safety glasses, goggles, or face shield

General safety and hygiene safety measures:

Wash hands and face after use. Launder contaminated clothing before re-use. Always use protective equipment to avoid direct contact.

---

9. Physical and Chemical Properties

Form: high viscosity mastic

Odor: mild

Odor threshold: no data
Color: off white to cream
pH value: 8.0 – 9.0
Melting point: not applicable
Boiling point: similar to water
Flash point: not applicable
Flammability: none flammable
Lower Explosion Limit: low
Upper Explosion Limit: low
Vapor Pressure: low
Density: 11.74 – 13.68 lbs. per gallon
Relative density: 1.41 – 1.64 grams / cm3
Vapor density: low
Partition Coefficient n-octanol /water (log Pow): no data
Self- ignition temperature: not applicable
Viscosity, dynamic: 500,000 – 625,000 cps
Solubility in water: limited
Miscibility in water: miscible
Evaporation rate: same as water
Other information:

---

10. Stability and Reactivity

Reactivity: Stable
Chemical stability: Stable
Possibility of hazardous reactions: None, product is stable.
Conditions to avoid: Extreme temperatures.
Incompatible materials: None known
Hazardous decomposition products: None known.

---

11. Toxicological Information

No data available
Primary routes of exposure: respiratory, eyes, skin. Ingestion is not likely but might cause gastric disturbances.

Acute Toxicity / Effects

Acute toxicity: May cause irritation upon contact.

Chronic Toxicity Effects

Repeated dose toxicity: no data available
Genetic toxicity: no data available
Carcinogenicity: not carcinogenic
Reproductive toxicity: no data available
Teratogenicity: no data available
Experiences in humans

Other Information

---

12. Ecological Information
No data available

---

13. Disposal Considerations
Abide by all State, federal and local regulations

---

14. Transport Information
Proper Shipping name: Not applicable
Proper Hazard Class: Not hazardous
Hazard Code: None hazardous
Bill of Lading Description: **Adhesives, NOI**

---

15. Regulatory Information:

Federal Regulations

Registration status:

TSCA: Chemicals contained in the product are either listed or exempt in the U.S. EPA TSCA inventory list.

SARA Title III, Section 312 Hazard Class: None

EPA SARA Title III Section 313: None

State regulations:

CA Prop 65:

Warning: This product may contain a chemical (s) known to the state of California to cause cancer and birth defects or other reproductive harm.

NFPA Hazard Codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

HMIS rating:

Health: 1 Flammability: 0 Physical hazard: 0

---

16. Other Information

SDS prepared by: W.F. Taylor SDS group

SDS prepared on: May, 22, 2015

W.F. Taylor LLC believes the data set forth herein are accurate as of the date hereof. Taylor makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.

T Floors
walls
Wd. Roofs
H- 1
F- 0
R- 0
PPE - B

TAYLOR

Safety Data Sheet

9680 - 4 Architects Choice Carpet Adhesive

Revision date: May 22, 2015

Version: 1

1. **Identification**

9680 – 4 Architects Choice Carpet Adhesive

Recommended use of the chemical and restriction on use: interior installation of flooring material over approved subfloors- wide variety of carpet and resilient floorings. Not for use with vinyl backings.

Details of the supplier of the safety data sheet

Company: W.F.Taylor
LLC 11545 Pacific
Avenue
Fontana, CA 92337, USA

Telephone number: (951) 360-6677

Emergency Telephone Number: 1-800-535-5053

Other Means of Identification
Chemical Family: Synthetic latex and Hydrocarbon resin blend

2. Hazards identification

According to regulation 2012 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

Classification of the Product:

No need for classification according to GHS criteria for this product.

Label Elements

This product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

None known if used according to instructions. Irritation may occur when in contact with eyes and skin.

Emergency Overview

Caution:

May cause skin irritation if not removed after skin contact.
Use with Use with local exhaust ventilation.
Use protective equipment for eyes, skin protection.

---

3. Composition / Information on Ingredients

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

This product does not contain any components classified as hazardous under the referenced regulation.

According to Regulation 1994 OSHA Hazard Communication Standard : 29 CFR Part 1910.1200

CAS number	Content	Chemical Name
Trade Secret	1-10	Tackifier Resin
Trade Secret	1-10	SBR latex
1132-58-7	15-25	Kaolin Clay
7732-18-5	35-45	Water

4. First Aid Measures

Description of First Aid measures

General Advice:

Upon contact, remove material from skin, eyes, and clothing. If irritation persists, seek medical attention.

If inhaled:

Remove individual to fresh air if needed.

If on Skin:

Wash with mild soap and water.

If in eyes:

Open eyelids and flush with running water for at least 15 minutes.

If Swallowed:

Do not induce vomiting. Seek medical help immediately.

Most Important symptoms and effects, both acute and delayed

Not expected due to non- classification of the product.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Symptomatic treatment

---

5. Fire-Fighting Measures

Extinguishing Media

None needed in wet state. Product is water based.

Dry material will burn. Use Water spray, foam, dry powder when needed.

Special hazards arising from the substance or mixture

Material is a mixture of organic compounds. Compounds of carbon may arise during burning.

Advice for fire-fighters

Wear self-contained breathing apparatus and turn out gear.

Further Information:

Dispose debris and contaminated clothing in accordance with regulations.

6. **Accidental release measures**

Further accidental release measures: Slip hazard when spilled.

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Avoid contact with skin and eyes.

Environmental Precautions

Do not release spilled material into natural waters.

Methods and material for containment and cleaning up

Remove material using absorbents. Scrape off excess and place in closed DOT approved containers for disposal.

7. **Handling and Storage**

Precautions for Safe Handling

Do not puncture. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Keep from freezing. Avoid extreme temperatures.

8. **Exposure Control/ Personal Protection**

Advice on system design: Maintain proper ventilation.

Personal protective equipment:

Respiratory protection: NIOSH respirator if needed. Use local exhaust ventilation. Do not use closed air-circulating system.

Skin protection: chemical resistant gloves, apron, coveralls, and boots to prevent unnecessary contact.

Eye protection: safety glasses, goggles, or face shield

General safety and hygiene safety measures:

Wash hands and face after use. Launder contaminated clothing before re-use. Always use protective equipment to avoid direct contact.

---

9. Physical and Chemical Properties

Form: medium viscosity liquid

Odor: mild

Odor threshold: no data

Color: off white to cream

pH value: 9.8 - 10

Melting point: not applicable

Boiling point: similar to water

Flash point: not applicable

Flammability: none flammable

Lower Explosion Limit: low

Upper Explosion Limit: low

Vapor Pressure: low

Density: 9.3 – 9.9 lbs. per gallon **Relative density:** 1.11 – 1.19 grams / cm3

Vapor density: low

Partition Coefficient n-octanol /water (log Pow): no data **Self- ignition temperature:** not applicable

Viscosity, dynamic: 100,000 – 175,000 cps

Solubility in water: limited

Miscibility in water: miscible

Evaporation rate: same as water

Other information:

---

10. Stability and Reactivity

Reactivity: Stable

Chemical stability: Stable

Possibility of hazardous reactions: None, product is stable.

Conditions to avoid: Extreme temperatures.

Incompatible materials: None known

Hazardous decomposition products: None known.

11. Toxicological Information

No data available

Primary routes of exposure: respiratory, eyes, skin. Ingestion is not likely but might cause gastric disturbances.

Acute Toxicity / Effects

Acute toxicity: May cause irritation upon contact.

Chronic Toxicity Effects

Repeated dose toxicity: no data
available Genetic toxicity: no data
available Carcinogenicity: not
carcinogenic Reproductive toxicity: no
data available Teratogenicity: no data
available Experiences in humans

Other Information

12. Ecological Information

No data available

13. Disposal Considerations

Abide by all State, federal and local regulations

14. Transport Information

Proper Shipping name: Not applicable
Proper Hazard Class: Not hazardous
Hazard Code: None hazardous

Bill of Lading Description: **Adhesives, NOI**

15. Regulatory Information:

Federal Regulations

Registration status:

TSCA: Chemicals contained in the product are either listed or exempt in the U.S. EPA TSCA inventory list.

SARA Title III, Section 312 Hazard Class:

None EPA SARA Title III Section 312: None

State regulations:

CA Prop 65:

Warning: This product may contain a chemical (s) known to the state of California to cause cancer and birth defects or other reproductive harm.

NFPA Hazard Codes:

Health: 1 Fire: 0 Reactivity: 0 Special:

HMIS rating:

Health: 1 Flammability: 0 Physical hazard: 0

16. Other Information

SDS prepared by: Darwin C. Regis

SDS prepared on: May, 22, 2015

W.F. Taylor LLC believes the data set forth herein are accurate as of the date hereof. Taylor makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.

Franklin International

Safety Data Sheet

Titebond White Glue

Section 1. Identification

GHS product identifier	:	Titebond White Glue
Product type	:	Liquid.
Address	:	Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	:	Franklin Technical Services
Telephone	:	(800) 877-4583
In case of emergency	:	Franklin Security (614) 445-1300
Reference number	:	1106
Product code	:	15026
Date of revision	:	6/2/2015.
Print date	:	6/3/2015.
Chemtrec (24 Hour)	:	(800) 424 - 9300
Chemtrec International	:	(703) 527 - 3887
Chemical family	:	Adhesive.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Section 2. Hazards identification

OSHA/HCS status	:	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	:	Not classified. Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5.5%

GHS label elements

Signal word	:	No signal word.
Hazard statements	:	No known significant effects or critical hazards.

Precautionary statements

General	:	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Hazards not otherwise classified	:	None known.

Section 3. Composition/information on ingredients

Hazardous ingredients

United States

Name	CAS number	%
No hazardous ingredient		

Canada

Name	CAS number	%
No hazardous ingredient		

Mexico

					Classification			
Name	CAS number	UN number	%	IDLH	H	F	R	Special
No hazardous ingredient								

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 10 to 32.222°C (50 to 90°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Ingredient name	Exposure limits
No exposure limit value known.	

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
No exposure limit value known.											

Mexico

Occupational exposure limits

Ingredient	Exposure limits
No exposure limit value known.	

Consult local authorities for acceptable exposure limits.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : White.

Odor : Faint odor.

Odor threshold : Not available.

pH : 4.8

Melting point : Not available.

Boiling point : 98.889°C (210°F)

Flash point : Closed cup: >93.333°C (>200°F) [Setaflash.]

Evaporation rate : <1 (butyl acetate = 1)

VOC (less water, less exempt solvents) : 10.7 g/l

Relative density : 1.09

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 12. Ecological information

Toxicity

Conclusion/Summary : Not available.

Persistence and degradability

Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : None of the components are listed.

Section 15. Regulatory information

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

Not available.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Not applicable.				

Canada

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): All components are listed or exempted.

Europe : Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

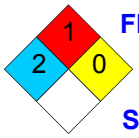
Hazardous Material Information System (U.S.A.)

Health	2
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Flammability

Health

Instability/Reactivity

Special

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	:	6/3/2015.
Date of issue/Date of revision	:	6/2/2015.
Date of previous issue	:	5/21/2015.
Version	:	4.1
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	:	Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** **Touch N Seal CP 750 FR ICC Part - A**

· **Article number:** EHS2732 - SDS / A REGULAR

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Polyurethane-sealant

· **1.3 Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.
	H229	Pressurised container: May burst if heated.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 1)

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
diphenylmethanediisocyanate,isomeres and homologues
4,4'-methylenediphenyl diisocyanate

· **Hazard statements**
H229 Pressurised container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P285	In case of inadequate ventilation wear respiratory protection.
P264	Wash thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 2)

· **Additional information:**
Contains isocyanates. May produce an allergic reaction.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

· **Hazard description:**

· **WHMIS-symbols:**
A - Compressed gas
D2A - Very toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 0
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 0
Reactivity = 1

· **HMIS Long Term Health Hazard Substances**	
101-68-8	4,4'-methylenediphenyl diisocyanate
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 3)

CAS: 9016-87-9	diphenylmethanediisocyanate,isomeres and homologues Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	> 50%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9	4,4'-methylenediphenyl diisocyanate Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 811-97-2 EINECS: 212-377-0	Norflurane Press. Gas, H280	10-25%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**

· **General information:**
Take affected persons out into the fresh air.
Do not leave affected persons unattended.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Do not pull solidified product off the skin.
If skin irritation continues, consult a doctor.

· **After eye contact:**
Protect unharmed eye.
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
Do not remove contact lenses if worn.

· **After swallowing:**
Unlikely route of exposure.
Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Asthma attacks
Headache
Allergic reactions
Coughing
Breathing difficulty
Dizziness

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 4)

· **Hazards**
Danger of impaired breathing.
Danger of pulmonary oedema.
Danger of convulsion.
Danger of disturbed cardiac rhythm.
Condition may deteriorate with alcohol consumption.
· **4.3 Indication of any immediate medical attention and special treatment needed**
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary oedema.
Monitor circulation, possible shock treatment.
Treat skin and mucous membrane with antihistamine and corticoid preparations.

5 Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** None.
· **5.2 Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapour pressure when heated.
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Hydrogen cyanide (HCN)
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Remove persons from danger area.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
Protect from heat.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Clean the affected area carefully; suitable cleaners are:
Warm water and cleansing agent
Dispose contaminated material as waste according to item 13.

(Contd. on page 6)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 5)

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Use only in well ventilated areas.
Take note of emission threshold.
Ensure good ventilation/exhaustion at the workplace.
· **Information about fire - and explosion protection:**
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
Store in a cool location.
Provide ventilation for receptacles.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
Store away from oxidizing agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.
· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL (USA)	Short-term value: C 0,2 mg/m³, C 0,02 ppm
REL (USA)	Short-term value: C 0,2* mg/m³, C 0,02* ppm Long-term value: 0,05 mg/m³, 0,005 ppm *10-min

(Contd. on page 7)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 6)

TLV (USA)	0,051 mg/m³, 0,005 ppm
EL (Canada)	Short-term value: C 0,01 ppm Long-term value: 0,005 ppm Skin; S
EV (Canada)	0,005 ppm
811-97-2 Norflurane	
WEEL (USA)	1000 ppm

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when high concentrations are present.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves**
Nitrile rubber, NBR
PVC gloves
Fluorocarbon rubber (Viton)
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Not suitable are gloves made of the following materials:** Natural rubber, NR
· **Eye protection:**
Contact lenses should not be worn.

(Contd. on page 8)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 7)

Safety glasses

Goggles recommended during refilling

· **Body protection:** Impervious protective clothing

· **Limitation and supervision of exposure into the environment**

No further relevant information available.

· **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Aerosolized liquid with compressed gas in cylinders
Colour:	Cream coloured
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	Not applicable, as aerosol.
· **Flash point:**	Not applicable, as aerosol.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	5716 hPa
· **Density at 20 °C:**	1,03 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.

(Contd. on page 9)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 8)

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**
VOC (US EPA Method 24) 0 g/l

· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis.
Contact with acids releases toxic gases.
Danger of receptacles bursting because of high vapour pressure when heated.
Reacts with oxidizing agents.
Exothermic polymerization.
· **10.4 Conditions to avoid** Store away from oxidizing agents.
· **10.5 Incompatible materials:** Contact with acids liberates toxic gas.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Ammonia
Isocyanate
Nitrogen oxides

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.

(Contd. on page 10)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 9)

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
Toxic and/or corrosive effects may be delayed up to 24 hours.
· **Sensitisation:** Sensitization possible by inhalation and/or dermal contact.
· **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** The product contains materials that are harmful to the environment.
· **12.2 Persistence and degradability** The product is partially biodegradable. Significant residuals remain.
· **12.3 Bioaccumulative potential** Does not accumulate in organisms.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
This statement was deduced from products with a similar structure or composition.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Contact waste processors for recycling information.

· **Uncleaned packaging:**
· **Recommendation:**
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
Disposal must be made according to official regulations.

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 10)

14 Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN3500
· **14.2 UN proper shipping name**
· **DOT, IMDG, IATA** Chemical under pressure, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
· **ADR** 3500 CHEMICAL UNDER PRESSURE, N.O.S. (Fluorinated Hydrocarbon, Nitrogen)
· **14.3 Transport hazard class(es)**

· **DOT**

· **Class** 2.2
· **Label** 2.2

· **ADR**

· **Class** 2 8A Gases.
· **Label** 2.2

· **IMDG, IATA**

· **Class** 2.2
· **Label** 2.2
· **14.4 Packing group**
· **DOT, ADR, IMDG, IATA** Not Regulated
· **14.5 Environmental hazards:**
· **Marine pollutant:** No
· **14.6 Special precautions for user** Warning: Gases.
· **Danger code (Kemler):** 20
· **EMS Number:** F-D,S-U
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 120 ml
· **Transport category** 3

(Contd. on page 12)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 11)

· **Tunnel restriction code**	C/E
· **UN "Model Regulation":**	UN3500, CHEMICAL UNDER PRESSURE, N.O.S. (Fluorinated Hydrocarbon, Nitrogen), 2.2

15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	CBD

· **IARC (International Agency for Research on Cancer)**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	3
101-68-8	4,4'-methylenediphenyl diisocyanate	3

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

(Contd. on page 13)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 12)

· **Canadian Ingredient Disclosure list (limit 0.1%)**	
101-68-8	4,4'-methylenediphenyl diisocyanate

· **Canadian Ingredient Disclosure list (limit 1%)**
None of the ingredients is listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitisation by inhalation and skin contact.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
: Flammable aerosols, Hazard Category 3
Press. Gas: Gases under pressure: Compressed gas
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

(Contd. on page 14)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - A

(Contd. of page 13)

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· **Sources**

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** **Touch N Seal CP 750 FR ICC Part - B**

· **Article number:** EHS2732 – SDS / B REGULAR

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Polyurethane-sealant

· **1.3 Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

health hazard

Repr. 1A H360 May damage fertility or the unborn child.

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

H229 Pressurised container: May burst if heated.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R60: May impair fertility.

Xn; Harmful

R22: Harmful if swallowed.

Xi; Irritant

R36: Irritating to eyes.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 1)

Warning! Pressurized container.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
Polyether polyol
Methyloxirane polymer with oxirane, ether with 2,6-bis[(bis(2-hydroxyethyl)amino) methyl]-4-nonylphenol (5:1)
halogenated aliphatic polyether polyol
· **Hazard statements**
H229 Pressurised container: May burst if heated.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
· **Precautionary statements**

P281	Use personal protective equipment as required.
P264	Wash thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

· **Additional information:**
Contains diglycidyl 1,2-cyclohexanedicarboxylate, Neodecanoic Acid. May produce an allergic reaction.
Restricted to professional users.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
· **Hazard description:**
· **WHMIS-symbols:**
D1B - Toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 2)

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 0
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 0
Reactivity = 1

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**
None of the ingredients is listed.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 811-97-2 EINECS: 212-377-0	Norflurane Press. Gas, H280	10-25%
	Polyether polyol Xn R22; Xi R36/37/38 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 68441-62-3	halogenated aliphatic polyether polyol Xn R22; Xi R36 Acute Tox. 4, H302; Eye Irrit. 2, H319	10-25%
CAS: 460-73-1	1,1,1,3,3-Pentafluoropropane, (Genetron®245fa) Press. Gas, H280	<10%

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 3)

CAS: 52019-35-9	Methyloxirane polymer with oxirane, ether with 2,6-bis[(bis(2-hydroxyethyl) amino) methyl]-4-nonylphenol (5:1) T R60; Xi R36/37/38 Repr. 1A, H360 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	<10%
CAS: 5493-45-8 EINECS: 226-826-3	diglycidyl 1,2-cyclohexanedicarboxylate Xi R36/37/38; Xi R43 Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	<10%
CAS: 26896-20-8 EINECS: 248-093-9	Neodecanoic Acid Xn R22; Xi R38-41; Xi R43 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	<10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**

· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.

· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders.
Dizziness
Coughing
Allergic reactions

· **Hazards** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed, gastric irrigation.
If necessary oxygen respiration treatment.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 4)

5 Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** None.
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.

(Contd. on page 6)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 5)

Store away from foodstuffs.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
811-97-2 Norflurane	
WEEL (USA)	1000 ppm

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use suitable respiratory protective device when high concentrations are present.
Use suitable respiratory protective device in case of insufficient ventilation.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 7)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 6)

· **Eye protection:**
Contact lenses should not be worn.

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Aerosol
Colour:	Amber coloured
· **Odour:**	Like aromates
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	-15 °F / -26 °C
· **Flash point:**	Not applicable, as aerosol.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	>500 °F / >260 °C
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	5716 hPa
· **Density at 20 °C:**	1,2 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.

(Contd. on page 8)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 7)

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**
Organic solvents: 0,0 %
Water: 0,7 %
VOC (US EPA Method 24) 0 g/l

· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Reacts with catalysts.
Reacts with peroxides.
Reacts with strong oxidizing agents.
Reacts with strong acids.
Exothermic polymerization.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Phosphorus compounds
Chlorine compounds
Nitrogen oxides (NOx)
Poisonous gases/vapours
Phosgene

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** Slight irritant effect on skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitizing effect by skin contact is possible by prolonged exposure.
Sensitizing effect through inhalation is possible by prolonged exposure.

(Contd. on page 9)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 8)

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
Toxic and/or corrosive effects may be delayed up to 24 hours.
· **Repeated dose toxicity:** May cause damage to organs through prolonged or repeated exposure.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
Repr. 1A

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN3500
· **14.2 UN proper shipping name**
· **DOT, IMDG, IATA** Chemical under pressure, n.o.s. (Fluorinated Hydrocarbon, Nitrogen)
· **ADR** 3500 CHEMICAL UNDER PRESSURE, N.O.S (Fluorinated Hydrocarbon, Nitrogen)

(Contd. on page 10)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 9)

· **14.3 Transport hazard class(es)**

· **DOT**

· **Class**	2.2
· **Label**	2.2

· **ADR**

· **Class**	2 8A Gases.
· **Label**	2.2

· **IMDG, IATA**

· **Class**	2.2
· **Label**	2.2
· **14.4 Packing group**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Gases.
· **Danger code (Kemler):**	20
· **EMS Number:**	F-D,S-U
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **ADR**	
· **Limited quantities (LQ)**	120 ml
· **Transport category**	3
· **Tunnel restriction code**	C/E
· **UN "Model Regulation":**	UN3500, CHEMICAL UNDER PRESSURE, N.O.S. (Fluorinated Hydrocarbon, Nitrogen), 2.2

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 10)

15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**
None of the ingredients is listed.

(Contd. on page 12)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 11)

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H360 May damage fertility or the unborn child.

R22 Harmful if swallowed.
R36 Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R60 May impair fertility.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
: Flammable aerosols, Hazard Category 3
Press. Gas: Gases under pressure: Compressed gas
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Repr. 1A: Reproductive toxicity, Hazard Category 1A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

(Contd. on page 13)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 03.04.2014 Revision: 03.04.2014

Trade name: Touch N Seal CP 750 FR ICC Part - B

(Contd. of page 12)

· **Sources**

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** **Touch N Seal No-Warp Foam**

· **Article number:** EHS 9890

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture** Sealant

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**
Convenience Products, division of Clayton Corp.
866 Horan Drive
Fenton, MO 63026-2416
Phone: 636-349-5855

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H222-H229.
The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H222.

H222: Extremely flammable aerosol.

flame

Flam. Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.

health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R20: Harmful by inhalation.

Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

F+; Extremely flammable

R12: Extremely flammable.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
4,4'-methylenediphenyl diisocyanate
Methylenediphenyl diisocyanate, dipropyleneglycol, tripropyleneglycol, copolymer methylenediphenyl diisocyanate

· **Hazard statements**
The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H222.
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H222-H229.
H222: Extremely flammable aerosol.
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 2)

H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.
P211 Do not spray on an open flame or other ignition source.
P280 Wear protective gloves / eye protection.
P260 Do not breathe mist/vapours/spray.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

· **Hazard description:**

· **WHMIS-symbols:**

A - Compressed gas
B5 - Flammable aerosol
D2A - Very toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 4
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 4
Reactivity = 1

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**	
101-68-8	4,4'-methylenediphenyl diisocyanate
26447-40-5	methylenediphenyl diisocyanate

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 3)

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 68092-58-0	Methylenediphenyl diisocyanate, dipropyleneglycol, tripropyleneglycol, copolymer Xn R42 Resp. Sens. 1, H334	30-50%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9	4,4'-methylenediphenyl diisocyanate Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	30-50%
CAS: 26447-40-5 EINECS: 247-714-0 Index number: 615-005-00-9	methylenediphenyl diisocyanate Xn R20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3 Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	5-10%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8	dimethyl ether F+ R12 Flam. Gas 1, H220 Press. Gas, H280	5-10%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0	isobutane F+ R12 Flam. Gas 1, H220 Press. Gas, H280	1-5%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane F+ R12 Flam. Gas 1, H220 Press. Gas, H280	1-5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 4)

Take affected persons out into the fresh air.

· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Do not pull solidified product off the skin.
If skin irritation continues, consult a doctor.

· **After eye contact:**
Immediately remove contact lenses if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Asthma attacks
Headache
Breathing difficulty
Allergic reactions
Coughing
Nausea
Gastric or intestinal disorders when ingested.
Irritant to skin and mucous membranes.
Irritant to eyes.
Dizziness
Disorientation

· **Hazards**
Danger of impaired breathing.
Danger of pulmonary oedema.
Danger of pneumonia.
Danger of disturbed cardiac rhythm.
Danger of convulsion.

· **4.3 Indication of any immediate medical attention and special treatment needed**
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.
Monitor circulation.
If necessary oxygen respiration treatment.
Medical supervision for at least 48 hours.
Contains isocyanates. May produce an allergic reaction.

5 Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Water in flooding quantities.

(Contd. on page 6)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 5)

· **For safety reasons unsuitable extinguishing agents:** None.
· **5.2 Special hazards arising from the substance or mixture**
Danger of receptacles bursting because of high vapour pressure when heated.
During heating or in case of fire poisonous gases are produced.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information**
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Protect from heat.
Isolate area and prevent access.
Keep people at a distance and stay on the windward side.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Use only in well ventilated areas.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.
Emergency cooling must be available in case of nearby fire.

(Contd. on page 7)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 6)

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL (USA)	Ceiling limit: 0,2 mg/m³, 0,02 ppm
REL (USA)	Long-term value: 0,05 mg/m³, 0,005 ppm Ceiling limit: 0,2* mg/m³, 0,02* ppm *10-min
TLV (USA)	Long-term value: 0,051 mg/m³, 0,005 ppm
EL (Canada)	Short-term value: C 0,01 ppm Long-term value: 0,005 ppm Skin; S
EV (Canada)	Long-term value: 0,005 ppm
115-10-6 dimethyl ether	
IOELV (EU)	Long-term value: 1920 mg/m³, 1000 ppm
WEEL (USA)	Long-term value: 1000 ppm
EL (Canada)	Long-term value: 1000 ppm
75-28-5 isobutane	
TLV (USA)	Short-term value: 2370 mg/m³, 1000 ppm
EV (Canada)	Long-term value: 800 ppm
74-98-6 propane	
PEL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1800 mg/m³, 1000 ppm
TLV (USA)	refer to Appendix F: minimal oxygen content
EL (Canada)	Long-term value: 1000 ppm

(Contd. on page 8)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 7)

EV (Canada)	Long-term value: 1,000 ppm

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
Clean skin thoroughly immediately after handling the product.
· **Respiratory protection:**

Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.

(Contd. on page 9)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 8)

No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Aerosol
Colour:	White
· **Odour:**	Light Petroleum-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	-44 °F / -42 °C (propellant)
· **Flash point:**	-155 °F / -104 °C (propellant)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure:**	Not determined.
· **Density at 20 °C:**	1,01 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
VOC (US EPA Method 24)	137 g/l

(Contd. on page 10)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 9)

· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Danger of receptacles bursting because of high vapour pressure when heated.
· **10.3 Possibility of hazardous reactions**
Develops readily flammable gases/fumes.
Flammable.
Danger of receptacles bursting because of high vapour pressure when heated.
Reacts with oxidizing agents.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Toxic fumes may be released if heated above the decomposition point.
Contact with acids releases toxic gases.
· **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen cyanide (prussic acid)

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2200 mg/kg (mouse)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Subacute to chronic toxicity:**
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 10)

Harmful
Irritant
Danger through skin adsorption.
Toxic and/or corrosive effects may be delayed up to 24 hours.
In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with the danger of central respiratory arrest.

· **Acute effects (acute toxicity, irritation and corrosivity):** Vapours have narcotic effect.
· **Sensitisation:**
Sensitization possible by skin contact.
Sensitization possible by inhalation and/or dermal contact.
· **Repeated dose toxicity:**
May cause damage to organs through prolonged or repeated exposure.
Repeated exposures may result in skin and/or respiratory sensitivity.

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN1950

(Contd. on page 12)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 11)

· **14.2 UN proper shipping name**

Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

· **DOT**	Aerosols, flammable
· **ADR**	1950 AEROSOLS, flammable
· **IMDG, IATA**	AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **DOT**

· **Class**	2.1
· **Label**	2.1

· **ADR**

· **Class**	2 5F Gases.
· **Label**	2.1

· **IMDG, IATA**

· **Class**	2.1
· **Label**	2.1
· **14.4 Packing group**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Gases.
· **Danger code (Kemler):**	-
· **EMS Number:**	F-D,S-U
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **ADR**	
· **Limited quantities (LQ)**	1L
· **Transport category**	2
· **Tunnel restriction code**	D

(Contd. on page 13)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 12)

· **UN "Model Regulation":** UN1950, AEROSOLS, flammable, 2.1

15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD

· **IARC (International Agency for Research on Cancer)**

101-68-8	4,4'-methylenediphenyl diisocyanate	3

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

101-68-8	4,4'-methylenediphenyl diisocyanate

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

(Contd. on page 14)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 13)

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

R12 Extremely flammable.
R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R42 May cause sensitisation by inhalation.
R42/43 May cause sensitisation by inhalation and skin contact.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Gas 1: Flammable gases, Hazard Category 1
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Press. Gas: Gases under pressure: Compressed gas
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

(Contd. on page 15)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 30.04.2014 Revision: 30.04.2014

Trade name: Touch N Seal No-Warp Foam

(Contd. of page 14)

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· **Sources**

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

SAFETY DATA SHEET

1. Identification

Material name: PROGLAZE WHITE
Material: 942806 323

Recommended use and restriction on use

Recommended use: Sealant
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
Tremco U.S Sealants
3735 Green Road
Cleveland OH 44122
US

Contact person:	EH&S Department
Telephone:	216-292-5000
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Carcinogenicity	Category 1A

Unknown toxicity - Health

Acute toxicity, oral	0.7 %
Acute toxicity, dermal	4.8 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	99.4 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 3

Unknown toxicity - Environment

Acute hazards to the aquatic environment	98.2 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement: May cause cancer.
Harmful to aquatic life.

Precautionary Statement:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If exposed or concerned: Get medical advice/attention.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Amorphous silica	7631-86-9	10 - 30%
Ethyltriacetoxysilane	17689-77-9	1 - 5%
Titanium dioxide	13463-67-7	1 - 5%
Aluminum	7429-90-5	0.5 - 1.5%
Mineral oil	8012-95-1	0.1 - 1%
Iron oxide	1309-37-1	0.1 - 1%
Dibutyltin diacetate	1067-33-0	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Amorphous silica	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
Aluminum - Respirable dust. - as Al	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum - Total dust. - as Al	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Mineral oil - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2011)
Mineral oil - Mist.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Iron oxide - Respirable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (2011)
Iron oxide - Fume.	PEL	10 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Dibutyltin diacetate - as Sn	STEL	0.2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	TWA	0.1 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL	0.1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	type	Exposure Limit Values	Source
Amorphous silica - Total	TWA	4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable.	TWA	1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Amorphous silica - Respirable dust.	TWA	6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Mineral oil - Mist.	TWA	0.2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Mineral oil - Mist.	TWAEV	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	STEL	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

Mineral oil - Mist.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Appearance

Physical state: solid
Form: Paste
Color: White
Odor: Sour/acidic
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash Point: > 149 °C > 300 °F(Tag closed cup)
Evaporation rate: Slower than Ether
Flammability (solid, gas): No
Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.
Vapor pressure: No data available.
Vapor density: Vapors are heavier than air and may travel along the floor and in the bottom of containers.

Relative density:	1.04
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 45,243.01 mg/kg

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):

Amorphous silica	in vivo (Rabbit, 24 hrs): Not irritating
Ethyltriacetoxysilane	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Titanium dioxide	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Aluminum	in vivo (Rabbit, 24 hrs): Not irritating
Iron oxide	in vivo (Rabbit, 1 - 72 hrs): Not irritating

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Titanium dioxide	Overall evaluation: Possibly carcinogenic to humans.
Mineral oil	Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:
Mineral oil Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

Titanium dioxide	LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality
Aluminum	LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.31 mg/l Mortality

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

Titanium dioxide	EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication
Aluminum	LC 50 (Water flea (Daphnia magna), 24 h): 3.5 mg/l Mortality LC 50 (Rotifer (Brachionus calyciflorus), 24 h): > 3 mg/l Mortality LC 50 (Ridged-beak peaclam (Pisidium compressum), 96 h): > 0.4 mg/l Mortality LC 50 (Scud (Hyalella azteca), 96 h): > 1 mg/l Mortality LC 50 (Snail (Amnicola limosa), 96 h): > 1 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

Titanium dioxide	LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result
Aluminum	LOAEL (Pimephales promelas, 28 d): 11.9 mg/l experimental result EC 50 (Pimephales promelas, 7 d): 0.695 mg/l experimental result LOAEL (Salvelinus fontinalis, 30 d): 0.169 mg/l experimental result EC 50 (Pimephales promelas, 7 d): 3.999 mg/l experimental result EC 10 (Pimephales promelas, 7 d): 0.726 mg/l experimental result

Iron oxide	LOAEL (Pimephales promelas, 33 d): 1.6 mg/l experimental result

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Aluminum	Brook trout (Salvelinus fontinalis), Bioconcentration Factor (BCF): 36 (Flow through)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Dibutyltin diacetate	Log Kow: 1.27

Mobility in Soil: No data available.

Other Adverse Effects: Harmful to aquatic organisms.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Amorphous silica	500 lbs
Ethyltriacetoxysilane	500 lbs
Titanium dioxide	500 lbs
Aluminum	500 lbs
Mineral oil	500 lbs
Iron oxide	500 lbs
Dibutyltin diacetate	500 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Amorphous silica
Titanium dioxide

US. Massachusetts RTK - Substance List

Chemical Identity
Amorphous silica
Titanium dioxide

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Amorphous silica
Titanium dioxide

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	36 g/l
VOC Method 310:	3.50 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.

New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	08/13/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

Revision date 14-May-2015 **Version** 3

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code 410.0065064.076

Product Name VAL65064 PREM LACQUER CLEAR 6UC

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Aerosol, Paint

Details of the supplier of the safety data sheet

See section 16 for more information

The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

E-mail address msds@valspar.com

Emergency telephone number

United States of America 1-888-345-5732

American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands 1-800-255-3924

Section 2: HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable aerosols	Category 2
Gases under pressure	Liquefied gas

Label elements

Signal word **WARNING**

HAZARD STATEMENTS
Flammable aerosol
Contains gas under pressure; may explode if heated
Causes serious eye irritation
Suspected of causing cancer
May cause drowsiness or dizziness

PREVENTION
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

RESPONSE
IF exposed or concerned: Get medical advice/attention.

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin
Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion
Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

STORAGE
Store locked up. Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 122 °F (50 °C).

DISPOSAL
Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)
Propellant is classified as a simple asphyxiant if released in large quantities: May displace oxygen and cause rapid suffocation.

OTHER HAZARDS
Causes mild skin irritation. spontaneously combustible material. Risk of self-ignition of used cleaning rags, paper wipes etc. Contaminated materials should be soaked in water and placed in a closed metal container before disposal.

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Acetone	67-64-1	25 - 50
Methyl ethyl ketone	78-93-3	10 - 25
Xylenes	1330-20-7	1 - 3
Isopropyl alcohol	67-63-0	1 - 3
Ethylbenzene	100-41-4	0.3 - 1

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice
IF exposed or concerned: Get medical advice/attention.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion
Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media
Dry chemical, CO2, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical
Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes. spontaneously combustible material. Risk of self-ignition of used cleaning rags, paper wipes etc. Contaminated materials should be soaked in water and placed in a closed metal container before disposal. Keep product and empty container away from heat and sources of ignition.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Risk of self-ignition of used cleaning rags, paper wipes etc. Contaminated materials should be soaked in water and placed in a closed metal container before disposal.

General Hygiene Considerations
Avoid contact with skin, eyes or clothing. When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Protect from sunlight. Store in a well-ventilated place.

Incompatible materials
Strong bases. Strong oxidizing agents. Strong acids. Copper. Amines.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits
If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m^3	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m^3
Methyl ethyl ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m^3	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m^3 STEL: 300 ppm STEL: 885 mg/m^3
Xylenes 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m^3	
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m^3	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m^3 STEL: 500 ppm STEL: 1225 mg/m^3
Ethylbenzene 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m^3	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m^3 STEL: 125 ppm STEL: 545 mg/m^3

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear anti-static clothing made of natural fiber or of high temperature resistant synthetic fiber. Wear suitable protective clothing.

Hand Protection
There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Protection
No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aerosol
Appearance	No information available
Odor	Solvent
Color	clear
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	-35 °C / -31 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	6.46
specific gravity	.77
Solubility(ies)	Not Determined
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information

Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization None under normal processing.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Strong bases. Strong oxidizing agents. Strong acids. Copper. Amines.

Hazardous Decomposition Products Carbon monoxide. Carbon dioxide (CO_2).

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Causes serious eye irritation
Skin Contact
Not applicable
Ingestion
Not applicable
Inhalation
May cause drowsiness or dizziness

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	-	-	= 50100 mg/m³ (Rat) 8 h
Methyl ethyl ketone 78-93-3	= 2483 mg/kg (Rat)	= 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
Xylenes 1330-20-7	= 3500 mg/kg (Rat)	> 4350 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m³ (Rat) 4 h
Ethylbenzene 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.2 mg/L (Rat) 4 h

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 92800 Mg/kg
ATEmix (dermal) 28037 Mg/kg
ATEmix (inhalation-dust/mist) 54.8 mg/l
ATEmix (inhalation-vapor) 402 mg/l

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylbenzene 100-41-4	A3	Group 2B		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen.
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans.
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present.

Skin corrosion/irritation Not applicable
Serious eye damage/eye irritation Causes serious eye irritation
Skin sensitization Not applicable
Respiratory sensitization Not applicable
Germ cell mutagenicity Not applicable
Carcinogenicity Suspected of causing cancer

Reproductive Toxicity	Not applicable
Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness
Specific target organ toxicity (repeated exposure)	Not applicable
Aspiration hazard	Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Environmental precautions — Prevent product from entering drains.

Persistence and degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

Other adverse effects — No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes — Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging — Improper disposal or reuse of this container may be dangerous and illegal. Empty containers must be scrapped or reconditioned.

Section 14: TRANSPORT INFORMATION

	DOT	IMDG	IATA
14.1 UN/ID no	ORM-D	UN1950	UN1950
14.2 Proper shipping name	CONSUMER COMMODITY	Aerosols	Aerosols
14.3 Hazard Class		2.1	2.1
14.4 Packing Group			
14.5 Environmental hazard	Not applicable		
14.6 Special Provisions			
	Emergency Response Guide Number	**EmS-No**	
	126	F-D, S-U	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code — No information available

Section 15: REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory — All components are listed or exempt from listing

DSL - Canadian Domestic Substances List — All components are listed or exempt from listing

US Federal Regulations

Chemical Name	SARA 313 - Threshold Values %	Hazardous air pollutants (HAPs) content
Xylenes 1330-20-7 1 - 3	1	Present

Ethylbenzene 100-41-4 0.3 - 1	0.1	Present

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Xylenes 1330-20-7	100 lb			X
Ethylbenzene 100-41-4	1000 lb	X	X	X

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl ethyl ketone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Xylenes 1330-20-7	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Ethylbenzene 100-41-4	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

Rule 66 status of product
Not photochemically reactive.

California Proposition 65
WARNING! This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

U.S. EPA Label information
EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Acetone 67-64-1
Methyl ethyl ketone 78-93-3
Propane 74-98-6
Isobutyl acetate 110-19-0
Butane 106-97-8
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Cellulosic Polymer
Xylenes 1330-20-7
Isopropyl alcohol 67-63-0

Ethylbenzene 100-41-4

Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal
Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system

Section 16: OTHER INFORMATION

HMIS

Health hazards	2*
** = Chronic Health Hazard*	
Flammability	4
Physical hazards	0
Personal Protection	X

Supplier Address

Valspar Consumer Headquarters 8725 W. Higgins Rd. Suite 1000 Chicago, IL 60631 773-628-5500	The Valspar Corporation 4999 36th St. Grand Rapids, MI 49512 800-253-3957	Valspar Plasti-Kote 7655 Tranmere Dr. Mississauga, Ontario L5S 1L4 905-671-8333

Prepared By	Product Stewardship
Revision date	14-May-2015
Revision Note	No information available

Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

End of Safety Data Sheet

SAFETY DATA SHEET

Revision date 14-May-2015 **Version** 3

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code 410.0063000.076

Product Name VAL63000 GLOSS BLACK 12UC

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Aerosol, Paint

Details of the supplier of the safety data sheet

See section 16 for more information

The Valspar Corporation
PO Box 1461
Minneapolis, MN 55440

E-mail address msds@valspar.com

Emergency telephone number

United States of America 1-888-345-5732

American Samoa, Guam, Northern Mariana Islands, Puerto Rico, U.S. Virgin Islands 1-800-255-3924

Section 2: HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Flammable aerosols	Category 2
Gases under pressure	Liquefied gas

Label elements

Signal word **DANGER**

HAZARD STATEMENTS
Flammable aerosol
Contains gas under pressure; may explode if heated
Causes serious eye irritation
May cause drowsiness or dizziness
May be fatal if swallowed and enters airways

PREVENTION
Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

RESPONSE
Get medical advice/attention if you feel unwell.

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin
Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

STORAGE
Store locked up. Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 122 °F (50 °C).

DISPOSAL
Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)
Propellant is classified as a simple asphyxiant if released in large quantities: May displace oxygen and cause rapid suffocation.

OTHER HAZARDS
Causes mild skin irritation. Harmful to aquatic life with long lasting effects.

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Acetone	67-64-1	25 - 50
Solvent naphtha, petroleum, light aliphatic	64742-89-8	10 - 25
Naphtha, petroleum, hydrotreated light	64742-49-0	1 - 3
Carbon black	1333-86-4	0.3 - 1

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice
Get medical advice/attention if you feel unwell.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media
Dry chemical, CO2, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical
Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

General Hygiene Considerations
When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place. Protect from sunlight. Store in a well-ventilated place.

Incompatible materials
Strong oxidizing agents.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits
If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m^3	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m^3
Carbon black 1333-86-4	TWA: 3 mg/m^3 inhalable fraction	TWA: 3.5 mg/m^3	IDLH: 1750 mg/m^3 TWA: 3.5 mg/m^3 TWA: 0.1 mg/m^3 Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear anti-static clothing made of natural fiber or of high temperature resistant synthetic fiber. Wear suitable protective clothing.

Hand Protection
There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

Thermal Protection
No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aerosol
Appearance	No information available
Odor	Solvent
Color	black
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	-35 °C / -31 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	5.76
specific gravity	.69
Solubility(ies)	Not Determined
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information

Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO_2).

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Causes serious eye irritation
Skin Contact
Not applicable
Ingestion
May be fatal if swallowed and enters airways
Inhalation
May cause drowsiness or dizziness

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetone 67-64-1	-	-	= 50100 mg/m³ (Rat) 8 h
Solvent naphtha, petroleum, light aliphatic 64742-89-8	-	= 3000 mg/kg (Rabbit)	-
Naphtha, petroleum, hydrotreated light 64742-49-0	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 73680 ppm (Rat) 4 h
Carbon black 1333-86-4	-	-	-

Numerical measures of toxicity - Product Information

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity
According to IARC, Volume 93, no significant exposure to primary particles of carbon black is thought to occur from use in paints since the pigment is bound to other materials.

Chemical Name	ACGIH	IARC	NTP	OSHA
Carbon black 1333-86-4	A3	Group 2B		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen.
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans.
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present.

Skin corrosion/irritation Not applicable
Serious eye damage/eye irritation Causes serious eye irritation
Skin sensitization Not applicable
Respiratory sensitization Not applicable
Germ cell mutagenicity Not applicable
Carcinogenicity Not applicable
Reproductive Toxicity Not applicable
Specific target organ toxicity (single exposure) May cause drowsiness or dizziness
Specific target organ toxicity (repeated exposure) Not applicable
Aspiration hazard Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Environmental precautions Prevent product from entering drains.

Persistence and degradability
No information available

Bioaccumulation
No information available

Mobility
No information available

Other adverse effects No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal. Empty containers must be scrapped or reconditioned.

Section 14: TRANSPORT INFORMATION

	DOT	IMDG	IATA
14.1 UN/ID no	ORM-D	UN1950	UN1950
14.2 Proper shipping name	CONSUMER COMMODITY	Aerosols	Aerosols
14.3 Hazard Class		2.1	2.1
14.4 Packing Group			
14.5 Environmental hazard	Not applicable		
14.6 Special Provisions			
	Emergency Response Guide Number 126	**EmS-No** F-D, S-U	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

Section 15: REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory All components are listed or exempt from listing

DSL - Canadian Domestic Substances List All components are listed or exempt from listing

US Federal Regulations

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

Rule 66 status of product
Not photochemically reactive.

California Proposition 65
WARNING! This product contains a chemical known in the State of California to cause cancer.

U.S. EPA Label information
EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Acetone 67-64-1
Propane 74-98-6
Solvent naphtha, petroleum, light aliphatic 64742-89-8
Butane 106-97-8
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Naphtha, petroleum, hydrotreated light 64742-49-0

Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal
Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system

Section 16: OTHER INFORMATION

HMIS

Health hazards	3
Flammability	4
Physical hazards	0
Personal Protection	X

Supplier Address

Valspar Consumer Headquarters
8725 W. Higgins Rd. Suite 1000
Chicago, IL 60631
773-628-5500

The Valspar Corporation
4999 36th St.
Grand Rapids, MI 49512
800-253-3957

Valspar Plasti-Kote
7655 Tranmere Dr.
Mississauga, Ontario L5S 1L4
905-671-8333

Prepared By Product Stewardship

Revision date 14-May-2015
Revision Note No information available

Disclaimer
The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

End of Safety Data Sheet

GHS SAFETY DATA SHEET

WELD-ON® 714™ Low VOC Cement for CPVC Plastic Pipe

Date Revised: **OCT 2013**
Supersedes: **DEC 2011**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **WELD-ON® 714™ Low VOC Cement for CPVC Plastic Pipe**

PRODUCT USE: Low VOC Solvent Cement for CPVC Plastic Pipe

SUPPLIER:

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2B				

GHS LABEL: **OR**

Signal Word: **Danger**

WHMIS CLASSIFICATION: CLASS B, DIVISION 2

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H332: Harmful if inhaled	P280: Wear protective gloves/protective clothing/eye protection/face protection
H335: May cause respiratory irritation	P337+P313: Get medical advice/attention
H336: May cause drowsiness or dizziness	P403+P233: Store in a well ventilated place. Keep container tightly closed
EUH019: May form explosive peroxides	P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	30 - 60
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 - 25
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	5 - 20

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, hydrogen chloride and smoke

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 33°C (90°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL:	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

GHS SAFETY DATA SHEET

WELD-ON® 714™ Low VOC Cement for CPVC Plastic Pipe

Date Revised: **OCT 2013**
Supersedes: **DEC 2011**

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Orange or gray, heavy syrupy liquid		
Odor:	Ketone	**Odor Threshold:**	0.88 ppm (Cyclohexanone)
pH:	Not Applicable		
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	**Boiling Range:**	66°C (151°F) to 156°C (313°F)
Boiling Point:	66°C (151°F) Based on first boiling component: THF	**Evaporation Rate:**	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) TCC based on THF	**Flammability:**	Category 2
Specific Gravity:	0.995 @23°C (73°F)	**Flammability Limits:**	**LEL:** 1.1% based on Cyclohexanone
Solubility:	Solvent portion soluble in water. Resin portion separates out.		**UEL:** 11.8% based on THF
Partition Coefficient n-octanol/water:	Not Available	**Vapor Pressure:**	129 mm Hg @ 20°C (68°F)based on THF
Auto-ignition Temperature:	321°C (610°F) based on THF	**Vapor Density:**	>2 (Air = 1)
Decomposition Temperature:	Not Applicable	**Other Data: Viscosity:**	Heavy bodied
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤ 490 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: None known to humans

Toxicity:	LD_{50}	LC_{50}
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m^3 (rat)
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m^3 (rat)
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known
Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 490 g/l.
Degradability: Biodegradable
Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1133
Packing Group: PG II
Label Required: Class 3 Flammable Liquid
Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant
Symbols: F, Xi
Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

Risk Phrases:
R11: Highly flammable.
R36/37: Irritating to eyes and respiratory system.
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapors may cause drowsiness and dizziness

Safety Phrases:
S2: Keep out of the reach of children
S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33: Take precautionary measures against static discharges.

SECTION 16 - OTHER INFORMATION

Specification Information:
Department issuing data sheet: IPS, Safety Health & Environmental Affairs
E-mail address: <EHSinfo@ipscorp.com>
All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 10/15/2013 / Updated GHS Standard Format
Intended Use of Product: Solvent Cement for CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

GHS SAFETY DATA SHEET

WELD-ON® 771™ Low VOC Pipe Cement for ABS Plastic Pipe

Date Revised: **OCT 2013**
Supersedes: **DEC 2011**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **WELD-ON® 771™ Low VOC Pipe Cement for ABS Plastic Pipe**

PRODUCT USE: Low VOC Solvent Cement for ABS Plastic Pipe

SUPPLIER:

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2B				

GHS LABEL: **OR**

Signal Word: **Danger**

WHMIS CLASSIFICATION: CLASS B, DIVISION 2

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H336: May cause drowsiness or dizziness	P280: Wear protective gloves/protective clothing/eye protection/face protection
EUH 066: Repeated exposure may cause skin dryness or cracking.	P337+P313: Get medical advice/attention
	P403+P233: Store in a well ventilated place. Keep container tightly closed
	P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	35 - 50
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	10 - 20

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon and smoke

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Milky or yellow, medium syrupy liquid		
Odor:	Ketone	**Odor Threshold:**	1 ppm (Acetone)
pH:	Not Applicable		
Melting/Freezing Point:	-95°C (-139°F) Based on first melting component: Acetone	**Boiling Range:**	56°C (133°F) to 80°C (176°F)
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	**Evaporation Rate:**	>1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) T.C.C. based on Acetone	**Flammability:**	Category 2
Specific Gravity:	0.886 @23°C (73°F)	**Flammability Limits:**	**LEL:** 1.4% based on MEK
Solubility:	Solvent portion soluble in water. Resin portion separates out.		**UEL:** 12.8% based on Acetone
Partition Coefficient n-octanol/water:	Not Available	**Vapor Pressure:**	190 mm Hg @ 20°C (68°F): Acetone
Auto-ignition Temperature:	404°C (759°F): MEK	**Vapor Density:**	> 2.0 (Air = 1)
Decomposition Temperature:	Not Applicable	**Other Data: Viscosity:**	Medium bodied
VOC Content:	When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤ 325 g/l.		

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon and smoke.
Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: None known to humans

Toxicity:	LD_{50}	LC_{50}
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m^3 (rat)
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m^3 (rat)

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known
Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 325 g/l.
Degradability: Biodegradable
Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1133
Packing Group: PG II
Label Required: Class 3 Flammable Liquid
Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant
Symbols: F, Xi
Risk Phrases: R11: Highly flammable.
R36/37: Irritating to eyes and respiratory system.
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapors may cause drowsiness and dizziness
Safety Phrases: S2: Keep out of the reach of children
S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33: Take precautionary measures against static discharges.

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

SECTION 16 - OTHER INFORMATION

Specification Information:
Department issuing data sheet: IPS, Safety Health & Environmental Affairs
E-mail address: <EHSinfo@ipscorp.com>
All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 10/14/2013 / Updated GHS Standard Format
Intended Use of Product: Solvent Cement for ABS Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

Fleetweld® 35

Mild Steel, Cellulosic • AWS E6011

Key Features

- Stable arc performance
- High operator appeal
- AC and DC welding

Typical Applications

- Sheet metal
- In-plant pipe welding
- Steel with moderate surface contaminants
- Welding on galvanized and specially coated steels

Conformances

AWS A5.1/A5.1M: 2004	E6011
ASME SFA-A5.1:	E6011
ABS:	E6011
Lloyd's Register:	3M
EN ISO 2560-B:	E4311 A

Welding Positions

All

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	50 lb (22.7 kg) Carton
3/32 (2.4)	14 (350)	ED028152
1/8 (3.2)	14 (350)	ED028153
5/32 (4.0)	14 (350)	ED028154
3/16 (4.8)	14 (350)	ED028155
7/32 (5.6)	18 (450)	ED032301
1/4 (6.4)	18 (450)	ED028157

MECHANICAL PROPERTIES[1] – *As Required per AWS A5.1/A5.1M: 2004*

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @-29°C (-20°F)
Requirements - AWS E6011	330 (48) min.	430 (60) min.	22 min.	27 (20) min.
Typical Results[3] - As-Welded	385-415 (56-60)	470-510 (68-74)	26-33	56-101 (42-75)

DEPOSIT COMPOSITION[1] – *As Required per AWS A5.1/A5.1M: 2004*

	%C	%Mn	%Si	%P	%S
Requirements - AWS E6011	0.20 max.	1.20 max.	1.00 max.	Not Specified	Not Specified
Typical Results[3] - As-Welded	0.11-0.16	0.32-0.60	0.09-0.28	0.006-0.011	0.004-0.013

	%Ni	%Cr	%Mo	%V
Requirements - AWS E6011	0.30 max.	0.20 max.	0.30 max.	0.08 max.
Typical Results[3] - As-Welded	≤ 0.06	0.01-0.04	≤ 0.02	≤ 0.01

TYPICAL OPERATING PROCEDURES

	Current (Amps)					
Polarity[4]	3/32 in (2.4 mm)	1/8 in (3.2 mm)	5/32 in (4.0 mm)	3/16 in (4.8 mm)	7/32 in (5.6 mm)	1/4 in (6.4 mm)
AC	50-85	75-120	90-160	120-200	150-260	190-300
DC±	40-75	70-110	80-145	110-180	135-235	170-270

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer below. [4]Preferred polarity is listed first.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

THE LINCOLN ELECTRIC COMPANY
22801 St. Clair Avenue • Cleveland, OH • 44117-1199 • U.S.A.
Phone: +1.216.481.8100 • www.lincolnelectric.com

LINCOLN® ELECTRIC
THE WELDING EXPERTS®

© Lincoln Global, Inc. All Rights Reserved.
Issue Date 01/12

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP-X-OUT II 1 DZ

Material number : 000000000000019501

Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318

Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information	:	Compliance Services 1-877-428-9937
For a Medical Emergency	:	877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	:	CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a compressed gas
Colour	clear, colourless
Odour	mild, solvent-like

GHS Classification

Gases under pressure : Compressed gas
Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity : Category 1A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container in accordance with local regulation.

Potential Health Effects

Carcinogenicity:

IARC	Group 1: Carcinogenic to humans	
	trichloroethylene	79-01-6
	Group 2A: Probably carcinogenic to humans	
	tetrachloroethylene	127-18-4
	Group 2B: Possibly carcinogenic to humans	
	1,2-epoxybutane	106-88-7
ACGIH	Suspected human carcinogen	
	trichloroethylene	79-01-6
	Confirmed animal carcinogen with unknown relevance to humans	
	tetrachloroethylene	127-18-4
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
NTP	Reasonably anticipated to be a human carcinogen	
	tetrachloroethylene	127-18-4
	trichloroethylene	79-01-6

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
tetrachloroethylene	127-18-4	>= 70 - < 90
trichloroethylene	79-01-6	>= 20 - < 30
carbon dioxide	124-38-9	>= 1 - < 5
1,2-epoxybutane	106-88-7	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.
Remove to fresh air.

In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.

In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
Water spray jet

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO2)
Carbon monoxide

Smoke
Chlorine compounds

Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Do not breathe vapours or spray mist. Provide sufficient air exchange and/or exhaust in work rooms. Always replace cap after use. Take precautionary measures against static discharges.
Conditions for safe storage	:	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep in a dry, cool and well-ventilated place.

Observe label precautions.
No smoking.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Oxidizing agents
Keep away from metals.
Store and keep away from bases and alkalies.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
tetrachloroethylene	127-18-4	TWA	25 ppm	ACGIH
		STEL	100 ppm	ACGIH
		TWA	100 ppm	OSHA Z-2
		CEIL	200 ppm	OSHA Z-2
		Peak	300 ppm	OSHA Z-2
		TWA	25 ppm 170 mg/m3	OSHA P0
trichloroethylene	79-01-6	TWA	10 ppm	ACGIH
		STEL	25 ppm	ACGIH
		TWA	100 ppm	OSHA Z-2
		CEIL	200 ppm	OSHA Z-2
		Peak	300 ppm	OSHA Z-2
		TWA	50 ppm 270 mg/m3	OSHA P0
		STEL	200 ppm 1,080 mg/m3	OSHA P0
carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0
1,2-epoxybutane	106-88-7	TWA	2 ppm	US WEEL

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TETRACHLOROETHENE	127-18-4	Tetrachloroethylene	In blood	Prior to shift (16 hours after exposure	0.5 mg/l	ACGIH BEI

				ceases)		
TETRACHLOROETHENE		Tetrachloroethylene	In end-exhaled air	Prior to shift (16 hours after exposure ceases)	3 .parts per million	ACGIH BEI
TRICHLOROETHENE	79-01-6	Trichloroacetic acid	Urine	End of shift at end of workweek	15 mg/l	ACGIH BEI
TRICHLOROETHENE		Trichloroethanol	In blood	End of shift at end of workweek	0.5 mg/l	ACGIH BEI
TRICHLOROETHENE		Trichloroethylene	In blood	End of shift at end of workweek		ACGIH BEI
TRICHLOROETHENE		Trichloroethylene	In end-exhaled air	End of shift at end of workweek		ACGIH BEI

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Safety glasses

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aerosol containing a compressed gas

Colour	:	clear, colourless
Odour	:	mild, solvent-like
Odour Threshold	:	no data available
pH	:	not applicable
Melting point/freezing point	:	no data available
Boiling point	:	87.2 °C
Flash point	:	not applicable
Evaporation rate	:	> 1 n-Butyl Acetate = 1.0
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Density	:	1.562 g/cm3
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	no data available
Viscosity		
Viscosity, kinematic	:	no data available
Heat of combustion	:	5.42 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents

		Metals Bases
Hazardous decomposition products	:	Carbon dioxide (CO2) Carbon monoxide Gaseous hydrogen chloride (HCl). Chlorine Phosgene

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : 3,069 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

tetrachloroethylene:

Acute oral toxicity	:	LD50 Oral rat: 2,629 mg/kg
Acute inhalation toxicity	:	LC50 rat: 34,200 mg/l Exposure time: 8 h
Acute dermal toxicity	:	LD50 Dermal rabbit: 5,000 mg/kg

trichloroethylene:

Acute oral toxicity	:	LD50 Oral rat: 4,920 mg/kg
Acute inhalation toxicity	:	LC50 mouse: 8450 ppm Exposure time: 4 h
Acute dermal toxicity	:	LD50 Dermal rabbit: > 20,000 mg/kg

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

tetrachloroethylene:
trichloroethylene:
carbon dioxide:
1,2-epoxybutane:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

Product:

Remarks: no data available

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: no data available

Components:

tetrachloroethylene :

Partition coefficient: n-octanol/water	:	log Pow: 3.40

trichloroethylene :

Partition coefficient: n-octanol/water	:	log Pow: 2.29
1,2-epoxybutane :		
Partition coefficient: n-octanol/water	:	Pow: 0.68

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information	:	no data available An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
tetrachloroethylene	127-18-4	100	138

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard
Sudden Release of Pressure Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

tetrachloroethylene	127-18-4	72.4095 %
trichloroethylene	79-01-6	24.8007 %
1,2-epoxybutane	106-88-7	0.1247 %

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

tetrachloroethylene	127-18-4
trichloroethylene	79-01-6

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL.
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

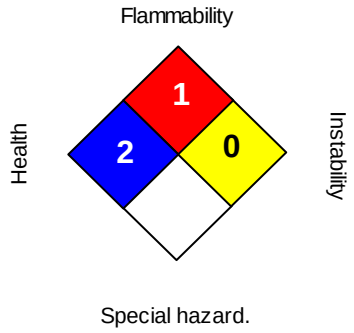
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :

Signal word : **Danger:**

Hazard statements : Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause cancer.

Precautionary statements :

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/ face protection. Wear protective gloves. Use personal protective equipment as required.
Response: IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Storage: Store locked up. Protect from sunlight. Store in a well-ventilated place.
Disposal: Dispose of contents/container in accordance with local regulation.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®,Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®,Rexodan®, Mykal™, and a number of private labeled brands.

Appendix F MANUFACTURER DATA

Introduction

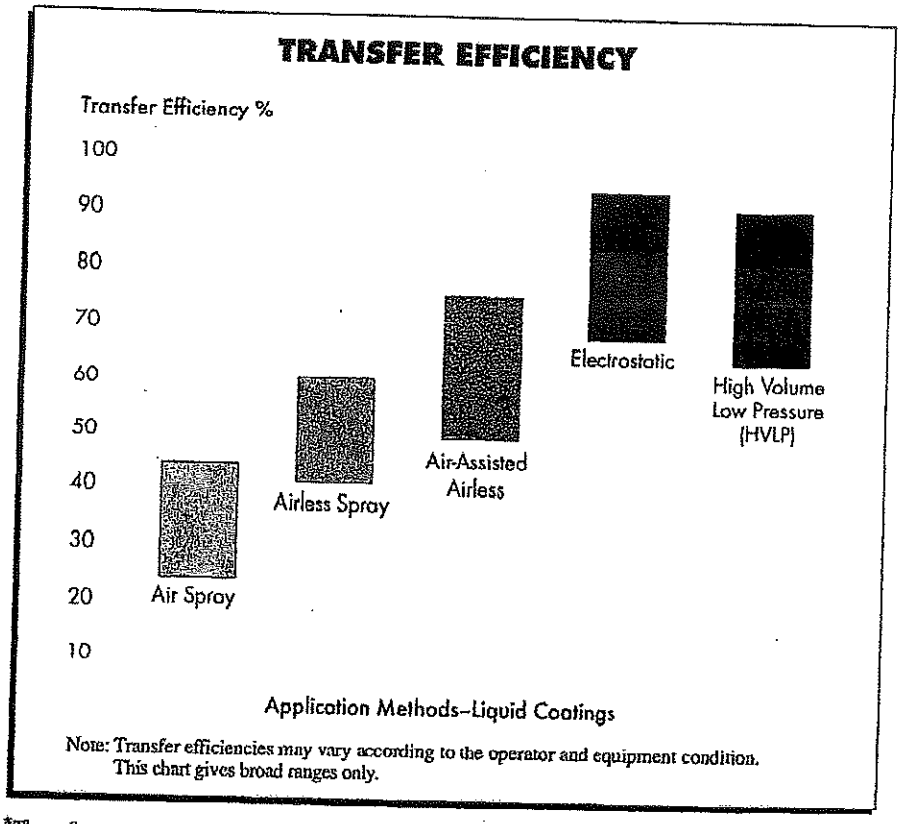
The contractor market for HVLP spray systems is the fastest-growing market segment in the spray equipment industry. As you'll soon realize, HVLP sprayers represent a tremendous opportunity to help painters become more competitive and profitable. Used primarily for finishing work, HVLP sprayers work hand-in-hand with airless equipment to help contractors reduce the time and material necessary to complete a job.

The key is minimized overspray and control of the spray pattern. HVLP systems* atomize coatings by supplying air at High Volume (up to 25 CFM – cubic feet per minute) and Low Pressure (up to 10 PSI – pounds per square inch) to the air cap for mixing with the fluid stream from the nozzle. The user can expect transfer efficiency ranging from 65 – 90 percent and can finely control the size and shape of the spray pattern, as well as the rate of application and thickness of coats. The result is:

- *Less time masking and prep work*
- *Less material waste*
- *Less time cleaning up*
- *MORE PROFITS*

In addition, the high transfer efficiency of HVLP assists contractors to comply with new clean air laws designed to reduce volatile organic compounds (VOC) emissions. HVLP paint sprayers help protect the environment–and painters–by reducing overspray and bounceback.

This manual will give an overview of HVLP technology and uses; it will also focus on the specific features and operation of Titan CAPSPRAY® HVLP equipment.



*These Systems are fully compliant with:
C.A.R.B. (California Air Resource Board)
SCAQMD (South Coast Air Quality Board)
O.T.C. (Ozone Transport Commission)
E.P.A. (Environmental Protection Agency)
H.V.L.P. Regulating

STANDARD EQUIPMENT, Basic Model MRA Dust Collector

Primary separator built into the unit. Secondary separation of fine particles by filter bag section. Belted motor driven exhaust fan with 3 phase, 60 cycle, 230/460 volt, open drip proof motor. NO controls furnished. Floor level storage section for 55 gallon drums (no drums included). Belt guard.

EXTRA EQUIPMENT

SILENCER ..... The Model MRA has a very low noise level, made even quieter by the use of a silencer.

LOW CEILING MODIFICATION. The unit is designed for low ceiling installation. The fan and motor unit is mounted alongside of the unit, permitting installation in much lower ceiling room.

FILTER MEDIA..... The unit with standard filter media is designed to handle almost any type of dust problem. A number of special filter medias are available for the most unusual type of dust problems.

INCREASED STORAGE ..... A hopper style discharge bin is available for increased storage capacity.

ELECTRICAL CONTROLS ..... Magnetic controls are not furnished as standard equipment, but are available as an extra.

AUTOMATIC SHAKER ..... The electric shaker can be controlled with a timing device which is energized when the fan is stopped. The shaker operates automatically for a predetermined length of time, then shuts itself off.

ELECTRIC SHAKER ..... The manual lever on the bag shaking assembly can be replaced by an electric motor. This feature is furnished as standard equipment on models with hopper storage, but must be ordered as an extra on all basic models.

DIRTY FILTER INDICATOR ... A magnehelic gauge (an indicating gauge) can be installed on the unit to automatically indicate when filter media needs cleaning.

WEATHER HOOD ..... For outside installation a weather hood can be installed to protect the motor. This feature is furnished as standard equipment on models with hopper storage.

WHEN YOU SEE MURPHY-RODGERS, YOU'RE LOOKING AT THE FINEST DUST COLLECTING AND AIR POLLUTION CONTROL EQUIPMENT AVAILABLE . . . ANYWHERE!

SPECIFICATIONS COMMON TO ALL MODELS (Subject to change without notice.)

MODEL NO.	EXHAUSTER	CFM	FILTER AREA	AIR TO CLOTH	NO. OF BAGS	INLET
MRA-11	MR-11/10 H.P.	3,036	427 Sq. Ft.	7.1 to 1	64	11"
MRA-13	MR-13/15 H.P.	4,278	528 Sq. Ft.	8.1 to 1	64	13"
MRA-15	MR-15/20 H.P.	5,704	668 Sq. Ft.	8.3 to 1	81	15"
MRA-17	MR-17/25 H.P.	7,314	825 Sq. Ft.	8.9 to 1	100	17"
MRA-20	MR-20/30 H.P.	9,062	1219 Sq. Ft.	7.4 to 1	121	20"
MRA-22	MR-22/40 H.P.	11,086	1414 Sq. Ft.	7.8 to 1	144	22"

NOTE: CFM calculated at 4,600 ft. velocity & 16" S.P.W.G.

Revised 2/92

DISTRIBUTED BY

ANOTHER FINE PRODUCT OF

MURPHY-RODGERS, INC.

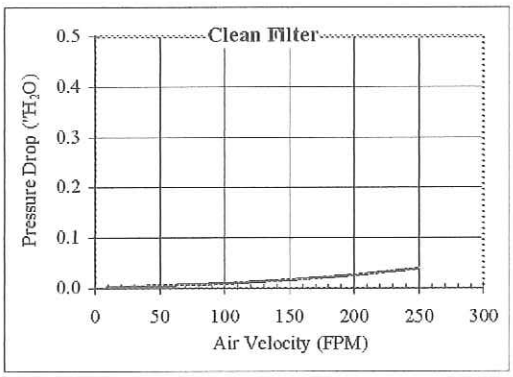
DUST COLLECTORS & AIR POLLUTION CONTROL EQUIPMENT

2301 BELGRAVE AVE., HUNTINGTON PARK, CALIF. 90255
TELEPHONE (213) 587-4118
FAX # (213) 583-9540

PAINT ARRESTANCE FILTER TEST REPORT

Spray Removal Efficiency & Paint Holding Capacity

Tested for:	Air Flow Technology Inc.
Filter Mfr.:	Air Flow Technology Inc.
Filter Name:	15 Grams Paint Arrestor
Report#./Test#	R 660 T 760
Report Date:	March 16, 2005



Test Information

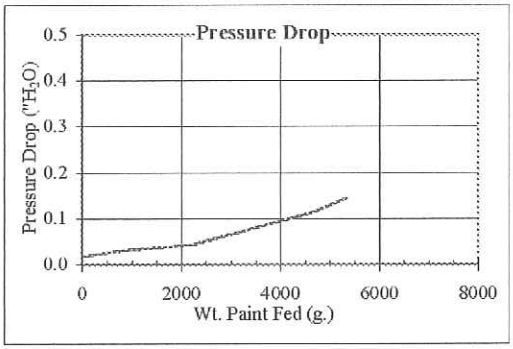
FILTER DESCRIPTION:
White/Green highloft fiberglass

PAINT DESCRIPTION:
High Solids Baking Enamel (S.W. #1 Permaclad 2400, red)

PAINT SPRAY METHOD:
Conventional Air Gun at 40 PSI

SPRAY FEED RATE:
137 gr./min. **130** cc./min.

AIR VELOCITY:
150 FPM



Test Results

INITIAL PRESSURE DROP of Clean Test Filter
0.02 in. water

FINAL PRESSURE DROP of Loaded Test Filter
0.14 in. water

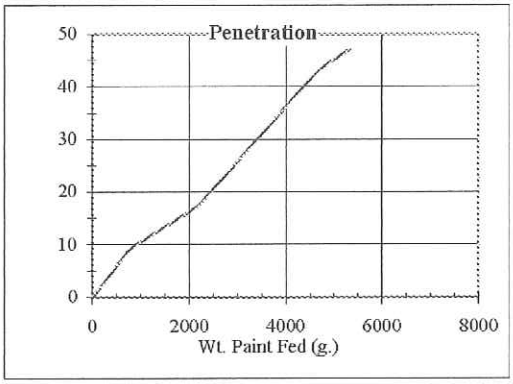
WEIGHT GAIN on TEST FILTER & Test Frame Trough
3925 grams

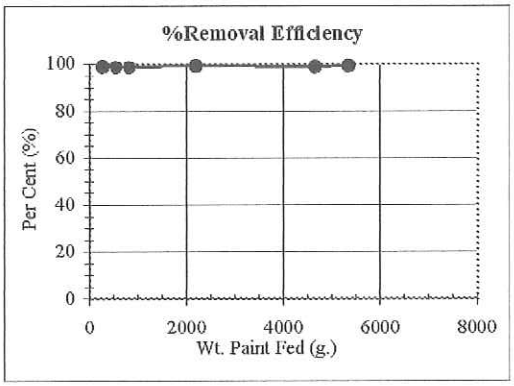
PAINT HOLDING CAPACITY of TEST FILTER
1073 grams = **2.4** lbs.

PAINT RUN-OFF
2852 grams

WEIGHT GAIN on FINAL FILTER
47.1 grams = **PENETRATION**

AVERAGE REMOVAL EFFICIENCY of TEST FILTER
98.81 %





COMPLIANT WITH 40 CFR PART 63 NESHAP

Test Engineer: Todd Kruger

Supervising Engineer: K. C. Kwok, Ph.D.

MAX USAGE
15 min / hr
Annual USAGE

EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET

Model: DCA25SSIU

The engine used in this generator set is certified to comply with United States EPA Tier 2 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Model:	ISUZU	AA-4LE2	Bore:	3.35 in.	(85 mm)
Type:	4-Cycle, In-Line, 4-Cylinder, Diesel		Stroke:	3.78 in.	(96 mm)
Aspiration:	Naturally Aspirated		Displacement:	133 cid	(2.18 liters)
			Compression Ratio:		18:1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	36
Rated Load Fuel Consumption (gal/Hr)	1.44
Rated Load Exhaust Gas Flow (cfm)	144
Rated Load Exhaust Gas Temperature (F)	1058

United States EPA - Mobile Off-Highway Tier 2 Limits - ≥25 BHP - ≤48 BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO2)	(5.59)* gr/bhp-hr	(5.22)* gr/bhp-hr
HC (Total Unburned Hydrocarbons)	(NOx + HC)* Combined	(NOx + HC)* Combined
CO (Carbon Monoxide)	4.10 gr/bhp-hr	1.94 gr/bhp-hr
PM (Particulate Matter)	0.45 gr/bhp-hr	0.22 gr/bhp-hr

EPA Engine Family: 6SZXL02.2DNB

EPA Certificate of Conformance: SZX-NR3-06-02

Effective Date: Year 2006

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

Storage Tank Capacities

Diesel Storage Tank Capacity	300gal.
Gasoline Storage Tank Capacity	300gal.
Propane Storage Tank Capacity	500gal.

Propane Tanks in Storage	16
Propane Tanks on Forklifts	9
Total Number of Forklifts	10 (One is Out of Service)

Total Hour reading on Generator

Date Purchased Generator	11/08/07
At time of Purchase	2000
As of 01/25/16	4869.8 hrs.
Hours Nashua Homes has put on	2869.8 hrs.
Annually	358.72 hrs.
Daily	1.49 hrs.