

**SECTION 1. IDENTIFICATION**

Product name : Sikaflex®-211 US

Company name : Sika Corporation
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Lyndhurst, NJ 07071
USA
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Telephone : (201) 933-8800

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E-mail address : ehs@sika-corp.com

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity (Inhalation) : Category 1A

Specific target organ system-ic toxicity - repeated exposure (Inhalation) : Category 2 (hearing organs)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350i May cause cancer by inhalation.
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.



Precautionary Statements :

Prevention:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P284 Wear respiratory protection.

Response:

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

- P405 Store locked up.

Disposal:

- P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

Other hazards

Intentional misuse by deliberate concentration and inhalation of vapor may be harmful or fatal.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
xylene	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 1 - < 5$
Quartz (SiO ₂)	14808-60-7	Carc. 1A; H350i	$\geq 0.1 - < 1$



		STOT RE 1; H372 STOT SE 3; H335	
ethylbenzene	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Carc. 2; H351 STOT RE 2; H373 Asp. Tox. 1; H304 Eye Irrit. 2A; H319	>= 0.1 - < 1
4,4'-methylenediphenyl diisocyanate	101-68-8	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	>= 0.1 - < 1
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	Skin Sens. 1A; H317	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : sensitizing effects
carcinogenic effects
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause cancer by inhalation.
May cause damage to organs through prolonged or repeated exposure if inhaled.
Asthmatic appearance
Allergic reactions



Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : 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.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.
- Conditions for safe storage : Prevent unauthorized access.



Store in original container.
 Keep container tightly closed in a dry and well-ventilated place.
 Observe label precautions.
 Store in accordance with local regulations.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
xylene	1330-20-7	TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		STEL	150 ppm 655 mg/m3	OSHA P0
Quartz (SiO2)	14808-60-7	TWA	100 ppm 435 mg/m3	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m3	ACGIH
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m3	ACGIH
ethylbenzene	100-41-4	TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
		TWA	100 ppm 435 mg/m3	OSHA Z-1



		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.005 ppm	ACGIH
		C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.02 ppm 0.2 mg/m3	OSHA P0

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks

: 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.

Eye protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection

: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures

: Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Color	:	various
Odor	:	aromatic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	1.457 g/cm ³
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm ² /s (104 °F / 40 °C)



Explosive properties : No data available
Oxidizing properties : No data available
Volatile organic compounds (VOC) content : 33 g/l

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : The product is chemically stable.
Possibility of hazardous reactions : Stable under recommended storage conditions.
Conditions to avoid : No data available
Incompatible materials : No data available

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified based on available information.

Components:**xylene:**

Acute oral toxicity : LD50 Oral (Rat): 3,523 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): 1,700 mg/kg

ethylbenzene:

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): 5,510 mg/kg

4,4'-methylenediphenyl diisocyanate:

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
Test atmosphere: dust/mist
Method: Expert judgment

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.



Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans Quartz (SiO ₂) (Silica dust, crystalline)	14808-60-7
	Group 2B: Possibly carcinogenic to humans titanium dioxide	13463-67-7
	Group 2B: Possibly carcinogenic to humans ethylbenzene	100-41-4
	Group 2B: Possibly carcinogenic to humans carbon black	1333-86-4
OSHA	Not applicable	
NTP	Known to be human carcinogen Quartz (SiO ₂) (Silica, Crystalline (Respirable Size))	14808-60-7

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Carbon black (1333-86-4)
Animal Toxicity:
 Rat, oral, duration 2 year
 Effect: no tumors

 Mouse, oral, duration 2 years
 Effect: no tumors
 Mouse, dermal, duration 18 months
 Effect: no skin tumors



Rat, inhalation, duration 2 years

Target organ: lungs

Effect: inflammation, fibrosis, tumors

Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.

Mortality studies (human data): A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorahan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (DEll, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010).

Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington.

Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.

IARC CANCER CLASSIFICATION: In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B)". This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause



cancer in animals (Group 2B).

ICGIH CANCER CLASSIFICATION: Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

ASSESSMENT: Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a result of a secondary non-genotoxic mechanism that has questionable relevance for classification in humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk to carcinogenicity.

Titanium dioxide (13463-67-7)

In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

Quartz (14808-60-7): This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3.3 mg/l
Exposure time: 96 h



Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Domestic regulation

49 CFR

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA list

- : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

**EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

xylene 1330-20-7 >= 1 - < 5 %

ethylbenzene 100-41-4 >= 0.1 - < 1 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

xylene 1330-20-7 >= 1 - < 5 %

California Prop 65

WARNING: Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
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
ACGIH / STEL : Short-term exposure limit
OSHA P0 / TWA : 8-hour time weighted average
OSHA P0 / STEL : Short-term exposure limit
OSHA P0 / C : Ceiling limit
OSHA Z-1 / TWA : 8-hour time weighted average
OSHA Z-1 / C : Ceiling
OSHA Z-3 / TWA : 8-hour time weighted average

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor



does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 06/17/2019

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US / Z8



1. Identification

Product name	:	Sikalastic®-641 Lo-VOC
Supplier	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
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Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Flammable liquids, Category 4	H227: Combustible liquid.
Acute toxicity, Category 4 (Inhalation)	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Respiratory sensitization, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360: May damage fertility or the unborn child.

GHS label elements

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H227 Combustible liquid. 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. H360 May damage fertility or the unborn child.



Precautionary Statements : **Prevention:**

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ eye protection/ face protection.
 P281 Use personal protective equipment as required.
 P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P370 + P378 In case of fire: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment for extinction.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.

There are no hazards not otherwise classified that have been identified during the classification process.

There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
4-chloro-a,a,a-trifluorotoluene	98-56-6	$\geq 10 - < 20 \%$
Reaction product of propylidynetrimethanol, propoxylated, reaction products with ammonia and 2,2-Dimethyl-3-(4-morpholinyl)propanal	1379822-00-0	$\geq 5 - < 10 \%$



Hardener MI (Isophoronedimethyl(morpholinoaldimine))	1217271-02-7	>= 2 - < 5 %
Isophorondiisocyanate homopolymer	53880-05-0	>= 2 - < 5 %
tris(methylphenyl) phosphate	1330-78-5	>= 0.1 - < 1 %
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	>= 0.1 - < 1 %
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	>= 0.1 - < 1 %
1-methyl-2-pyrrolidone	872-50-4	>= 0.1 - < 1 %
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5	>= 0.1 - < 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.

4. First aid measures

- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : irritant effects
sensitizing effects
toxic effects for reproduction
- Asthmatic appearance
Respiratory disorder
Allergic reactions
Excessive lachrymation
Erythema
Headache
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
- Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May damage fertility or the unborn child.



- Protection of first-aiders : Move out of dangerous area.
 Consult a physician.
 Show this material safety data sheet to the doctor in attendance.
- Notes to physician : Treat symptomatically.

5. Fire-fighting measures

- Suitable extinguishing media : Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Water
- Specific extinguishing methods : 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.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
 Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
 If the product contaminates rivers and lakes or drains inform respective authorities.
 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.

7. Handling and storage

- Advice on safe handling : Avoid formation of aerosol.
 Do not breathe vapors or spray mist.
 Avoid exceeding the given occupational exposure limits (see section 8).
 Do not get in eyes, on skin, or on clothing.
 For personal protection see section 8.
 Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
 Smoking, eating and drinking should be prohibited in the application area.
 Provide sufficient air exchange and/or exhaust in work rooms.



Pregnant women or women of child-bearing age should not be exposed to this product.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

Materials to avoid : No data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
barium sulfate	7727-43-7	OSHA P0	TWA	10 mg/m3 Total
		OSHA P0	TWA	5 mg/m3 Respirable fraction
		OSHA Z-1	TWA	15 mg/m3 total dust
		OSHA Z-1	TWA	5 mg/m3 respirable fraction
		ACGIH	TWA	5 mg/m3 Inhalable fraction
		OSHA P0	TWA	10 mg/m3 Total dust
		OSHA P0	TWA	5 mg/m3 respirable dust fraction
triphenyl-phosphate	115-86-6	ACGIH	TWA	3 mg/m3
		OSHA Z-1	TWA	3 mg/m3
		OSHA P0	TWA	3 mg/m3
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	ACGIH	TWA	0.005 ppm
		OSHA P0	TWA	0.005 ppm
		OSHA P0	STEL	0.02 ppm



*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks : 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.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove respiratory and skin/eye protection only after vapors have been cleared from the area.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.



9. Physical and chemical properties

Appearance	: liquid
Color	: various
Odor	: fruity
Odor Threshold	: No data available
Flash point	: ca. 149.99 °F (65.55 °C)
Ignition temperature	: No data available
Decomposition temperature	: No data available
Lower explosion limit (Vol%)	: No data available
Upper explosion limit (Vol%)	: No data available
Flammability (solid, gas)	: No data available
Oxidizing properties	: No data available
pH	: Note: Not applicable
Melting point/range / Freezing point	: No data available
Boiling point/boiling range	: No data available
Vapor pressure	: 5.300 mmHg (7.066066 hpa)
Density	: ca. 1.44 g/cm ³ at 73 °F (23 °C)
Water solubility	: Note: insoluble
Partition coefficient: n- octanol/water	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20.5 mm ² /s at 104 °F (40 °C)
Relative vapor density	: No data available
Evaporation rate	: No data available
Burning rate	: No data available
Volatile organic compounds (VOC) content	: 38 g/l

10. Stability and reactivity



Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Stable under recommended storage conditions.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: No data available

11. Toxicological information

Acute toxicity

Harmful if inhaled.

Components:

4-chloro-a,a,a-trifluorotoluene:

Acute oral toxicity : LD50 Oral (Rat): > 13,000 mg/kg

Reaction product of propylidynetrimethanol, propoxylated, reaction products with ammonia and 2,2-Dimethyl-3-(4-morpholinyl)propanal:

Acute oral toxicity : LD50 Oral (Rat): > 2,001 mg/kg

Hardener MI (Isophoronedimethyl(morpholinoaldimine)):

Acute oral toxicity : LD50 Oral (Rat): > 2,001 mg/kg

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute oral toxicity : LD50 Oral (Rat): 4,814 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.031 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): > 7,000 mg/kg

1-methyl-2-pyrrolidone:

Acute oral toxicity : LD50 Oral (Rat): 4,150 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

4,5-dichloro-2-octyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 Oral (Rat): 1,636 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.26 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Causes skin irritation.

Components:

**Hardener MI (Isophoronedimethyl(morpholinoaldimine)):**

Method: Regulation (EC) No. 440/2008, Annex, B.46
Result: Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:**Hardener MI (Isophoronedimethyl(morpholinoaldimine)):**

Result: Eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:**Hardener MI (Isophoronedimethyl(morpholinoaldimine)):**

Method: Regulation (EC) No. 440/2008, Annex, B.42 (LLNA)
Result: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Reproductive toxicity

May damage fertility or the unborn child.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

Group 2B: Possibly carcinogenic to humans

titanium dioxide

13463-67-7

Carbon black

1333-86-4

NTP

Not applicable

Carbon black (1333-86-4)

Animal Toxicity:

Rat, oral, duration 2 year
Effect: no tumors

Mouse, oral, duration 2 years
Effect: no tumors



Mouse, dermal, duration 18 months
Effect: no skin tumors

Rat, inhalation, duration 2 years
Target organ: lungs
Effect: inflammation, fibrosis, tumors

Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.

Mortality studies (human data): A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorahan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (DEll, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010).

Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington.

Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.

IARC CANCER CLASSIFICATION: In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B)". This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).

ICGIH CANCER CLASSIFICATION: Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

ASSESSMENT: Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a result of a secondary non-genotoxic mechanism that has questionable relevance for classification in



humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk to carcinogenicity.

Titanium dioxide (13463-67-7)

In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have been shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that cause lung cancer. Epidemiology studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

12. Ecological information

Other information

Do not empty into drains; dispose of this material and its container in a safe way.
 Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 May be harmful to the environment if released in large quantities.
 Water polluting material.

Component:

4-chloro-a,a,a-trifluorotoluene

98-56-6

Toxicity to fish:

LC50

Species: Brachydanio rerio (zebrafish)

Dose: 3 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 2 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50

Species: Pseudokirchneriella subcapitata (green algae)

Dose: > 0.41 mg/l

Exposure time: 72 h

Reaction product of propylidynetrimethanol, propoxylated, reaction products with ammonia and 2,2-Dimethyl-3-(4-morpholinyl)propanal

1379822-00-0

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 45.1 mg/l

Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates:

NOEC

Species: Daphnia magna (Water flea)

Dose: 12.5 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50

Species: Pseudokirchneriella subcapitata (green algae)

Dose: 1.56 mg/l

Exposure time: 72 h

Hardener MI
(Isophoronedimine(morpholino
Idimine))

1217271-02-7

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 40.2 mg/l

Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates:

NOEC

Species: Daphnia magna (Water flea)

Dose: 17.1 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50

Species: Pseudokirchneriella subcapitata (green algae)

Dose: 89 mg/l

Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates Chronic toxicity:

EC50

Species: Daphnia

Concentration: 40.20 mg/l

Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates Chronic toxicity:

NOEC

Species: Daphnia

Concentration: 17.10 mg/l

Exposure time: 48 h

4,5-dichloro-2-octyl-2H-
isothiazol-3-one

64359-81-5

Toxicity to fish:

LC50

Species: Fish

Dose: 0.0027 mg/l

Exposure time: 96 h

13. Disposal considerations**Disposal methods**

- Waste from residues : 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.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.



14. Transport information

DOT

Not regulated

IATA

UN number	3082
Description of the goods	Environmentally hazardous substance, liquid, n.o.s. (diphenyl-tolyl-phosphate)
Class	9
Packing group	III
Labels	9
Packing instruction (cargo aircraft)	964
Packing instruction (passenger aircraft)	964
Packing instruction (passenger aircraft)	Y964

IMDG

UN number	3082
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diphenyl-tolyl-phosphate)
Class	9
Packing group	III
Labels	9
EmS Number 1	F-A
EmS Number 2	S-F
Marine pollutant	yes

IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

TSCA list	: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
TSCA Continued	: This product contains a substance regulated by EPA under a TSCA Significant New Use Rule (SNUR). Information about this SNUR can be found at 40 CFR 721.10774. In addition,



because this substance is subject to a SNUR, it is also subject to export notification under TSCA Section 12(b).

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
 Chronic Health Hazard
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Reproductive toxicity

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

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.

Clean Air Act

Ozone-Depletion Potential 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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65  **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

16. Other information

HMIS Classification

Health	*	3
Flammability		2
Physical Hazard		0
Personal Protection		x



Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 09/27/2018

Material number: 567889



1. Identification

Product name : Sikalastic® EP Primer/Sealer Part A

Supplier : Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

E-mail address : ehs@sika-corp.com

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Flammable liquids, Category 4	H227: Combustible liquid.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 1A (Inhalation)	H350i: May cause cancer by inhalation.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ systemic toxicity - repeated exposure, Category 1, Lungs	H372: Causes damage to organs through prolonged or repeated exposure.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H350i May cause cancer by inhalation.



H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

Precautionary Statements

- : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
- Response:**
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment for extinction.
- Storage:**
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
- Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

Warning

- : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.



3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
bisphenol-A-(epichlorhydrin) epoxy resin	25068-38-6	>= 25 - < 50 %
Quartz (SiO ₂)	14808-60-7	>= 20 - < 25 %
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	68609-97-2	>= 10 - < 20 %
Solvent naphtha (petroleum), light arom.	64742-95-6	>= 5 - < 10 %
ethylbenzene	100-41-4	< 1 %

Actual concentration is withheld as a 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.

4. First aid measures

- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : irritant effects
sensitizing effects
carcinogenic effects
- Cough
Respiratory disorder
Allergic reactions
Excessive lachrymation
Erythema
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
- Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.



May cause cancer by inhalation.
Causes damage to organs through prolonged or repeated exposure.

- Protection of first-aiders : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
- Notes to physician : Treat symptomatically.

5. Fire-fighting measures

- Suitable extinguishing media : Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Water
- Specific extinguishing methods : 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.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

7. Handling and storage

- Advice on safe handling : Do not breathe vapors or spray mist.
Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the



application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Prevent unauthorized access.
Store in original container.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

Materials to avoid : No data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
Quartz (SiO ₂)	14808-60-7	ACGIH	TWA	0.025 mg/m ³ Respirable fraction
		OSHA Z-1	TWA	0.05 mg/m ³ Respirable dust
		OSHA Z-3	TWA	10 mg/m ³ / %SiO ₂ +2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO ₂ +5 respirable
		OSHA P0	TWA	0.1 mg/m ³ respirable dust fraction
		ACGIH	TWA	0.025 mg/m ³ Respirable fraction
		OSHA P0	TWA	0.1 mg/m ³ respirable dust fraction
		ACGIH	TWA	0.025 mg/m ³ Respirable fraction
		ACGIH	TWA	0.025 mg/m ³ Respirable fraction
Talc	14807-96-6	OSHA Z-3	TWA	20 Million particles per cubic foot Dust



		OSHA P0	TWA	2 mg/m3 respirable dust fraction
		ACGIH	TWA	2 mg/m3 Respirable fraction
Solvent naphtha (petroleum), light arom.	64742-95-6	OSHA Z-1	TWA	500 ppm 2,000 mg/m3
		OSHA P0	TWA	400 ppm 1,600 mg/m3
ethylbenzene	100-41-4	OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3
		OSHA P0	STEL	125 ppm 545 mg/m3

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering measures

: Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Personal protective equipment

Respiratory protection

: Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.



Hand protection Remarks	: 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.
Eye protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance	: liquid
Color	: red
Odor	: aromatic
Odor Threshold	: No data available
Flash point	: 155.8 °F (68.8 °C)
Ignition temperature	: No data available
Decomposition temperature	: No data available
Lower explosion limit (Vol%)	: No data available
Upper explosion limit (Vol%)	: No data available
Flammability (solid, gas)	: No data available
Oxidizing properties	: No data available
pH	: Note: Not applicable
Melting point/range / Freezing point	: No data available
Boiling point/boiling range	: No data available
Vapor pressure	: 0.01 mmHg (0.01 hpa)
Density	: ca.1.54 g/cm3



at 73 °F (23 °C)

Water solubility	:	Note: insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	ca. > 20.5 mm ² /s at 104 °F (40 °C)
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	72.05 g/l A+B Combined

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	No data available

11. Toxicological information

Acute toxicity

Not classified based on available information.

Components:

bisphenol-A-(epichlorhydrin) epoxy resin:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 20,000 mg/kg

ethylbenzene:

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 5,510 mg/kg

Skin corrosion/irritation

Causes skin irritation.



Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Lungs) through prolonged or repeated exposure.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain,liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC Group 1: Carcinogenic to humans

Quartz (SiO2) 14808-60-7

Group 2B: Possibly carcinogenic to humans

titanium dioxide 13463-67-7

ethylbenzene 100-41-4

NTP Known to be human carcinogen

Quartz (SiO2) 14808-60-7

Titanium dioxide (13463-67-7)

In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

12. Ecological information



Other information

Do not empty into drains; dispose of this material and its container in a safe way.
 Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 May be harmful to the environment if released in large quantities.
 Water polluting material.

Component:

bisphenol-A-
 (epichlorhydrin) epoxy
 resin

25068-38-6

Toxicity to fish:

LC50

Species: Oncorhynchus mykiss (rainbow trout)

Dose: 2 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: 1.8 mg/l

Exposure time: 48 h

13. Disposal considerations

Disposal methods

- Waste from residues : 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.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated

IATA

UN number

3082

Description of the goods

Environmentally hazardous substance, liquid, n.o.s.
 (bisphenol-A-(epichlorhydrin) epoxy resin)

Class

9

Packing group

III

Labels

9

Packing instruction (cargo aircraft)

964

Packing instruction (passenger aircraft)

964



Packing instruction (passenger aircraft)	Y964
IMDG	
UN number	3082
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol-A-(epichlorhydrin) epoxy resin)
Class	9
Packing group	III
Labels	9
EmS Number 1	F-A
EmS Number 2	S-F
Marine pollutant	yes

DOT & Domestic Aircraft: As per 49 CFR 171.4, Non-bulk materials (<119 Gal) are exempt from being classified as a Marine Pollutant.

IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Chronic Health Hazard
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

Sikalastic® EP Primer/Sealer Part A



Revision Date 01/18/2019

Print Date 01/18/2019

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
ethylbenzene 100-41-4 0.10 %

Clean Air Act

Ozone-Depletion Potential 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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65  **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

16. Other information

HMIS Classification

Health	*	3
Flammability		2
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

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Sikalastic® EP Primer/Sealer Part A



Revision Date 01/18/2019

Print Date 01/18/2019

BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 01/18/2019

Material number: 557813



1. Identification

Product name : Sikalastic® EP Primer/Sealer Part B

Supplier : Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

E-mail address : ehs@sika-corp.com

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Acute toxicity, Category 4 (Oral)	H302: Harmful if swallowed.
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific target organ systemic toxicity - repeated exposure, Category 1	H372: Causes damage to organs through prolonged or repeated exposure.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**



P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P281 Use personal protective equipment as required.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 P310 Immediately call a POISON CENTER/doctor.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Warning : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain,liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.
 There are no hazards not otherwise classified that have been identified during the classification process.
 There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
benzyl alcohol	100-51-6	$\geq 25 - < 50 \%$
Isophoronediamine	2855-13-2	$\geq 20 - < 25 \%$
2-piperazin-1-ylethylamine	140-31-8	$\geq 5 - < 10 \%$



P-tert-butylphenol (PTBP)	98-54-4	>= 5 - < 10 %
m-phenylenebis(methylamine)	1477-55-0	>= 5 - < 10 %

Actual concentration is withheld as a 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.

4. First aid measures

- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Gastrointestinal discomfort
Allergic reactions
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.

Health injuries may be delayed.
corrosive effects
sensitizing effects

Harmful if swallowed.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Causes severe burns.
- Protection of first-aiders : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.



Notes to physician : Treat symptomatically.

5. Fire-fighting measures

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

 - Specific extinguishing methods : 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.

 - Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
-

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Deny access to unprotected persons.
 - Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
-

7. Handling and storage

- Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products.

- Conditions for safe storage : Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Store in accordance with local regulations.



Materials to avoid : No data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
Benzyl alcohol	100-51-6	US WEEL	TWA	10 ppm
m-phenylenebis(methylamine)	1477-55-0	ACGIH	C	0.1 mg/m3
		OSHA P0	C	0.1 mg/m3

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks : 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.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.



- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

9. Physical and chemical properties

- Appearance : liquid
- Color : clear
yellow
- Odor : amine-like
- Odor Threshold : No data available
- Flash point : > 199.99 °F (> 93.33 °C)
- Ignition temperature : No data available
- Decomposition temperature : No data available
- Lower explosion limit (Vol%) : No data available
- Upper explosion limit (Vol%) : No data available
- Flammability (solid, gas) : No data available
- Oxidizing properties : No data available
- pH : Note: Not applicable
- Melting point/range /
Freezing point : No data available
- Boiling point/boiling range : No data available
- Vapor pressure : 15.000 mmHg (19.9983 hpa)
- Density : ca. 1.025 g/cm³
at 73 °F (23 °C)
- Water solubility : Note: insoluble
- Partition coefficient: n-
octanol/water : No data available
- Viscosity, dynamic : No data available
- Viscosity, kinematic : > 20.5 mm²/s
at 104 °F (40 °C)



Relative vapor density : No data available
Evaporation rate : No data available
Burning rate : No data available
Volatile organic compounds (VOC) content : 72.05 g/l
A+B Combined

10. Stability and reactivity

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : The product is chemically stable.
Possibility of hazardous reactions : Stable under recommended storage conditions.
Conditions to avoid : No data available
Incompatible materials : No data available

11. Toxicological information

Acute toxicity

Harmful if swallowed.

Components:

benzyl alcohol:

Acute oral toxicity : LD50 Oral (Rat): 1,620 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 4.178 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Isophoronediamine:

Acute oral toxicity : LD50 Oral (Rat): 1,030 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 5.01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2,000 mg/kg

2-piperazin-1-ylethylamine:

Acute oral toxicity : LD50 Oral (Rabbit): 2,097 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): ca. 866 mg/kg

m-phenylenebis(methylamine):

Acute oral toxicity : LD50 Oral (Rat): 930 mg/kg



Acute inhalation toxicity : LC50 (Rat): 1.34 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat): > 3,100 mg/kg

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Not applicable

NTP Not applicable

12. Ecological information

Other information Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
May be harmful to the environment if released in large quantities.
Water polluting material.

Component:



Benzyl alcohol	100-51-6	<p><u>Toxicity to fish:</u> LC50 Species: Fish Dose: > 100 mg/l Exposure time: 96 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: > 100 mg/l Exposure time: 48 h</p>
Isophoronediamine	2855-13-2	<p><u>Toxicity to algae:</u> ErC50 Species: Desmodesmus subspicatus (green algae) Dose: > 10 - 100 mg/l Exposure time: 72 h</p>
2-piperazin-1-ylethylamine	140-31-8	<p><u>Toxicity to fish:</u> LC50 Species: Fish Dose: > 100 mg/l Exposure time: 96 h</p>
m-phenylenebis(methylamine)	1477-55-0	<p><u>Toxicity to fish:</u> LC50 Species: Oryzias latipes (Japanese medaka) Dose: > 10 - 100 mg/l Exposure time: 96 h</p> <p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: > 10 - 100 mg/l Exposure time: 48 h</p>

13. Disposal considerations

Disposal methods

- Waste from residues : 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.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
UN number 3066



Description of the goods	Paint related material
Class	8
Packing group	III
Labels	8
Emergency Response	153
Guidebook Number	

IATA

UN number	3066
Description of the goods	Paint related material (P-tert-butylphenol (PTBP))
Class	8
Packing group	III
Labels	8
Packing instruction (cargo aircraft)	856
Packing instruction (passenger aircraft)	852
Packing instruction (passenger aircraft)	Y841

IMDG

UN number	3066
Description of the goods	PAINT RELATED MATERIAL (P-tert-butylphenol (PTBP))
Class	8
Packing group	III
Labels	8
EmS Number 1	F-A
EmS Number 2	S-B
Marine pollutant	yes

DOT: For Limited Quantity exceptions reference 49 CFR 173.154 (b)

IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know



CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

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.

Clean Air Act

Ozone-Depletion Potential 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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. Other information

HMIS Classification

Health	*	3
Flammability		1
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.



Notes to Reader

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 01/18/2019

Material number: 557812



1. Identification

Product name : Sika® Flexitape Heavy

Supplier : Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

E-mail address : ehs@sika-corp.com

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration $\geq 1\%$.

3. Composition/information on ingredients

Hazardous ingredients

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.

4. First aid measures

If inhaled : Move to fresh air.



- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No known significant effects or hazards.

See Section 11 for more detailed information on health effects and symptoms.
- Protection of first-aiders : No hazards which require special first aid measures.
- Notes to physician : Treat symptomatically.

5. Fire-fighting measures

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific extinguishing methods : 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.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

7. Handling and storage

- Advice on safe handling : For personal protection see section 8.
No special handling advice required.
Follow standard hygiene measures when handling chemical products.



- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Store in accordance with local regulations.
- Materials to avoid : No data available

8. Exposure controls/personal protection

Contains no substances with occupational exposure limit values.

- Engineering measures** : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

- Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Hand protection
Remarks : 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.
- Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Avoid breathing dust.

9. Physical and chemical properties

- Appearance : solid (woven nylon mesh)
- Color : off-white



Odor	:	odorless
Odor Threshold	:	No data available
Flash point	:	Note: Not applicable
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	No data available
Upper explosion limit (Vol%)	:	No data available
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	Note: Not applicable
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	No data available
Density	:	2.6 g/cm ³ at 68 °F (20 °C)
Water solubility	:	Note: insoluble
Partition coefficient: n- octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Note: Not applicable
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	No data available

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available



Incompatible materials : No data available

11. Toxicological information

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

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.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC Not applicable

NTP Not applicable

12. Ecological information

Other information : Do not empty into drains; dispose of this material and its container in a safe way.

13. Disposal considerations

Disposal methods

Waste from residues : 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.

Contaminated packaging : Empty containers should be taken to an approved waste



handling site for recycling or disposal.

14. Transport information

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

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.

Clean Air Act

Ozone-Depletion Potential

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).



This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. Other information

HMIS Classification

Health	/	1
Flammability		1
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 07/19/2017

Material number: 174149



SAFETY DATA SHEET SIKA® REEMAT PREMIUM

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME SIKA® REEMAT PREMIUM

SYNONYMS, TRADE NAMES ,

APPLICATION Surface coating for the building and construction industry

SUPPLIER SIKA SERVICES AG
 BU Contractors
 Tüffenwies 16
 CH-8048 Zürich
 +41 58 436 40 40
 +41 58 436 43 43
 sika@sika.ch

EMERGENCY TELEPHONE + 44(0)870 190 6777 (24hr, ENG)

2 HAZARDS IDENTIFICATION

Not regarded as a health or environmental hazard under current legislation.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
GLASS FIBRES	266-046-0	65997-17-3	60-100%	-

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

INHALATION

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

INGESTION

Immediately rinse mouth and provide fresh air. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust.

SPILL CLEAN UP METHODS

Not relevant.

7 HANDLING AND STORAGE

SIKA® REEMAT PREMIUM**USAGE PRECAUTIONS**

Avoid inhalation of dust and contact with skin and eyes. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product.

STORAGE PRECAUTIONS

Store at moderate temperatures in dry, well ventilated area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
GLASS FIBRES	WEL		2 mg/m ³			

WEL = Workplace Exposure Limit.

INGREDIENT COMMENTS

EU = Indicative Values according to Commission Directive 91/322/EEC. WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT**PROCESS CONDITIONS**

Provide eyewash station.

ENGINEERING MEASURES

Provide adequate ventilation. Observe Workplace Exposure Limits and minimise the risk of inhalation of dust.

RESPIRATORY EQUIPMENT

In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

HAND PROTECTION

Protective gloves are recommended.

EYE PROTECTION

Wear approved safety goggles.

HYGIENE MEASURES

When using do not eat, drink or smoke. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Fibrous		
COLOUR	White / off-white		
ODOUR	No characteristic odour.		
SOLUBILITY	Insoluble in water		
RELATIVE DENSITY	~ 2.6	VOLATILE BY VOL. (%)	0
VOLATILE ORGANIC COMPOUND (VOC)	0 g/litre		

10 STABILITY AND REACTIVITY**STABILITY**

Stable under normal temperature conditions and recommended use.

HAZARDOUS DECOMPOSITION PRODUCTS

No hazardous decomposition products.

11 TOXICOLOGICAL INFORMATION

SIKA® REEMAT PREMIUM**INHALATION**

Dust in high concentrations may irritate the respiratory system.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

May cause skin irritation/eczema May cause allergic contact eczema.

EYE CONTACT

Particles in the eyes may cause irritation and smarting.

SPECIFIC EFFECTS

Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Not regarded as dangerous for the environment.

DEGRADABILITY

The product is not biodegradable.

13 DISPOSAL CONSIDERATIONS**DISPOSAL METHODS**

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION**GENERAL**

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

No transport warning sign required.

MARINE POLLUTANT

No.

15 REGULATORY INFORMATION**RISK PHRASES**

NC

Not classified.

SAFETY PHRASES

P13

Safety data sheet available for professional user on request.

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

GUIDANCE NOTES

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

16 OTHER INFORMATION**GENERAL INFORMATION**

Only trained personnel should use this material.

ISSUED BY

Mike Byrne

REVISION DATE

30/04/2009

REV. NO./REPL. SDS GENERATED 4

SIKA® REEMAT PREMIUM

RISK PHRASES IN FULL

NC Not classified.

DISCLAIMER

The information given is believed to be correct but does not claim to be all inclusive and is to be used only as a guide. This company will not be held liable for any damage resulting from handling or from contact with this product. Do not use without referring to the product and safety data sheet. Refer to all local, national and international regulations. Protect from frost and heat - stir before use. Manufactured in the E.U. under an ISO9000 registered system.



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 795 Silicone Building Sealant White

Issue Date: 08/16/2019

Print Date: 08/17/2019

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWSIL™ 795 Silicone Building Sealant White

Recommended use of the chemical and restrictions on use

Identified uses: Adhesive, binding agents

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

Label elements

Precautionary statements

Prevention

Use only outdoors or in a well-ventilated area.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone elastomer

This product is a mixture.

Component	CASRN	Concentration
Diisopropoxydi(ethoxyacetoacetyl)titanate	27858-32-8	>= 0.6 - <= 1.08 %
Methanol	67-56-1	>= 0.16 - <= 0.23 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray. Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Metal oxides. Formaldehyde. Carbon oxides. Silicon oxides.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

Advice for firefighters

Fire Fighting Procedures: 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. Evacuate area.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: 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: Wipe up or scrape up and contain for salvage or disposal. 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. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Methanol	ACGIH	TWA	200 ppm

	Further information: headache: Headache; nausea: Nausea; dizziness: Dizziness; eye dam: Eye damage; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); Skin: Danger of cutaneous absorption		
	ACGIH	STEL	250 ppm
	Further information: headache: Headache; nausea: Nausea; dizziness: Dizziness; eye dam: Eye damage; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); Skin: Danger of cutaneous absorption		
	OSHA Z-1	TWA	260 mg/m3 200 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	STEL	325 mg/m3 250 ppm
	Further information: X: Skin notation		
	OSHA P0	TWA	260 mg/m3 200 ppm
	Further information: X: Skin notation		
Isopropanol	ACGIH	TWA	200 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	400 ppm
	Further information: CNS impair: Central Nervous System impairment; URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); A4: Not classifiable as a human carcinogen		
	OSHA Z-1	TWA	980 mg/m3 400 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	TWA	980 mg/m3 400 ppm
	OSHA P0	STEL	1,225 mg/m3 500 ppm

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material. The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:
Isopropanol

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
Isopropanol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	off-white
Odor	slight
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Seta closed cup 91 °C (196 °F)
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.52
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents. Vapours may form explosive mixture with air.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde. Benzene. Isopropanol.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Based on information for component(s):
Prolonged exposure not likely to cause significant skin irritation.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Based on information for component(s):
May cause slight temporary eye irritation.
May cause mild eye discomfort.

Sensitization

For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Contains a component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency

Carcinogenicity

For similar material(s): Did not cause cancer in long-term animal studies which used routes of exposure considered relevant to industrial handling. Positive results have been reported in other studies using routes of exposure not relevant to industrial handling. Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies.

Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diisopropoxydi(ethoxyacetoacetyl)titanate

Acute inhalation toxicity

For similar material(s): LC50, Rat, male and female, 4 Hour, vapour, > 198.65 mg/l No deaths occurred at this concentration.

Methanol

Acute inhalation toxicity

Easily attainable vapor concentrations may cause serious adverse effects, even death. At lower concentrations: May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death. Effects may be delayed.

LC50, Rat, 4 Hour, vapour, 3 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Diisopropoxydi(ethoxyacetoacetyl)titanate

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Rasbora heteromorpha (Harlequin fish), static test, 96 Hour, 4,200 mg/l

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent
NOEC, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 100 mg/l, OECD Test Guideline 201 or Equivalent

Methanol

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Bluegill sunfish (Lepomis macrochirus), flow-through test, 96 Hour, 15,400 mg/l

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Acute toxicity to algae/aquatic plants

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 22,000 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

IC50, activated sludge, 3 Hour, Respiration rates., > 1,000 mg/l, OECD Test Guideline 209

Chronic toxicity to fishNOEC, *Oryzias latipes* (Orange-red killifish), 200 Hour, 15,800 mg/l**Persistence and degradability****Diisopropoxydi(ethoxyacetoacetyl)titanate****Biodegradability:** For similar material(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 66 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301D**Methanol****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.**Theoretical Oxygen Demand:** 1.50 mg/mg**Chemical Oxygen Demand:** 1.49 mg/mg Dichromate**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	72 %
20 d	79 %

Photodegradation**Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 8 - 18 d**Method:** Estimated.**Bioaccumulative potential****Diisopropoxydi(ethoxyacetoacetyl)titanate****Bioaccumulation:** For similar material(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 0.05**Bioconcentration factor (BCF):** 3 Fish Estimated.**Methanol****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** -0.77 Measured**Bioconcentration factor (BCF):** < 10 *Leuciscus idus* (Golden orfe) Measured**Mobility in soil****Diisopropoxydi(ethoxyacetoacetyl)titanate**

For similar material(s):

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 1.53 Estimated.

Methanol

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 0.44 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 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.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)
Toluene	108-88-3	1000 lbs RQ
Toluene	108-88-3	100 lbs RQ (F005)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)

Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Calcium carbonate treated with stearic acid	Not available
Polydimethylsiloxane hydroxy-terminated	70131-67-8
Siloxanes and silicones, dimethyl	63148-62-9
Amorphous fumed silica	112945-52-5

California Prop. 65

WARNING: This product can expose you to chemicals including Methanol, Toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System

NFPA

Health	Flammability	Instability
0	1	0

HMIS

Health	Flammability	Physical Hazard
0/	1	0

Revision

Identification Number: 1570471 / A001 / Issue Date: 08/16/2019 / Version: 9.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
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
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

US



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 756 SMS Bldg Sealant Precast White

Issue Date: 09/23/2019

Print Date: 09/24/2019

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWSIL™ 756 SMS Bldg Sealant Precast White

Recommended use of the chemical and restrictions on use

Identified uses: Construction materials and additives

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Skin sensitisation - Category 1

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

May cause an allergic skin reaction.

Precautionary statements**Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves.

Response

IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/ attention.
 Wash contaminated clothing before reuse.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone, Sealant

This product is a mixture.

Component	CASRN	Concentration
C.I. Pigment Yellow 53	8007-18-9	<= 1.6 %
Vinyltri (methylethylketoxime) silane	2224-33-1	>= 0.7 - <= 0.76 %
Aminoethylaminoisobutylmethyldimethoxysilane	23410-40-4	>= 0.31 - <= 0.34 %

4. FIRST AID MEASURES

Description of first aid measures**General advice:**

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray. Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Metal oxides. Formaldehyde. Carbon oxides. Silicon oxides.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

Advice for firefighters

Fire Fighting Procedures: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. 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: Wipe up or scrape up and contain for salvage or disposal. 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. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Do not swallow. Avoid contact with eyes. Protect from moisture. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: Do not store in or use iron or steel containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Methanol	ACGIH	TWA	200 ppm
	Further information: headache: Headache; nausea: Nausea; dizziness: Dizziness; eye dam: Eye damage; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); Skin: Danger of cutaneous absorption		
	ACGIH	STEL	250 ppm
	Further information: headache: Headache; nausea: Nausea; dizziness: Dizziness; eye dam: Eye damage; BEI: Substances for which there is a Biological Exposure Index or Indices (see BEI® section); Skin: Danger of cutaneous absorption		
	OSHA Z-1	TWA	260 mg/m3 200 ppm
	Further information: (b): The value in mg/m3 is approximate.		
	OSHA P0	STEL	325 mg/m3 250 ppm
	Further information: X: Skin notation		
	OSHA P0	TWA	260 mg/m3 200 ppm
	Further information: X: Skin notation		

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:

Methanol.

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	in accordance with the product description
Odor	slight
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available

Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.43
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: Do not expose to temperatures above 212 °F/100 °C. Exposure to moisture

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde. Methanol.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Information on likely routes of exposure

Eye contact, Skin contact, Ingestion.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, Rat, > 5,000 mg/kg Estimated.

Information for components:

C.I. Pigment Yellow 53

LD50, Rat, > 2,000 mg/kg

Vinyltri (methylethylketoxime) silane

LD50, Rat, > 2,000 mg/kg

Aminoethylaminoisobutylmethyldimethoxysilane

LD50, Rat, male and female, 653 mg/kg OECD Test Guideline 401

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, > 2,000 mg/kg Estimated.

Information for components:

C.I. Pigment Yellow 53

The dermal LD50 has not been determined.

Vinyltri (methylethylketoxime) silane

LD50, Rat, > 2,000 mg/kg

Aminoethylaminoisobutylmethyldimethoxysilane

LD50, Rabbit, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

Acute inhalation toxicity

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

Information for components:

C.I. Pigment Yellow 53

The LC50 has not been determined.

Vinyltri (methylethylketoxime) silane

The LC50 has not been determined.

Aminoethylaminoisobutylmethyldimethoxysilane

LC50, Rat, male and female, 4 Hour, vapour, 0.6 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.

Skin corrosion/irritation

Based on information for component(s):

Brief contact is essentially nonirritating to skin.

Information for components:

C.I. Pigment Yellow 53

Prolonged contact is essentially nonirritating to skin.

May cause more severe response if skin is abraded (scratched or cut).

May stain skin.

Vinyltri (methylethylketoxime) silane

Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation

Based on information for component(s):

May cause moderate eye irritation.

Information for components:

C.I. Pigment Yellow 53

May cause slight eye irritation.

Corneal injury is unlikely.

Solid or dust may cause irritation due to mechanical action.

Vinyltri (methylethylketoxime) silane

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Aminoethylaminoisobutylmethyldimethoxysilane

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization

For skin sensitization:

Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant information found.

Information for components:

C.I. Pigment Yellow 53

For skin sensitization:

No relevant data found.

For respiratory sensitization:
No relevant data found.

Vinyltri (methylethylketoxime) silane

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

Has caused allergic skin reactions when tested in guinea pigs.
Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Information for components:

C.I. Pigment Yellow 53

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Vinyltri (methylethylketoxime) silane

Available data are inadequate to determine single exposure specific target organ toxicity.

Aminoethylaminoisobutylmethyldimethoxysilane

Available data are inadequate to determine single exposure specific target organ toxicity.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Information for components:

C.I. Pigment Yellow 53

Based on physical properties, not likely to be an aspiration hazard.

Vinyltri (methylethylketoxime) silane

Based on available information, aspiration hazard could not be determined.

Aminoethylaminoisobutylmethyldimethoxysilane

Based on physical properties, not likely to be an aspiration hazard.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For this family of materials:

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Information for components:

C.I. Pigment Yellow 53

In animals, effects have been reported on the following organs:

Lung.

Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

Vinyltri (methylethylketoxime) silane

In animals, effects have been reported on the following organs:

Blood.

Aminoethylaminoisobutylmethyldimethoxysilane

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

For this family of materials: Did not cause cancer in long-term animal studies which used routes of exposure considered relevant to industrial handling. Positive results have been reported in other studies using routes of exposure not relevant to industrial handling. Both the National Toxicology Program (NTP) Third Annual Report on Carcinogens and the International Agency for Research on Cancer (IARC) Monographs cite limited evidence for carcinogenicity to humans of certain nickel compounds, and sufficient evidence for carcinogenicity to animals. However, both state that it is not possible to specify which specific nickel compounds might be carcinogenic to humans. Nickel Antimony Titanium Yellow Rutile is not listed in the groups of compounds thought to be carcinogenic to either humans or animals.

Information for components:

C.I. Pigment Yellow 53

Has caused cancer in humans. Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

Vinyltri (methylethylketoxime) silane

No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

No relevant data found.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Information for components:

C.I. Pigment Yellow 53

Screening studies in animals suggest that this material does not affect fetal development.

Vinyltri (methylethylketoxime) silane

No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

Contains component(s) which have been shown to interfere with reproduction in animal studies.

Information for components:

C.I. Pigment Yellow 53

Screening studies suggest that this material does not affect reproduction.

Vinyltri (methylethylketoxime) silane

No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies.

Information for components:**C.I. Pigment Yellow 53**

In vitro genetic toxicity studies were negative.

Vinyltri (methylethylketoxime) silane

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aminoethylaminoisobutylmethyldimethoxysilane

In vitro genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity**C.I. Pigment Yellow 53****Acute toxicity to fish**

LC50, Leuciscus idus (Golden orfe), 96 Hour, >10,000 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, >100 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants

EC50, Algae (Scenedesmus subspicatus), 48 Hour, Not available, >100 mg/l, Method Not Specified.

Toxicity to bacteria

EC50, Pseudomonas putida, 0.5 Hour, >10,000 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, > 1 mg/l

Vinyltri (methylethylketoxime) silane**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 120 mg/l, OECD Test Guideline 203
LC50, Oryzias latipes (Orange-red killifish), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Aminoethylaminoisobutylmethyldimethoxysilane

Acute toxicity to fish

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Based on data from similar materials

LC50, Cyprinus carpio (Carp), static test, 96 Hour, 200 mg/l, EPA-660/3-75-009

Acute toxicity to aquatic invertebrates

Based on data from similar materials

EC50, Daphnia magna (Water flea), static test, 48 Hour, 81 mg/l, Directive 67/548/EEC, Annex V, C.2.

Acute toxicity to algae/aquatic plants

Based on data from similar materials

ErC50, Selenastrum capricornutum (green algae), 72 Hour, 8.8 mg/l, OECD Test Guideline 201

Based on data from similar materials

NOEC, Selenastrum capricornutum (green algae), 72 Hour, 3.1 mg/l, OECD Test Guideline 201

Toxicity to bacteria

Based on data from similar materials

IC50, Pseudomonas putida, 16 Hour, 67 mg/l, DIN 38 412 Part 8

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 1 mg/l

Persistence and degradability

C.I. Pigment Yellow 53

Biodegradability: Not readily biodegraded.

Vinyltri (methylethylketoxime) silane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301A

Stability in Water (1/2-life)

, DT50, < 1 min, Half-life Temperature 2 °C, OECD Test Guideline 111

Aminoethylaminoisobutylmethyldimethoxysilane

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Biodegradation: 11.1 %

Exposure time: 28 d

Method: OECD Test Guideline 301D

Bioaccumulative potential**Vinyltri (methylethylketoxime) silane**

Bioaccumulation: No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 1.4 estimated

Mobility in soil**Vinyltri (methylethylketoxime) silane**

No relevant data found.

Aminoethylaminoisobutylmethyldimethoxysilane

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Respiratory or skin sensitisation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CASRN
C.I. Pigment Yellow 53	8007-18-9
Cobalt titanite green spinel	68186-85-6

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Calculated RQ exceeds reasonably attainable upper limit.

Components	CASRN	RQ (RCRA Code)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)
Toluene	108-88-3	1000 lbs RQ
Toluene	108-88-3	100 lbs RQ (F005)
Methanol	67-56-1	5000 lbs RQ
Methanol	67-56-1	100 lbs RQ (F003)

Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Calcium carbonate treated with stearic acid	Not available
Dimethyl siloxane, trimethoxysilyl-terminated	Not available
Polydimethylsiloxane hydroxy-terminated	70131-67-8
Titanium dioxide	13463-67-7
C.I. Pigment Yellow 53	8007-18-9
Cobalt titanite green spinel	68186-85-6
Aluminum	7429-90-5

California Prop. 65

WARNING: This product can expose you to chemicals including C.I. Pigment Yellow 53, Cobalt titanite green spinel, which is/are known to the State of California to cause cancer, and Methanol, Hexane, Toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System

NFPA

Health	Flammability	Instability
2	1	0

HMIS

Health	Flammability	Physical Hazard
2/	1	0

Revision

Identification Number: 4104511 / A001 / Issue Date: 09/23/2019 / Version: 9.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
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
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population

(Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

US



SAFETY DATA SHEET

DOW CHEMICAL TAIWAN LIMITED

Product name: DOWSIL™ 123 Silicone Seal 4.0 Black

Issue Date: 2019.09.02

Print Date: 2019.09.03

DOW CHEMICAL TAIWAN LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: DOWSIL™ 123 Silicone Seal 4.0 Black

Other names: None

Recommended use of the chemical and restrictions on use

Identified uses: Article Construction materials and additives

COMPANY IDENTIFICATION

DOW CHEMICAL TAIWAN LIMITED
5F-2 AND 5F-3, NO. 2, SEC. 3
MINSHENG E. ROAD, ZHONGSHAN DIST.
104 TAIPEI CITY
TAIWAN

Customer Information Number:

(86) 21-3851-4988
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 886-49-226-0560

Local Emergency Contact: 049-226-0560

2. HAZARDS IDENTIFICATION

GHS Classification

This product is not hazardous per the Globally Harmonized System of Classification and Labelling (GHS).

GHS label elements

Precautionary statements

Prevention

Use only outdoors or in a well-ventilated area.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Properties: Silicone elastomer

This product is an article.

Component	CASRN	Concentration
Cured rubber article	Not available	100.0%

4. FIRST AID MEASURES

Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Seek first aid or medical attention as needed. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately. Suitable emergency safety shower facility should be immediately available.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Protection of first-aiders

Indication of any immediate medical attention and special treatment needed

Notes to physician: If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray. Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: No hazardous combustion products are known.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

Advice for firefighters

Fire Fighting Procedures: 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. Evacuate area.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: 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: Sweep up or vacuum up spillage and collect in suitable container for disposal. 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.
See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Any type of listing among TWA, STEL, Ceiling and BEI which is missing from above Control parameters table, can be considered as no data available.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present.

The following should be effective types of air-purifying respirators: When dust/mist are present use a/an Particulate filter. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter.

Hygiene measures: No smoking and drinking

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Cured Elastomer
Color	in accordance with the product description
Odor	odourless
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable

Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.10 - 1.25
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Inhibitor: None

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Route of Exposure

Please refer to the information below.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

As product: Single dose oral LD50 has not been determined.

LD50, > 5,000 mg/kg Estimated.

Acute dermal toxicity

No adverse effects anticipated by skin absorption.

As product: The dermal LD50 has not been determined.

LD50, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust. Vapors released during thermal processing may cause respiratory irritation.

The LC50 has not been determined.,

Symptoms

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Mechanical injury only.

Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

Sensitization

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Chronic toxicity or long term toxicity

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

No relevant data found.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Ecotoxicity

Cured rubber article

Acute toxicity to fish

No relevant data found.

Persistence and degradability

Cured rubber article

Biodegradability: No relevant data found.

Bioaccumulative potential

Cured rubber article

Bioaccumulation: No relevant data found.

Mobility in soil

Cured rubber article

No relevant data found.

Results of PBT and vPvB assessment

Cured rubber article

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Other adverse effects

Cured rubber article

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

Specific transport measures and precautionary conditions: No

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Taiwan Chemical Substance Inventory (TCSI)

All intentional components are either listed on the Inventory or exempted by regulations, or certified by vendors of their supply chemicals.

Applicable regulations in Taiwan:

Occupation Safety and Health Law

Waste Disposal Act.

16. OTHER INFORMATION

Revision

Identification Number: 2670526 / A169 / Issue Date: 2019.09.02 / Version: 1.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations;

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Information Source and References

This SDS is prepared in Taiwan by the Product Regulatory Management group from information supplied by our parent company.

Date that the SDS was prepared: Please refer to issue date.

Organization that prepared the SDS	Company Name: Dow Chemical Taiwan Ltd	
	Address/Telephone: 1.CHUNG-HSIN 1ST STREET, MIN-HSIUNG INDUSTRIAL PARK,MIN-HSIUNG, CHIA-YI HSIEN ,TAIWAN / 886-5-2918446 / ytsai@dow.com	
Prepared by	Title: Product Regulatory Specialist	Name: Y.P. Tsai

DOW CHEMICAL TAIWAN LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

TW

Material Safety Data Sheet Exemption

This statement will notify you that open cell backer rod manufactured or imported by Nomaco, Inc. is an "Article" under the OSHA Hazard Communication Standard and, as such, is exempt from the provisions of the standard. (Please see the explanation of the exemption below.) Safety Data Sheets are required to be furnished by suppliers under various Federal and State statutes and regulations for substances, materials or products that are deemed to be hazardous. Open cell backer rod is not deemed to be a hazardous product. We, therefore submit this statement in lieu of a Safety Data Sheet.

The Occupational Safety and Health Administration's Hazard Communication Standard requires Safety Data Sheets be furnished for substances, materials or products which are deemed to be hazardous products. Section 1910.1200 (b) (5) (iv) of the standard exempts "Articles." According to the definitions and interpretations in Part C of the above reference, an "Article" means a manufactured item:

- I. Which is formed to a specific shape or design during manufacture,
- II. Which has end use function(s) dependent in whole or part upon its shape or design during end use; and
- III. Which does not release, or otherwise result in exposure to, a hazardous chemical under normal conditions of use.

All open cell backer rod manufactured or imported by Nomaco, Inc. are formed to specific shapes or design during manufacture; have end use function(s) dependent in whole or part upon their shapes and design during end use; and do not release, or otherwise result in exposure to, a hazardous chemical under normal conditions of use. Thus, open cell backer rod manufactured or imported by Nomaco, Inc. are an "Article" as defined by the standard, and are exempt from the requirements for Safety Data Sheets.

The statement provided above is offered for all open cell backer rod manufactured or imported by Nomaco, Inc. in lieu of a Safety Data Sheet for project records required for compliance with the OSHA Hazard Communication Standard and State Right-to-Know Requirements.

Should any additional information or assistance be required, please call 800.345.7279 and ask for the Technical Services Department.

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Sure-Flex Reinforced PVC Membranes and Accessories

Trade Names

Sure-Flex PVC, Sure-Flex PVC FRS, FleeceBACK PVC, FleeceBACK PVC FRS, FleeceBACK Rapid Lock RL PVC, Sure-Flex PVC Coverstrip, Sure-Flex Non-Reinforced PVC Flashing (Overlayment Strip), Sure-Flex PVC Contour Rib Profile, Sure-Flex PVC Yellow Warning Strip, Sure-Flex PVC Walkway Rolls, SureFlex PVC Pressure Sensitive Coverstrip

Product Use

Roof and Waterproofing Membranes and Accessories

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

The products listed above are considered “articles” as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered “manufactured articles” as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS . Under normal conditions of use, these products do not pose a hazard in the workplace or to the building occupants. Since these products or “articles” pose no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, “articles” are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

GHS Label Elements

Symbol(s)

None required

Signal Word

None required

Hazard Statement(s)

None required

Precautionary Statement(s)

Prevention

None required

Response

None required

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
	Proprietary	100%

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

None known.

Inhalation

Inhalation of vapors from these products during heat welding may cause respiratory tract irritation. If breathing becomes difficult, remove person from heat welding area to fresh air. Seek medical attention if irritation persists.

Skin

If skin irritation occurs, wash skin with soap and water. Seek medical attention if irritation persists.

Eyes

Vapor from this product during heat welding may irritate eyes. If eye irritation occurs, flush eyes with water for 15 minutes. Seek medical attention if irritation persists.

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

Ingestion

Cannot be ingested under normal circumstances.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

None known

Delayed

None known

Note to Physicians

Nothing known to note

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use dry chemical, carbon dioxide, or water spray.

Unsuitable Extinguishing Media

None reported.

Special Hazards Arising from the Product

None known.

Hazardous Combustion Products

Hazardous combustion products may include: Oxides of carbon, oxides of nitrogen, hydrocarbons, hydrochloric acid, and other organic compounds.

Advice for firefighters

Wear full protective fire fighting gear including a self-contained breathing apparatus (SCBA) to avoid inhalation of smoke and gases.

Fire Fighting Measures

Use standard procedures for Class A fires. Wear self-contained breathing apparatus (SCBA) and protective clothing for structural fire fighting.

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

Sweep up and dispose in accordance with all applicable regulations.

Environmental Precautions

Provide adequate ventilation during heat welding.

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use protective equipment as described in Section 8 when handling products. Handle in accordance with good industrial hygiene and safety practices.

Conditions for Safe Storage, Including any Incompatibilities

Material should be kept dry, clean, and in original packaging.

Incompatible Materials

None known

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

No known exposure limits

Biological Limit Value

There are no biological limit values for any of these products' components.

Engineering Controls

Provide adequate ventilation when heat welding this product.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face Protection

Sunglasses which filter out ultraviolet light are strongly recommended since the white surface is highly reflective to sunlight

Skin Protection

Impervious gloves such as nitrile should be used to avoid excessive skin contact. Heavy cotton or insulated gloves and clothing should be used to handle hot plastic.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134, ANSI Z88.2 and / or CSA Z94.4-93 requirements must be followed whenever workplace conditions warrant use of a respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Flexible plastic sheet	Physical State	Solid
Odor	Mild vinyl-like	Color	Various
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	Not available	Evaporation Rate	Not available

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Vapor Density (air=1)	Not available	Vapor Pressure	Not available
Water Solubility	Not available	Specific Gravity (water=1)	1.30 – 1.40
Viscosity	Not available	Solubility (Other)	Not available

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

Keep away from heat, sparks or open flame.

Incompatible Materials

None known

Hazardous decomposition products

Gases or vapors such as oxides of carbon, oxides of nitrogen, hydrocarbons, hydrochloric acid, acrylic acid, and other organic compounds may be released in a fire.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Unlikely under normal conditions.

Skin Contact

Unlikely under normal conditions.

Eye Contact

Unlikely under normal conditions.

Ingestion

Unlikely under normal conditions.

Acute and Chronic Toxicity

No data available.

Immediate Effects

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

No immediate effects known.

Delayed Effects

No delayed effects known.

Irritation/Corrosivity Data

My cause skin irritation with repeated contact. No other effects known.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

No data available.

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No data available.e

Component Analysis - Aquatic Toxicity

No data available

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

(1) Recycle / reprocess; (2) Incineration including energy recovery of waste material in a permitted facility in accordance with local, state or federal regulations; (3) Landfilling in a licensed facility in accordance with local, state or federal regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated

IATA 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:
None

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: No Chronic Health: No 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:
None known

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

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

Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

None known

Component Analysis - Inventory

Finished product is not hazardous. Component analysis not required.

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: October 07, 2020

Revision Note: General Update

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:



Safety Data Sheet

Material Name: Sure-Flex Reinforced PVC Membranes and Accessories

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. 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

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

PVC and KEE HP Membrane Cleaner

Chemical Family

Membrane cleaner

Product Use

Clean PVC Roofing Membranes

Restrictions on Use

None known.

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Carcinogenicity - Category 2

Reproductive Toxicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system, digestive system, and respiratory system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood, kidneys, liver, and ears)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation. May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure.
May cause 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.
Keep container tightly closed.
Keep away from heat, sparks, open flame, and hot surfaces - No smoking.
Ground and bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Take precautionary measures against static discharge.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection, and face protection.
Do not breathe dust, fume, gas, mist, vapors, and spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media to extinguish.
IF exposed or concerned: Get medical advice or attention.
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
IF ON SKIN (or hair): Remove or take off immediately all contaminated clothing. Rinse skin with water or shower.
If skin irritation occurs: Get medical advice or attention.
Wash contaminated clothing before reuse.
Specific treatment (see label).
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Do NOT induce vomiting.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal

Dispose of contents and container in accordance with local/regional/national/international regulations.



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Other Hazards

None known.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
67-64-1	Acetone	50
1330-20-7	Xylenes (o-, m-, p- isomers)	30-40
100-41-4	Ethylbenzene	10-20

The chemical identity and/or percentage of composition is being withheld as a trade secret.

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed: Call a POISON CENTER or doctor or physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor or physician if you feel unwell.

Skin

Remove or take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs: Get medical advice or attention. Wash contaminated clothing before reuse.

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

Aspiration hazard. Immediately call a POISON CENTER or doctor or physician. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Skin irritation, eye and respiratory irritation, drowsiness and dizziness

Delayed

Cancer, reproductive effects, central nervous system damage, digestive system damage, respiratory system damage, kidney damage, liver damage, ear damage, or blood damage.

Note to Physicians

If adverse effects occur, treat symptomatically and supportively.



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water spray, foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

Do not scatter spilled material with high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable. Vapors may travel to ignition source and flashback. Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks).

Hazardous Combustion Products

Carbon dioxide, carbon monoxide, Hydrocarbon

Advice for firefighters

Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground and bond container and receiving equipment. Take action to prevent static discharges. Move container from fire area if it can be done without risk. Do not use high-pressure water streams. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

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

Eliminate all sources of ignition. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements, or confined areas. Vapor-suppressing foam may be used to control vapors. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools during clean-up. Dike far ahead of liquid spill for collection and later disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces.

Environmental Precautions

Avoid release to the environment.



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Section 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. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Take action to prevent static discharges. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required. Wear protective gloves, clothing and eye, and face protection. Do not breathe gas, fumes, vapor, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Store in accordance with all current regulations and standards. Keep away from incompatible materials. Empty product containers may contain product residue.

Incompatible Materials

Oxidizing agents, acids, bases, aldehydes, amines, ammonia, reducing agents, and chlorine compounds.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Acetone	67-64-1
ACGIH:	250 ppm TWA
	500 ppm STEL
NIOSH:	250 ppm TWA 590 mg/m ³ TWA
	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA 1210 mg/m ³ TWA
OSHA (US):	1000 ppm TWA 2400 mg/m ³ TWA
Mexico:	1000 ppm TWA VLE-PPT 2400 mg/m ³ TWA VLE-PPT
	1260 ppm STEL [PPT-CT] 3000 mg/m ³ STEL [PPT-CT]

Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Xylenes (o-, m-, p- isomers)	1330-20-7
ACGIH:	100 ppm TWA
	150 ppm STEL
Europe:	50 ppm TWA (pure) 221 mg/m ³ TWA (pure)
	Possibility of significant uptake through the skin (pure)
	100 ppm STEL (pure) 442 mg/m ³ STEL (pure)
OSHA (US):	100 ppm TWA 435 mg/m ³ TWA
Mexico:	100 ppm TWA VLE-PPT 435 mg/m ³ TWA VLE-PPT
	150 ppm STEL [PPT-CT] 655 mg/m ³ STEL [PPT-CT]
Ethylbenzene	100-41-4
ACGIH:	20 ppm TWA
NIOSH:	100 ppm TWA 435 mg/m ³ TWA
	125 ppm STEL 545 mg/m ³ STEL
	800 ppm IDLH (10% LEL)
Europe:	100 ppm TWA 442 mg/m ³ TWA
	Possibility of significant uptake through the skin
	200 ppm STEL 884 mg/m ³ STEL
OSHA (US):	100 ppm TWA 435 mg/m ³ TWA
Mexico:	100 ppm TWA VLE-PPT 435 mg/m ³ TWA VLE-PPT



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

	125 ppm STEL [PPT-CT] 545 mg/m ³ STEL [PPT-CT]
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ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

Acetone (67-64-1)

25 mg/l Medium: urine Time: end of shift Parameter: Acetone (non-specific)

Xylenes (o-, m-, p- isomers) (1330-20-7)

1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids

Ethylbenzene (100-41-4)

0.15 g/g creatinine Medium: urine Time: end of shift Parameter: Sum of mandelic acid and phenyl glyoxylic acid (nonspecific)

Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Thoroughly clean and dry contaminated clothing before reuse.

Respiratory Protection

Respirators depend on exposure level. SCBA with full face piece recommended during change outs and available in case of emergency.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid	Physical State	liquid
Odor	Not available	Color	colorless
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	56.1 - 137 °C
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	3.6	Flammability (solid, gas)	Not available

Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Autoignition Temperature	465°C (869°F)	Flash Point	-17 °C
Lower Explosive Limit	1 %	Decomposition temperature	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	97 Torr
Vapor Density (air=1)	2.85	Specific Gravity (water=1)	Not available
Water Solubility	soluble	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	0.84 g/ml
Molecular Weight	Not available		

Other Information

No information available for the product.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazard 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. Keep away from incompatible materials.

Incompatible Materials

Oxidizing agents, acids, bases, aldehydes, amines, ammonia, reducing agents, and chlorine compounds.

Hazardous decomposition products

Carbon monoxide, carbon dioxide, Hydrocarbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Vapor or mist may cause respiratory tract irritation. May cause nausea, dizziness, drowsiness and headache, central nervous system damage, liver damage, kidney damage

Skin Contact

Causes skin irritation. Repeated exposure may cause skin dryness or cracking.



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation,

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:

Acetone (67-64-1)

Oral LD₅₀ - Rat 5800 mg/kg
Dermal LD₅₀ - Rabbit >15700 mg/kg
Inhalation LC₅₀ - Rat 50100 mg/m³ 8 h

Xylenes (o-, m-, p- isomers) (1330-20-7)

Oral LD₅₀ - Rat 3500 mg/kg
Dermal LD₅₀ - Rabbit >4350 mg/kg
Inhalation LC₅₀ - Rat 29.08 mg/L 4 h

Ethylbenzene (100-41-4)

Oral LD₅₀ - Rat 3500 mg/kg
Dermal LD₅₀ - Rabbit 15400 mg/kg
Inhalation LC₅₀ - Rat 17.4 mg/L 4 h

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Inhalation - Vapor	> 20 mg/L
Oral	> 2000 mg/kg

Immediate Effects

May be fatal if swallowed and enters airways. Skin irritation, eye irritation and respiratory tract irritation, drowsiness and dizziness.

Delayed Effects

Cancer, reproductive effects, central nervous system damage, digestive system damage, respiratory system damage, blood damage, liver damage, kidney damage, and ear damage.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Component Carcinogenicity

Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Xylenes (o-, m-, p-isomers)	1330-20-7
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999] Monograph 47 [1989] (Group 3 (not classifiable))
Ethylbenzene	100-41-4
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present

Carcinogenicity

Suspected of causing cancer.

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available

Reproductive Toxicity

Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Central nervous system, respiratory system

Specific Target Organ Toxicity - Repeated Exposure

Central nervous system, digestive system, respiratory system, blood, ears

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

Kidney, skin disorders, lung disorder, heart disorders

Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

Acetone	67-64-1
Fish:	LC ₅₀ 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L LC ₅₀ 96 h Pimephales promelas 6210 - 8120 mg/L [static] LC ₅₀ 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC ₅₀ 48 h Daphnia magna 10294 - 17704 mg/L [Static] EPA EC ₅₀ 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
Xylenes (o-, m-, p-isomers)	1330-20-7
Fish:	LC ₅₀ 96 h Pimephales promelas 13.4 mg/L [flow-through] LC ₅₀ 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L [static] LC ₅₀ 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L LC ₅₀ 96 h Lepomis macrochirus 13.1 - 16.5 mg/L [flow-through] LC ₅₀ 96 h Lepomis macrochirus 19 mg/L LC ₅₀ 96 h Lepomis macrochirus 7.711 - 9.591 mg/L [static] LC ₅₀ 96 h Pimephales promelas 23.53 - 29.97 mg/L [static] LC ₅₀ 96 h Cyprinus carpio 780 mg/L [semi-static] LC ₅₀ 96 h Cyprinus carpio >780 mg/L LC ₅₀ 96 h Poecilia reticulata 30.26 - 40.75 mg/L [static]
Invertebrate:	EC ₅₀ 48 h water flea 3.82 mg/L; LC ₅₀ 48 h Gammarus lacustris 0.6 mg/L
Ethylbenzene	100-41-4
Fish:	LC ₅₀ 96 h Oncorhynchus mykiss 11 - 18 mg/L [static] LC ₅₀ 96 h Oncorhynchus mykiss 4.2 mg/L [semi-static] LC ₅₀ 96 h Pimephales promelas 7.55 - 11 mg/L [flow-through] LC ₅₀ 96 h Lepomis macrochirus 32 mg/L [static] LC ₅₀ 96 h Pimephales promelas 9.1 - 15.6 mg/L [static] LC ₅₀ 96 h Poecilia reticulata 9.6 mg/L [static]
Algae:	EC ₅₀ 72 h Pseudokirchneriella subcapitata 4.6 mg/L IUCLID EC ₅₀ 96 h Pseudokirchneriella subcapitata >438 mg/L IUCLID EC ₅₀ 72 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/L [static] EPA EC ₅₀ 96 h Pseudokirchneriella subcapitata 1.7 - 7.6 mg/L [static] EPA
Invertebrate:	EC ₅₀ 48 h Daphnia magna 1.8 - 2.4 mg/L IUCLID



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Persistence and Degradability

No data available.

Bio accumulative Potential

No data available.

Mobility

No data available.

Other Toxicity

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: FLAMMABLE LIQUIDS, N.O.S., (Contains: Acetone, Xylene)

Hazard Class: 3

UN/NA #: UN1993

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: FLAMMABLE LIQUID, N.O.S., (Contains: Acetone, Xylene)

Hazard Class: 3

UN#: UN1993

Packing Group: II

Required Label(s): 3

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Xylenes (o-, m-, p- isomers)	1330-20-7
IBC Code:	Category Y
Ethylbenzene	100-41-4
IBC Code:	Category Y



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

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.

Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Xylenes (o-, m-, p- isomers)	1330-20-7
SARA 313:	1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ
Ethylbenzene	100-41-4
SARA 313:	0.1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2017 reporting categories

Flammable; Carcinogenicity; Reproductive Toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity; Aspiration Hazard

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
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes

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

Ethylbenzene	100-41-4
Carc:	carcinogen, 6/11/2004

Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

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Canada Regulations

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

Acetone	67-64-1
	1 %
Ethylbenzene	100-41-4
	0.1 %

Component Analysis - Inventory

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

Xylenes (o-, m-, p- isomers) (1330-20-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

Ethylbenzene (100-41-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes



Safety Data Sheet

Material Name: PVC and KEE HP Membrane Cleaner

Product #: 329729

Section 16 - OTHER INFORMATION

Summary of Changes

New SDS: 6/2/2017

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); 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; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; 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; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; 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; MX - Mexico; NDSL - Non-Domestic Substance List (Canada); 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; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorization, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

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



Safety Data Sheet

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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.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low VOC Step 1 Activator

Chemical Family

Adhesive

Product Use

Low VOC Adhesive

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 2 (kidneys)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system,peripheral nerve system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)



Signal Word

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Material Name: Low VOC Step 1 Activator

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Danger

Hazard Statement(s)

Highly flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes serious eye irritation
May cause allergic skin reaction
Causes damage to organs
May cause damage to organs
May cause respiratory irritation. May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace
Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish
If exposed or concerned: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor 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 eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

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Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	Polyphenol antioxidant	0.1-1
7704-34-9	Sulfur	0.1-1
137-26-8	Tetramethylthiuram disulfide	0.1-1
108-88-3	Toluene	1-5
67-64-1	Acetone	60-100

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs, seek 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

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys. May cause respiratory irritation. May cause drowsiness or dizziness.

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Delayed

Causes damage to organs through prolonged or repeated exposure. central nervous system, peripheral nerve system, blood.

Note to Physicians

Contains: toluene, acetone.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, various hydrocarbons, nitrogen compounds, hydrogen cyanide

Advice for firefighters

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. 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

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Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe gas/fume/vapour/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. **KEEP OUT OF REACH OF CHILDREN.**

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Keep separated from incompatible substances. Do not cut, puncture, or weld on or near this container.

Incompatible Materials

Strong oxidizing agents, strong acids, strong bases, alkali metals, halogens

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Tetramethylthiuram disulfide	137-26-8	
ACGIH:	0.05 mg/m3 TWA inhalable fraction and vapor	
NIOSH:	5 mg/m3 TWA	100 mg/m3 IDLH
OSHA (US):	5 mg/m3 TWA	
Mexico:	1 mg/m3 TWA LMPE-PPT	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m3 TWA	150 ppm STEL; 560 mg/m3 STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m3 TWA	100 ppm STEL; 384 mg/m3 STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m3 TWA LMPE-PPT	

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	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m ³ TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m ³ TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m ³ TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m ³ TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide for sufficient ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles. Maintain eye wash fountain and quick-drench shower in work area.

Skin Protection

Wear work clothes with long sleeves. White protective boots. Recommended material: protective skin cream.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear impermeable gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	pale yellow or amber	Physical State	liquid
Odor	ketone odor	Color	pale,yellow or amber
Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -93 °C (-139--135 °F)	Boiling Point	56 - 111 °C (133-231 °F)
Freezing point	Not available	Evaporation Rate	6.1
Boiling Point Range	Not available	Flammability (solid, gas)	Not available

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Autoignition	465 °C (869 °F)	Flash Point	-18 °C(-0.4°F)
Lower Explosive Limit	1.3 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	171.9 mmHg
Vapor Density (air=1)	2.1	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	200 cps	Solubility (Other)	Not available
Density	0.820 (relative)	VOC	<250 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 oxidizing agents, strong acids, strong bases, alkali metals, halogens

Hazardous decomposition products

Oxides of carbon, various hydrocarbons, nitrogen compounds, hydrogen cyanide

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

May cause mild skin irritation. May cause allergic skin reaction.

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Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways.

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:

Acrylonitrile-butadiene rubber (Mixture)

Oral LD50 Rat >30 g/kg

Dermal LD50 Rabbit >15 g/kg

Polyketone resin (Trade Secret)

Oral LD50 Rat >10000 mg/kg

Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Sulfur (7704-34-9)

Oral LD50 Rat >5050 mg/kg

Dermal LD50 Rabbit >2020 mg/kg

Inhalation LC50 Rat >5.49 mg/L

Tetramethylthiuram disulfide (137-26-8)

Oral LD50 Rat 560 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation LC50 Rat 500 mg/m³ 4 h

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 Rabbit 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal LD50 Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

Immediate Effects

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects

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Causes damage to organs through prolonged or repeated exposure: central nervous system, peripheral nerve system, blood.

Irritation/Corrosivity Data

Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Tetramethylthiuram disulfide	137-26-8
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 53 [1991]; Supplement 7 [1987] (Group 3 (not classifiable))
Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

kidneys, central nervous system

Specific Target Organ Toxicity - Repeated Exposure

blood, peripheral nerve system, central nervous system

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

Tetramethylthiuram disulfide is classified as a mutagen and reproductive toxicant. However, this component is bound in the polymer portion of the adhesive after manufacturing. After installation of this

Safety Data Sheet

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adhesive, this component is ultimately consumed in the curing reaction. Therefore, this product is not classified as a mutagen or reproductive toxicant.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Sulfur	7704-34-9
Fish:	LC50 96 h Brachydanio rerio 866 mg/L [static]; LC50 96 h Lepomis macrochirus <14 mg/L [static]; LC50 96 h Oncorhynchus mykiss >180 mg/L [static]
Tetramethylthiuram disulfide	137-26-8
Fish:	LC50 96 h Cyprinus carpio 0.0003 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 0.13 mg/L; LC50 96 h Lepomis macrochirus 0.034 - 0.05005 mg/L [static]; LC50 96 h Oncorhynchus mykiss 0.048 mg/L; LC50 96 h Oncorhynchus mykiss 0.00024 - 0.00028 mg/L [semi-static]; LC50 96 h Oncorhynchus mykiss 0.09 - 0.17 mg/L [static]; LC50 96 h Pimephales promelas 0.27 mg/L; LC50 96 h Pimephales promelas 0.0491 - 0.0611 nM [semi-static]; LC50 96 h Poecilia reticulata 0.22 - 0.33 mg/L [semi-static]
Algae:	EC50 96 h Desmodesmus subspicatus <0.1 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 0.21 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static];

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	LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID

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



Safety Data Sheet

Material Name: Low VOC Step 1 Activator

Product #:332651

US DOT Information:

Shipping Name:Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

TDG Information:

UN#: UN1133

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.

Tetramethylthiuram disulfide	137-26-8
SARA 313:	1 % de minimis concentration
CERCLA:	10 lb final RQ; 4.54 kg final RQ
Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **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
Sulfur	7704-34-9	Yes	Yes	No	Yes	Yes
Tetramethylthiuram disulfide	137-26-8	Yes	Yes	Yes	Yes	Yes

Safety Data Sheet

Material Name: Low VOC Step 1 Activator

Product #:332651

Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes

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 reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

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 SDSs 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

Tetramethylthiuram disulfide	137-26-8
	1 %
Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %

Component Analysis - Inventory

Acrylonitrile-butadiene rubber (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

Polyphenol antioxidant (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	No

Sulfur (7704-34-9)

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

Safety Data Sheet

Material Name: Low VOC Step 1 Activator

Product #:332651

Tetramethylthiuram disulfide (137-26-8)

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

Toluene (108-88-3)

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

Acetone (67-64-1)

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

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: January 2, 2019

Revision Note: General Update

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 -

Safety Data Sheet

Material Name: Low VOC Step 1 Activator

Product #:332651

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. 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

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low-VOC PVC Step 2 Primer

Synonyms

Primer

Chemical Family

Primer, mixture

Product Use

Solvent primer

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 3

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (liver,kidneys)

GHS Label Elements

Symbol(s)



Signal Word

Warning

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Hazard Statement(s)

Flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
May cause allergic skin reaction
Suspected of causing cancer
May cause drowsiness or dizziness
May cause 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
Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace

Response

In case of fire: Use appropriate media to extinguish
IF exposed or concerned: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor 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 eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Specific treatment (see label)

Storage

Keep container tightly closed
Store in a well-ventilated place. Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
Trade Secret	Isophorone Diisocyanate	0.5-1.5
108-88-3	Toluene	3-7
Trade Secret	Chlorinated polypropylene	0.1-1
98-56-6	PCBTF	60-100
Trade Secret	Isophorondiamine-isobutyraldimine	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion

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 skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed

May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Note to Physicians

Contains: toluene.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Flammable liquid and vapor.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk.

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

Remove all sources of ignition. Avoid breathing vapors. Ventilate the area. Use non-sparking tools. Use clean non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. Large spills: Dike for later disposal. Prevent entry into waterways, sewers, basements, or confined areas.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 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. Keep away from heat and ignition sources. When using do not smoke. Use non-sparking tools. Ground any equipment used in handling. Wash with plenty of soap and water. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

discharge. Do not breathe gas, fumes, vapor, or spray. Contaminated work clothing should not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed
 Store in a well-ventilated place. Keep cool
 Store locked up
 Keep away from heat, sparks and flame. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue. Keep away from incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
PCBTF	98-56-6	
ACGIH:	2.5 mg/m ³ TWA as F (related to Fluorides)	
OSHA (US):	2.5 mg/m ³ TWA as F; 2.5 mg/m ³ TWA dust (related to Fluorides)	
Mexico:	2.5 mg/m ³ TWA LMPE-PPT as F (related to Fluorides)	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thin brown liquid	Physical State	liquid
Odor	Naphthenic distillate	Color	Light brown
Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -33 °C(-139 - 27°F)	Boiling Point	111 - 139 °C(232 -282°F)
Freezing point	Not available	Evaporation Rate	1.4
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	246 °C(475°F)	Flash Point	4 °C(40°F)
Lower Explosive Limit	0.9	Decomposition	Not available
Upper Explosive Limit	10.5	Vapor Pressure	7.4 mmHg
Vapor Density (air=1)	5.7	Specific Gravity (water=1)	Not available
Water Solubility	insoluble	Partition coefficient: n-octanol/water	Not available
Viscosity	<200 cps	Solubility (Other)	Not available
Density	1.177	VOC	<250 g/L

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Take action to prevent static discharges. Avoid contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

No information on significant adverse effects.

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:

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation Rat >5000 ppm 1 hour

Isophorone Diisocyanate (Trade Secret)

Oral LD50 Rat >20000 mg/kg

Dermal LD50 Rabbit 4000 mg/kg

Inhalation LC50 Rat 5 mg/l 4 h

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Toluene (108-88-3)

Oral LD50 >7000 mg/kg

Dermal LD50 12 - 14 g/kg

Inhalation LC50 30 mg/L

chlorinated homopolymer (Trade Secret)

Oral Rat 5000 mg/kg

PCBTF (98-56-6)

Oral LD50 Rat 13 g/kg

Dermal LD50 Rabbit >2 mL/kg

Inhalation LC50 Rat 33 mg/L 4 h

Isophorondiamine-isobutyraldimine (Trade Secret)

Oral Rat 4150 mg/kg [OECD Test Guideline 401]

Dermal Rat >5000 mg/kg [OECD Test Guideline 402]

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed Effects

May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Irritation/Corrosivity Data

Causes skin and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
PCBTF	98-56-6
ACGIH:	A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

Prolonged exposure may cause liver and kidney damage.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Isophorone Diisocyanate	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss 9.22 mg/L
Invertebrate:	EC50 48 h Daphnia magna 6.14 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

PCBTF	98-56-6
Invertebrate:	EC50 48 h Daphnia magna 3.68 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

IATA Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

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.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

CERCLA:	1000 lb final RQ; 454 kg final RQ
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)
PCBTF	98-56-6
TSCA 12b:	Section 4 , 1 % de minimus concentration

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: Yes 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
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
PCBTF	98-56-6	Yes	No	Yes	Yes	Yes

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 reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

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

Toluene	108-88-3
	1 %

Component Analysis - Inventory

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

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

Isophorone Diisocyanate (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

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

Toluene (108-88-3)

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

chlorinated homopolymer (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

PCBTF (98-56-6)

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	No

Isophorondiamine-isobutyraldimine (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	No	No	Yes	Yes	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 4/24/2015

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 -

Safety Data Sheet

Material Name: Low-VOC PVC Step 2 Primer

Product #: 332652

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. 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

Material Name: Flexible FAST Part A

Product #: 317329 – 15 gal
310472 – 50 gal

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Flexible FAST Part A

Synonym: Diphenylmethane Diisocyanate

Chemical Family: Aromatic isocyanates

Product Use: Two-part adhesive for roofing systems

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity- Category 4 (Inhalation- mist)

Skin Corrosive/Irritation - Category 2

Eye Damage/Irritation - Category 2B

Specific Target Organ Toxicity - Single Exposure –(Irritating to respiratory system)-Category 3

Specific Target Organ Toxicity - Repeated Exposure –(by inhalation)-Category 2

Skin Sensitivity - Category 1B

Respiratory Sensitization- Category 1

Carcinogenicity-Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

H320 Causes eye irritation.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

Safety Data Sheet

Material Name: Flexible FAST Part A

**Product #: 317329 – 15 gal
310472 – 50 gal**

H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P201 Obtain special instructions before use.
P261 Avoid breathing mist.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

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.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING,

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SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200
Emergency overview**

WARNING:

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLISSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. AVOID CONTACT WITH SKIN AND EYES. SKIN OR EYE CONTACT MAY CAUSE IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	25.0 - 60.0
25686-28-6	4,4'-Methylenediphenyl diisocyanate, oligomers	3.0 – 7.0
26447-40-5	Methylenediphenyl diisocyanate	10.0 – 30.0
39420-98-9	Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate	10.0 - 30.0
9016-87-9	P-MDI	7.0 – 13.0
39310-05-9	Diphenylmethane diisocyanate, homopolymer	10.0 – 30.0
5873-54-1	Diphenylmethane-2,4'- diisocyanate	10.0 – 30.0

Section 4 - FIRST AID MEASURES

General advice: Remove contaminated clothing.

EYES: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

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SKIN: Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

INGESTION: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required

INHALATION: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Hazards: Symptoms can appear later.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Dry powder, foam, carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: nitrous gases, fumes/smoke, isocyanate, vapor

Fire Fighting Measures

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

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Methods and material for containment and cleaning up

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

Dike spillage.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:

Storage No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage stability:

Storage temperature: 16 - 27 °C (60 - 80°F)

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Diphenylmethane-4,4'-	101-68-8
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diisocyanate (MDI)	
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm
P-MDI	9016-87-9
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TVL	TWA value 0.005 ppm

Advice on system design:

Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Cover as much of the exposed skin as possible to prevent all skin contact., Suitable materials may include, saran-coated material, depending upon conditions of use.

General safety and hygiene measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	faint aromatic	Color	Light yellow to amber
Boiling Point (@ 5mmHg)	200°C (392°F)	Flammability Limit	Not flammable
Freezing Point	< -20.0°C (-4°F)	Vapor Pressure (25°C)	0.00001 mmHg
Autoignition	>470°C (878°F)	Flash Point	200°C (392°F)
Solubility in water	Reacts with water	Viscosity, Dynamic (25°C)	270 mPa.s
Vapor Density	N/A	Miscibility with water:	Reacts with water.
Density (25°C)	9.66 lb/USg	pH	N/A
Relative Density	N/A	Vapor Density	N/A
Thermal decomposition	No decomposition if stored and handled as prescribed.	Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.
Partitioning coefficient noctanol/ water (log Pow):	N/A		

Other Information: If necessary, information on other physical and chemical parameters is indicated in this section

Section 10 - STABILITY AND REACTIVITY

Reactivity

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not an oxidizer

Chemical Stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of Hazardous Reactions

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalies. Reacts with amines. Risk of exothermic reaction. Risk of polymerization.

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Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Conditions to Avoid

Avoid moisture.

Incompatible Materials

Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Inhalation of vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane-4,4'-diisocyanate (MDI) (101-68-8)

Oral LD50 Rat >10,000 mg/kg (Directive 84/449/EEC, B.1)

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)

An aerosol was tested

Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate (39420-98-9)

Oral LD50 Rat >10,000 mg/kg (Directive 84/449/EEC, B.1)

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)

Interaperitoneal LD50 Rabbit 100mg/kg

Diphenylmethane diisocyanate, homopolymer (39310-05-9)

Oral LD50 Rat >5,000 mg/kg (up and down procedure)

Dermal LD50 Rabbit >9,400 mg/kg

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Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)
Diphenylmethane-2,4'-diisocyanate (5873-54-1)
Dermal LD50 Rabbit >9,400 mg/kg
Inhalation LD50 Rat 0.49 mg/l (OECD Guideline 403)
Interaperitoneal LD50 Rabbit 100mg/kg

Assessment other acute effects

Assessment of STOT single: Category 3
Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane diisocyanate, homopolymer; Diphenylmethane-2,4'-diisocyanate
Species: rabbit
Result: Irritating.
Method: Draize test

Eye

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Species: rabbit
Result: Irritating.
Method: Draize test

Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane diisocyanate, homopolymer; Diphenylmethane-2,4'-diisocyanate

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Buehler test
Species: guinea pig
Result: sensitizing

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: sensitizin
Can cause skin sensitization

other
Species: guinea pig
Result: sensitizing
Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m³, olfactory epithelium

NOAEL: 0.2 mg/m³

LOAEL: 1 mg/m³

The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vitro: OECD Guideline 471 Ames-test Salmonella typhimurium:with and without metabolic activation ambiguous

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vivo: OECD Guideline 474 Micronucleus assay rat (male) Inhalation negative.

No clastogenic effect reported.

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Carcinogenicity

Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane-2,4'-diisocyanate

Experimental/calculated data: OECD Guideline 453 rat Inhalation 0, 0.2, 1, 6 mg/m³

Result: Positive/Lung tumors

Carcinogenetic class: Diphenylmethane-4,4'-diisocyanate (MDI) – IARC 3

Reproductive toxicity

Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development

OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m³

NOAEL Mat.: 4 mg/m³

NOAEL Teratog.: 4 mg/m³

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Medical conditions aggravated by overexposure

The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV₁, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

Potential Acute effects:

Eye contact: Causes eye irritation

Inhalation: Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and

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difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns.

Skin contact: Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitisers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Diphenylmethane 4,4'-diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Algae:	NOEC 72 h Algae 1640 mg/L IUCLID
Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Bacteria:	EC50 3 hr bacteria >100 mg/L[static]
Diphenylmethane diisocyanate, homopolymer	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]

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Bacteria:	EC50 3 hr bacteria >100 mg/L[static]
Algae:	EC50 72 h Algae >1640 mg/L IUCLID NOEC 72 h Algae 1640 mg/L IUCLID
Diphenylmethane-2,4'-diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Bacteria:	EC50 3 hr bacteria >100 mg/L[static]

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

The product may hydrolyse. The test result maybe partially due to degradation products. The product has not been tested as a whole. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H2O): Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information:

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

t_{1/2} 20 h (25 °C)

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

Mobility in soil

Assessment transport between environmental compartments.

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The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Registration status:

Chemical TSCA, US released / listed.

EPCRA 311/312 (Hazard categories) Acute;Chronic

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	CAS
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
P-MDI	9016-87-9



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CERCLA-RQ (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	CAS	CERCLA RQ
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	5000 lbs
P-MDI	9016-87-9	5,000 lbs

Reportable Quantity for release: 13,157.9 lb

STATE REGULATIONS

Chemical Name	CAS	State RTK
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	MA, NJ, PA
P-MDI	9016-87-9	MA, NJ, PA
Methylenediphenyl diisocyanate	26447-40-5	NJ

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 17, 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.



Safety Data Sheet

Material Name: Flexible FAST Part A

**Product #: 317329 – 15 gal
310472 – 50 gal**

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. 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

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Flexible FAST Adhesive Part B

Synonyms: Polyol Blend.

Chemical Family: Polyol Blend

Product Use: Commercial Roofing Adhesive

Restrictions on Use: Professional use only

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

None needed according to classification criteria

GHS Label Elements

Symbol(s)

None needed according to classification criteria

Signal Word

None needed according to classification criteria

Hazard Statement(s)

None needed according to classification criteria

Precautionary Statement(s)

Prevention

None needed according to classification criteria

Response

None needed according to classification criteria

Storage

None needed according to classification criteria

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
25265-71-8	Dipropylene glycol	5-10
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)	10-20
280-57-9	1,4-Diazabicyclo[2.2.2]octane	0.1-1
108-01-0	2-(Dimethylamino)ethanol	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

Wash with plenty of soap and water. 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

Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

**Product # 317331 – 15 gal
310473 – 50 gal**

Suitable Extinguishing Media

regular dry chemical, carbon dioxide, water, regular foam

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Closed containers may rupture violently when heated.

Hazardous Combustion Products

Oxides of carbon, oxides of phosphorus, hydrogen halides

Special Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

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

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Small spills: Absorb with earth, sand or other non-combustible material and transfer to container. Large spills: Dike for later disposal. Eliminate all sources of ignition. Do not flush into sanitary sewer systems, drains or surface water.

Environmental Precautions

Avoid release to the environment.

Section 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. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only in well ventilated areas. Wear protective gloves/clothing and eye/face protection. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria

Store between 65°F-85°F (18°C-30°C). Store in a dry place. Keep away from incompatible materials.

Incompatible Materials

Strong oxidizing materials, isocyanates, strong acids, strong bases

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	blue liquid	Physical State	liquid
Odor	musty, amine	Color	blue
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	>100 °C
Freezing point	Not available	Evaporation Rate	slower than ether
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	>201 °F [(CC)]
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Vapor Density (air=1)	>1	Specific Gravity (water=1)	1.1058
Water Solubility	soluble	Partition coefficient: n-octanol/water	Not available
Viscosity	250 cps	Solubility (Other)	Not available
Density	9.23 lb/gal at @ 25°C	Physical Form	liquid
VOC	0 g/l		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Prolonged heating above 160°C or storage below 5°C. Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials

Strong acids, strong bases, strong oxidizing materials, isocyanates

Hazardous decomposition products

Oxides of hydrogen, oxides of phosphorus, hydrogen halides

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Vapor or mist may cause respiratory tract irritation.

Skin Contact

May cause mild skin irritation.

Eye Contact

May cause mild eye irritation.



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Ingestion

May cause gastrointestinal disturbances, nausea, vomiting, and diarrhea.

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:

Dipropylene glycol (25265-71-8)

Oral LD50 Rat 14800 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Oral LD50 Rat 630 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >7 mg/L 4 h

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

Oral LD50 Rat 1700 mg/kg

Dermal LD50 Rabbit 3200 mg/kg

2-(Dimethylamino)ethanol (108-01-0)

Oral LD50 Rat 1803 mg/kg

Dermal LD50 Rabbit 1220 mg/kg

Inhalation LC50 Rat 1641 ppm 4 h

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

May cause respiratory tract irritation, skin irritation, and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No information available for the product.

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

**Product # 317331 – 15 gal
310473 – 50 gal**

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

None reported.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

2-Propanol, 1-chloro-, phosphate (3:1)	13674-84-5
Fish:	LC50 96 h Brachydanio rerio 56.2 mg/L [static]; LC50 96 h Pimephales promelas 98 mg/L [static]; LC50 96 h Poecilia reticulata 30 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 45 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 4 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 63 mg/L IUCLID
1,4-Diazabicyclo[2.2.2]octane	280-57-9
Fish:	LC50 96 h Pimephales promelas 1510 - 1980 mg/L [flow-through]
2-(Dimethylamino)ethanol	108-01-0
Fish:	LC50 96 h Pimephales promelas 81 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 35 mg/L IUCLID



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 317331 – 15 gal
310473 – 50 gal

Invertebrate:	EC50 48 h Daphnia magna 98.77 mg/L IUCLID
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Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Bioconcentration

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated.

IATA Information:

No Classification assigned.

TDG Information:

UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

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:

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

**Product # 317331 – 15 gal
310473 – 50 gal**

Component	CAS	CA	MA	MN	NJ	PA
Dipropylene glycol	25265-71-8	No	No	No	No	Yes
2-(Dimethylamino)ethanol	108-01-0	No	Yes	No	Yes	Yes

Not listed under California Proposition 65

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

1,4-Diazabicyclo[2.2.2]octane	280-57-9
	1 %

WHMIS Classification

D2A, D2B.

Component Analysis - Inventory

Oxirane, methyl-, polymer with oxirane (9003-11-6)

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

Dipropylene glycol (25265-71-8)

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

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

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

Siloxanes and Silicones, dimethyl, 3-hydroxypropyl methyl, ethoxylated propoxylated (68937-55-3)

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

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

**Product # 317331 – 15 gal
310473 – 50 gal**

Oxirane, methyl-, polymer with oxirane, mono-2-propenyl ether (9041-33-2)

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

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

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

2-(Dimethylamino)ethanol (108-01-0)

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

Water (7732-18-5)

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

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New 3/24/2015

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



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

**Product # 317331 – 15 gal
310473 – 50 gal**

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. 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.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low VOC PVC Bonding Adhesive

Chemical Family

Adhesive

Product Use

Low VOC Adhesive

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 2 (kidneys)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system, peripheral nerve system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Hazard Statement(s)

Highly flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes serious eye irritation
May cause allergic skin reaction
Causes Skin Irritation
Causes damage to organs
May cause damage to organs
May cause respiratory irritation.
May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace
Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish
If exposed or concerned: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor 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 eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	Polyphenol antioxidant	0.1-1
1314-13-2	Zinc Oxide	0.1-1
108-88-3	Toluene	1-5
67-64-1	Acetone	40-70
98-56-6	Parachlorobenzotrifluoride	5-10

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs, seek 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

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys. May cause respiratory irritation. May cause drowsiness or dizziness.

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Delayed

Causes damage to organs through prolonged or repeated exposure. central nervous system, peripheral nerve system, blood.

Note to Physicians

Contains: toluene, acetone, parachlorobenzotriflouride

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, various hydrocarbons, nitrogen compounds, hydrogen cyanide

Advice for firefighters

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. 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

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe gas/fume/vapour/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. **KEEP OUT OF REACH OF CHILDREN.**

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Keep separated from incompatible substances. Do not cut, puncture, or weld on or near this container.

Incompatible Materials

Strong oxidizing agents, strong acids, strong bases, alkali metals, halogens

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Zinc oxide	1314-13-2	
ACGIH:	2 mg/m ³ TWA respirable fraction	10 mg/m ³ STEL respirable fraction
NIOSH:	5 mg/m ³ TWA dust and fume	10 mg/m ³ STEL fume
	15 mg/m ³ Ceiling dust	500 mg/m ³ IDLH
OSHA (US):	5 mg/m ³ TWA fume; 15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	5 mg/m ³ TWA LMPE-PPT fume; 10 mg/m ³ TWA LMPE-PPT dust	
	10 mg/m ³ STEL [LMPE-CT] fume	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Europe:	50 ppm TWA; 192 mg/m3 TWA	100 ppm STEL; 384 mg/m3 STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m3 TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m3 TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m3 TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m3 TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m3 STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide for sufficient ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles. Maintain eye wash fountain and quick-drench shower in work area.

Skin Protection

Wear work clothes with long sleeves. White protective boots. Recommended material: protective skin cream.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear impermeable gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow	Physical State	liquid
Odor	ketone odor	Color	Yellow

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -87 °C (-139--124 °F)	Boiling Point	56 - 156 °C (133-283 °F)
Freezing point	Not available	Evaporation Rate	6.1
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	404 °C (759 °F)	Flash Point	-18 °C(-0.4°F)
Lower Explosive Limit	0.9 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	171.9 mmHg
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	2000 cps	Solubility (Other)	Not available
Density	0.877 (relative)	VOC	<250 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 oxidizing agents, strong acids, strong bases, alkali metals, halogens

Hazardous decomposition products

Oxides of carbon, various hydrocarbons, nitrogen compounds, hydrogen cyanide

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

May cause mild skin irritation. May cause allergic skin reaction.

Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways.

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:

Acrylonitrile-butadiene rubber (Mixture)

Oral LD50 Rat >30 g/kg

Dermal LD50 Rabbit >15 g/kg

Polyketone resin (Trade Secret)

Oral LD50 Rat >10000 mg/kg

Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Zinc oxide (1314-13-2)

Oral LD50 Rat >15000 mg/kg

Inhalation LC50 Rat >5.7 mg/L

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 Rabbit 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal LD50 Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

PCBTf (98-56-6)

Oral LD50 Rat 13 g/kg

Dermal LD50 Rabbit >2 mL/kg

Inhalation LC50 Rat 33 mg/L 4 h

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Immediate Effects

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects

Causes damage to organs through prolonged or repeated exposure: central nervous system, peripheral nerve system, blood.

Irritation/Corrosivity Data

Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

kidneys, central nervous system

Specific Target Organ Toxicity - Repeated Exposure

blood, peripheral nerve system, central nervous system

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
Parachlorobenzotrifluoride	98-56-6
Invertebrate:	EC50 48 h Daphnia magna 3.68 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

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:

Shipping Name: Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

TDG Information:

UN#: UN1133

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.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Acetone	67-64-1

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

CERCLA:	5000 lb final RQ; 2270 kg final RQ
PCBTF	98-56-6
TSCA 12b:	Section 4 , 1 % de minimus concentration

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **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
Zinc Oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes

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 and reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991
Parachlorobenzotriflouride	98-56-6
Carc:	Carcinogen

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 SDSs 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

Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %
Zinc Oxide	1314-13-2
	1 %

Component Analysis - Inventory

Acrylonitrile-butadiene rubber (Mixture)

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

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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

Polyphenol antioxidant (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	No

Zinc Oxide (1314-13-2)

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

Toluene (108-88-3)

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

Acetone (67-64-1)

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

Parachlorobenzotrifluoride (98-56-6)

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	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Safety Data Sheet

Material Name: Low VOC PVC Bonding Adhesive

Product #:309126

Summary of Changes

Revision Date: January 14, 2020

Revision Note: Modified Ingredients

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. 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.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Water Cut-Off Mastic

Synonyms: Butyl Mastic

Chemical Family: Mastic

Product Use: Elastomeric sealer for Single-Ply Membranes

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Skin Corrosion/Irritation - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

Causes skin irritation

May cause drowsiness or dizziness

Precautionary Statement(s)

Prevention

Keep container tightly closed

Keep away from heat/sparks/open flame/hot surfaces - No smoking

Ground/Bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Take precautionary measures against static discharge

Use only non-sparking tools

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Use only outdoors or in a well-ventilated area
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid breathing dust/fume/gas/mist/vapours/spray
 Wash thoroughly after handling

Response

In case of fire: Use appropriate media to extinguish
 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash before reuse
 Call a POISON CENTER or doctor if you feel unwell
 Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
 Keep cool
 Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	Silica compound	1-5
Trade Secret	Polyphenol antioxidant	< 0.1
Trade Secret	Severely hydrotreated paraffinic oil	1-5
Trade Secret	Polybutene	10-30
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
Mixture	Hydrous clay	3-7

Section 4 - FIRST AID MEASURES

Inhalation

Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if not breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. 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.

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Ingestion

If swallowed, do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Causes skin irritation. May cause drowsiness or dizziness.

Delayed

No information on significant adverse effects.

Section 5 - FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective. Use water spray to keep containers cool.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Can burn and explode easily when exposed to open flames or high heat. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, aldehydes

Firefighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools. 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

Keep away from heat/sparks/open flames/hot surfaces. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe



Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Keep away from incompatible materials. Do not cut, puncture, or weld on or near this container.

Incompatible Materials

Strong oxidizing agents, acids, bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Calcium carbonate	1317-65-3	
NIOSH:	10 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable dust	
OSHA (US):	15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	10 mg/m ³ TWA LMPE-PPT	20 mg/m ³ STEL [LMPE-CT]
Silica compound	Trade Secret	
OSHA (US):	20 mppcf TWA; ((80))/(% SiO ₂) mg/m ³ TWA)	
Mexico:	10 mg/m ³ TWA LMPE-PPT	
Carbon compound	Trade Secret	
ACGIH:	3 mg/m ³ TWA inhalable fraction	
NIOSH:	3.5 mg/m ³ TWA; 0.1 mg/m ³ TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons) as PAH	
	1750 mg/m ³ IDLH	
OSHA (US):	3.5 mg/m ³ TWA	
Mexico:	3.5 mg/m ³ TWA LMPE-PPT	7 mg/m ³ STEL [LMPE-CT]
Silica, crystalline	14808-60-7	

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

ACGIH:	0.025 mg/m ³ TWA respirable fraction	
NIOSH:	0.05 mg/m ³ TWA respirable dust	50 mg/m ³ IDLH respirable dust
OSHA (US):	((30)/(%SiO ₂ + 2) mg/m ³ TWA) total dust; ((250)/(%SiO ₂ + 5) mppcf TWA) respirable fraction; ((10)/(%SiO ₂ + 2) mg/m ³ TWA) respirable fraction	
Mexico:	0.1 mg/m ³ TWA LMPE-PPT respirable fraction	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Recommended material: protective skin cream.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	gray viscous liquid	Physical State	liquid
Odor	mild, solvent	Color	gray
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	119 - 141 °C (246-286 °F)
Freezing point	Not available	Evaporation Rate	3.5
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	246 °C (475 °F)	Flash Point	10 °C (50 °F)
Lower Explosive Limit	0.9 %	Decomposition	Not available
Upper Explosive Limit	6.7 %	Vapor Pressure	11.25 mmHg
Vapor Density (air=1)	4	Specific Gravity (water=1)	Not available
Water Solubility	0.5	Partition coefficient: n-octanol/water	Not available
Viscosity	1200000 cps	Solubility (Other)	hydrocarbons

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Density	1.2 - 1.3 (relative)	VOC	250 g/L
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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 oxidizing agents, acids, bases.

Hazardous decomposition products

Oxides of carbon, aldehydes

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

May cause eye irritation.

Ingestion

May cause gastrointestinal irritation.

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:

Carbon compound (Trade Secret)

Oral LD50 Rat >8000 mg/kg

Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Safety Data Sheet

Product #: 319621

Material Name: Water Cut-Off Mastic

Severely hydrotreated paraffinic oil (Trade Secret)
 Oral LD50 Rat >5000 mg/kg
 Dermal LD50 Rabbit >2000 mg/kg

Polybutene (Trade Secret)
 Oral LD50 Rat >34600 mg/kg
 Dermal LD50 Rat >10250 mg/kg

Solvent naphtha, petroleum, light aliphatic (64742-89-8)
 Oral LD50 Rat >2000 mg/kg
 Dermal LD50 Rat >2000 mg/kg

Silica, crystalline (14808-60-7)
 Oral LD50 Rat 500 mg/kg

Immediate Effects

Causes skin irritation. May cause drowsiness or dizziness. May cause gastrointestinal irritation.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

Causes skin irritation. May cause gastrointestinal irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Silica compound	Trade Secret
IARC:	Monograph 68 [1997] (Group 3 (not classifiable))
Carbon compound	Trade Secret
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man, inhalable fraction)
OSHA:	Present
Silica, crystalline	14808-60-7
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

May affect the central nervous nervous system: drowsiness, dizziness.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

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

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Severely hydrotreated paraffinic oil	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
Polybutene	Trade Secret
Fish:	Fish LC50 96 hr >1000 mg/L

Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Hydrous clay	Mixture
Fish:	Fish LC50 96 hr Oncorhynchus 19000 mg/L

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:

Shipping Name:ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): < 0.3 gal use Limited Quantity Label

IATA Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): < 0.3 gal use Limited Quantity Label

TDG Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II



Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Required Label(s):

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: Yes 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
Calcium carbonate	1317-65-3	No	Yes	Yes	Yes	Yes
Silica compound	Trade Secret	No	Yes	Yes	Yes	Yes
Carbon compound	Trade Secret	Yes	Yes	Yes	Yes	Yes
Silica, crystalline	14808-60-7	No	Yes	Yes	Yes	Yes

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

Carbon compound	Trade Secret
Carc:	carcinogen , initial date 2/21/03 (airborne, unbound particles of respirable size)
Silica, crystalline	14808-60-7
Carc:	carcinogen , initial date 10/1/88 (airborne particles of respirable size)

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

Carbon compound	Trade Secret
	1 %
Silica, crystalline	14808-60-7
	1 %

Component Analysis - Inventory

Calcium carbonate (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
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Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
-----	-----	-----	-----	-----	-----	----	-----	----	-----	-----	-----

Silica compound (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	Yes

Carbon 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

Polyphenol antioxidant (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	No

Severely hydrotreated paraffinic 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	No

Polybutene (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	Yes

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

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

Hydrous clay (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

Silica, crystalline (14808-60-7)

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

Section 16 - OTHER INFORMATION



Safety Data Sheet

Material Name: Water Cut-Off Mastic

Product #: 319621

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: January 24, 2019

Revision Note: General Update

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. 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.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Universal Single-Ply Sealant

Synonyms: Silyl Terminated Polyether

Chemical Family: Mixture

Product Use: Sealant

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Hazardous classification: Irritant Category 2

GHS Label Elements

Symbol(s)



Signal Word: Warning

Hazard Statement(s)

H315 Causes skin irritation

H317 May cause allergic skin reaction

H318 Causes serious eye damage

Precautionary Statement(s)

P273 Avoid release into the environment

P280 Wear protective gloves/protective clothing/eye protection

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes.

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local regulation.

R-Phrases

Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

R38 Irritating to skin.
R41 Risk serious damage to eyes.
R43 May cause sensitization by skin contact.

S-Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39 Wear eye/face protection.
Carcinogenity: This product contains no ingredient listed as a carcinogen on California Proposition 65 list.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1760-24-3	Amino Silane	1-3

Section 4 - FIRST AID MEASURES

Inhalation

An unlikely route of entry. Remove to fresh air. Consult a physician.

Skin

Clean product from affected area with Ethyl alcohol, then wash with soap and water.

Eyes

Flush with large amounts of water for at least 15 minutes. Consult a Physician if ill effects or irritation occurs.

Ingestion

An unlikely route of entry. Consult a physician.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Water, CO2, Dry Chemical, Foam.

Unusual Fire and Explosion Hazards: None

Flashpoint: N/A.

Upper Flammability Limit: N/A

Lower Flammability Limit: N/A

Auto Ignition Temperature: N/A



Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

Sensitivity to Impact: N/A

Sensitivity to Static Discharge: N/A

Hazardous Combustion Products: Thermal decomposition may produce toxic fumes of Carbon Monoxide, Carbon dioxide, Sulfur oxides and Hydrogen sulfide.

Section 6 - ACCIDENTAL RELEASE MEASURES

Handling Precautions: Wear personal protective clothing and equipment, see Section 8. Avoid eye, skin and clothing contact.

Cleanup: Collect spill with absorbent material such as cardboard, allow to cure and place into a container approved for waste disposal.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - HANDLING AND STORAGE

Handling Precautions: Use personal protection recommended in section 8. Avoid eye, skin and clothing contact.

Prevention of Fires and Explosions: Product is not considered flammable under normal conditions, and product is not considered explosive.

Storage Requirements: Store in a cool dry area (this product polymerizes when in contact with moisture.)

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/face protection: Wear safety glasses or goggles to avoid eye contact.

Skin Protection: Wear appropriate work clothing. Wear protective shoes. Recommended material: protective skin cream.

Environmental Exposure Control: No specific controls are needed.

Hand Protection: Wear impervious gloves such as vinyl to minimize contact with skin.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Paste, mild mint scent	Physical State	Water Solubility: Insoluble
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Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

Odor Threshold	N/A	pH	N/A
Melting Point	N/A	Flash Point	N/A
Freezing point	N/A	Flash Point Method	Based on FP of the most volatile component
Autoignition	N/A	Vapor Pressure	<1
Lower Explosive Limit	N/A	Specific Gravity (water=1)	0.97
Upper Explosive Limit	N/A	% Volatile	2.23%
Vapor Density (air=1)	>1	VOC	21.64 g/l
Density	8.1 lbs./gal. (calculated)		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions of use.

Conditions to Avoid

None Known

Incompatible Materials

None Known

Hazardous decomposition products

Thermal decomposition may produce toxic fumes of Carbon Monoxide (CO) and/or Carbon Dioxide (CO₂).

Section 11 - TOXICOLOGICAL INFORMATION

Amino Silane (Refer to sections 2 and 3)

Oral: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Skin Absorption: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Inhalation: LC50 Not acutely Toxic.

Skin Direct Contact: Slight irritation



Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

Eye Direct Contact: Severe irritation. Remark: Causes corneal injury.

Exposure Limits: Not applicable

Sensitization: No

Reproductive Toxicity: No

Mutagenicity: No

Teratogenicity: No

Synergistic Products: None

Section 12 - ECOLOGICAL INFORMATION

No known applicable information.

Section 13 - DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. This product becomes a firm synthetic rubber when cured. Please allow to cure before disposal.

Section 14 - TRANSPORT INFORMATION

Special shipping information: None

DOT: Not regulated

TDG: Not available

PIN: Not available

Section 15 - REGULATORY INFORMATION

Rotterdam Convention (PIC) Annex III: listed (Tributyl tin compounds (impurities) <2ppm)

U.S. Regulatory information

OSHA 29 CFR 1910-1200 – Irritant.

TSCA – All components of this product are listed on TSCA Inventory.



Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

CERCLA Reportable Quantity – Not applicable.

SARA Title III:

Section 302 Extremely Hazardous Substances – None.

Section 304 – Not applicable.

Section 311/312 – Immediate (acute) health hazard.

Section 313 – None.

RCRA – Refer to section 13.

California Proposition 65 Carcinogens: This product does not contain any chemicals known by the State of California to cause cancer.

California Proposition 65 Reproductive Toxins: This product does not contain any chemicals known by the State of California to cause reproductive harm.

Canadian WHMIS Classification- D2B

Section 16 - OTHER INFORMATION

HMIG Rating

Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

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



Safety Data Sheet

Material Name: Universal Single-Ply Sealant

Product #: 310131

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. 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.



Freedom Gray™

SECTION 1: IDENTIFICATION**Product Identifiers:** Freedom Gray™**Intended Use of the Product:** Manufacture of copper alloy products for, but not limited to, architecture and building.**Name, Address, and Telephone of the Manufacturer:** Revere Copper Products, One Revere Park, Rome, NY 13440**Emergency Telephone Number:** 800-448-1776 or 315-338-2022**SECTION 2: HAZARDS IDENTIFICATION****Solid copper and copper alloys, in massive form (rod, plate, sheet, strip, bar), are not hazardous.**

GHS-US Classification: Not classified

GHS-US Labeling: No labeling applicable

Hazards Not Otherwise Classified:

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact.

- Fine particles or dust dispersed in the air may present a fire/explosion hazard.
- Exposure to fumes or dust may aggravate existing respiratory disease or dermatitis.
- This product contains components that are environmentally hazardous and small chips, turnings and dust from processing may be toxic to aquatic life.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**Product Form:** Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Copper	(CAS No) 7440-50-8	90	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Zinc	(CAS No) 7440-66-6	3 - 5	Comb. Dust Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Tin	(CAS No) 7440-31-5	3 - 5	Comb. Dust

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES**Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye contact or skin contact hazards. The information below relates to the dust, fines, fumes or mists generated by subsequent processing.****Description of First Aid Measures:**

- General:** Never give anything by mouth to an unconscious person. If medical advice is needed, have this SDS at hand.
- Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms develop seek medical attention.
- Skin Contact:** Do not rub. Wash with plenty of soap and water. Promptly treat cuts or abrasions by thorough cleaning of the affected area. Contact with hot or molten metal will cause thermal burns, cool rapidly and seek medical attention.
- Eye Contact:** Do not rub. Thoroughly flush eyes with water for at least 15 minutes, including under lids, to remove all particles. Seek immediate medical attention for abrasions or other injuries to the eye.
- Ingestion:** Rinse mouth. Drink water to dilute. Seek medical attention if symptoms develop or you feel ill.

Most Important Symptoms and Effects both Acute and Delayed:

- Inhalation:** Short term exposure to fumes or dust may produce irritation of the mucous membranes and respiratory system. Exposure to metal fumes can produce an acute allergic condition known as "metal fume fever". Symptoms may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms

may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.

- Skin Contact:** Contact with fumes or metal powder may irritate skin. Contact with hot, molten metal will cause thermal burns. Injury from flying particles is possible.
- Eye Contact:** Short term exposure to fumes or dusts may cause eye irritation. Mechanical injury can result from particulate.
- Ingestion:** Ingestion of dust may cause nausea, vomiting, abdominal pain, metallic taste and diarrhea. Ingestion of large doses may cause stomach and intestine ulceration, jaundice and kidney or liver damage.

SECTION 5: FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media:** Solid products are not flammable or explosive, use extinguishing media appropriate for surrounding fire.
Use Class D extinguishing agents or dry sand on fires involving dust or fines.
- Unsuitable Extinguishing Media:** Do NOT use water on molten material, will react violently due to steam explosions. Do NOT use water or halogenated extinguishing agents on fires involving dust or fines.
- Specific Hazards Arising From Material:** Dusts or fines may burn if they are ignited.
Fumes may contain oxides of copper and other ingredients.
Fine particles or dust dispersed in the air may present a fire/explosion hazard.
Use of water on molten material will cause steam explosions.
- Special Protective Equipment and Precautions for Firefighters:** Do not breathe fumes from fires or vapors from decomposition, wear self-contained NIOSH approved breathing apparatus. Wear full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Not applicable to copper and copper alloys in the massive form. The information below relates to the dust or fines generated by processing.

- Personal Precautions, Protective Equipment and Emergency Procedures:** Avoid generation of airborne dust. Ensure adequate ventilation. Protect clean-up personnel from inhalation of dusts or fumes, or contact with eyes and skin.
- Environmental Precautions:** Do not flush dust or fines to surface waters, soil or sanitary sewer system.
- Methods / Material for Containment and Clean Up:** Dust and fines should be cleaned up avoiding generation of airborne particulates. Wash down with water if in contact with acids.
- Reference to Other Sections :** See Sec 8 and Sec 13.

SECTION 7: HANDLING AND STORAGE

- Precautions for Safe Handling:** As sold in the massive form, copper and copper alloys pose no chemical handling hazard. Avoid contact with sharp edges, where proper gloves when handling.
Dust, fines, fume or mist generated by processing may pose a hazard through inhalation, ingestion and eye or by skin contact. Avoid breathing metal fumes and/or dust. Practice good housekeeping. Practice good hygiene. Avoid generating dusts. Eating, drinking or smoking should not be allowed in areas where these alloys are processed.
- Conditions for Safe Storage:** Other than incompatibles, no special storage conditions for copper in the massive form.
- Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Appropriate Engineering Controls:** Use appropriate engineering controls to minimize exposure to airborne concentrations during chemical treatment, milling, grinding, welding, melting, sawing, brazing, burning or other similar processes.
Provide emergency eye wash fountains and safety showers in the immediate vicinity of any

potential exposure.

Personal Protective Equipment:	Highly dependent upon process being performed. User must review every process individually to evaluate appropriate PPE. Do not eat, drink or smoke during processing operations.
Respiratory Protection:	As appropriate for process and engineering controls in place.
Eye Protection:	Safety glasses, chemical goggles or face shield as appropriate to process.
Hand Protection:	Cut resistant gloves whenever handling. Chemically resistant gloves or thermally resistant gloves as appropriate to process.
Skin and Body Protection:	Wear suitable protective clothing. With molten material wear thermally protective clothing.
Hygiene Measures:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Always wash your hands immediately after handling this product.

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Copper (7440-50-8)		
Mexico	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Mexico	OEL STEL (mg/m ³)	2 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ (fume)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (dust and mist) 0.1 mg/m ³ (fume)
USA IDLH	US IDLH (mg/m ³)	100 mg/m ³ (dust, fume and mist)
Alberta	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
British Columbia	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist) 0.2 mg/m ³ (fume)
Manitoba	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
New Brunswick	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Nova Scotia	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Nunavut	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Nunavut	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Northwest Territories	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Northwest Territories	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Prince Edward Island	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Québec	VEMP (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Saskatchewan	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume)

		3 mg/m ³ (dust and mist)
Saskatchewan	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Yukon	OEL STEL (mg/m ³)	0.2 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Yukon	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)

Tin (7440-31-5)

Mexico	OEL TWA (mg/m ³)	2 mg/m ³
Mexico	OEL STEL (mg/m ³)	4 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³
USA IDLH	US IDLH (mg/m ³)	100 mg/m ³
Alberta	OEL TWA (mg/m ³)	2 mg/m ³
British Columbia	OEL TWA (mg/m ³)	2 mg/m ³
Manitoba	OEL TWA (mg/m ³)	2 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	2 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	2 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	2 mg/m ³
Ontario	OEL TWA (mg/m ³)	2 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	2 mg/m ³
Québec	VEMP (mg/m ³)	2 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	4 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	2 mg/m ³

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Appearance:	
Odor:	Odorless	Odor Threshold:	Not applicable
pH:	Not applicable	Evaporation Rate:	Not applicable
Melting Point:	Base: 1083 °C (1981 °F) Coating: Approx. 350 °C (660 °F)	Freezing Point:	Base: 1065 °C (1950 °F)
Boiling Point:	Not available	Boiling Point Range:	Not available
Flash Point:	Not applicable	Auto-ignition Temperature:	Not applicable
Flammability (solid, gas):	Not flammable	Decomposition Temperature:	Not applicable
Upper Flammable Limit	Not applicable	Lower Flammable Limit:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density at 20 °C:	Not applicable
Relative Density:	Not determined	Specific Gravity:	Not determined
Solubility:	Negligible in water	Viscosity:	Not applicable
Explosion Data – Sensitivity to Mechanical Impact:	Not expected to present an explosion hazard due to mechanical impact	Explosion Data – Sensitivity to Static Discharge:	Not expected to present an explosion hazard due to static discharge
Partition Coefficient: N-Octanol/Water:	Not applicable		

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at under normal conditions.
Chemical Stability:	Stable under normal conditions of use and under recommended handling and storage conditions. (Section 7).
Possibility of Hazardous Reactions:	Hazardous polymerization cannot occur.
Conditions to Avoid:	Avoid creating or spreading dust. Incompatible materials.
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury. Water (when in molten form)
Hazardous Decomposition Products:	When heated to decomposition, may produce metal oxides and fumes. Contact with strong acids will release hydrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye or skin contact hazards.

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. Most likely exposure routes: For dust: ingestion, inhalation, skin and eye contact. For fume: inhalation and eye contact.

Symptoms/Injuries After Inhalation:	Metal fumes or dust may irritate the mucous membranes and respiratory tract (shortness of breath, wheezing, coughing) Metal fumes or dust can produce an acute allergic condition known as "metal fume fever". Symptoms of metal fume fever may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.
Symptoms/Injuries After Skin Contact:	Dust or fines may irritate skin. Hot or molten metal will cause thermal burns. Mechanical injury from via flying particles and chipped slag is possible.
Symptoms/Injuries After Eye Contact:	Dust, fines or fumes may cause eye irritation. Hot or molten metal will cause thermal burns. Mechanical damage via flying particles and chipped slag is possible.
Symptoms/Injuries After Ingestion:	Ingestion of dusts or fines from processing can occur due to poor hygiene and may produce irritation of the gastrointestinal tract (nausea, vomiting, and diarrhea)

Chronic Symptoms:

Copper:	Overexposure to fumes may cause metal fume fever. Tissue damage of mucous membranes may follow chronic dust exposure.
Zinc:	Prolonged exposure to high concentrations of zinc fumes may cause "zinc shakes", an involuntary twitching of the muscles.
Tin:	Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis.
Lead:	Chronic exposure to fumes and/or dust or ingestion of dust can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage. Other reported symptoms include polyneuritis, diminished vision and peripheral neuropathy, such as tingling or loss of feeling in fingers, arms & legs, gingival lead line; hypertension.

Information on Toxicological Effects – Product in Massive Form

Acute Toxicity:	Not classified	Germ Cell Mutagenicity:	Not classified
LD50 and LC50 Data:	Not available	Teratogenicity:	Not classified
Skin Corrosion/Irritation:	Not classified	Carcinogenicity:	Not classified
Serious Eye Damage/Irritation:	Not classified	Specific Target Organ Toxicity (Repeated Exposure):	Not classified

Respiratory or Skin Sensitization:	Not classified	Reproductive Toxicity:	Not classified
Aspiration Hazard:	Not classified	Specific Target Organ Toxicity (Single Exposure):	Not classified

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available

Copper (7440-50-8)	
LC50 Fish 1	<= 0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 - 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031 - 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])

Zinc (7440-66-6)	
LC50 Fish 1	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

12.2. Persistence and Degradability Not readily biodegradeable

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Recycle all solid copper and copper alloy scrap. Dust, fines or powders should also be recycled or classified by an environmental professional and disposed of in accordance with all local, regional, national, provincial, territorial and international regulations.

Do not dispose of dust, fines and powders to surface waters or sanitary sewers

Packaging Disposal: Dispose of in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT: Not regulated for transport

In Accordance with IMDG: Not regulated for transport

In Accordance with IATA: Not regulated for transport

In Accordance with TDG: Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Copper (7440-50-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %
Zinc (7440-66-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)
Tin (7440-31-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Copper (7440-50-8)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Zinc (7440-66-6)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Tin (7440-31-5)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Lead (7439-92-1)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
Nickel (7440-02-0)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

15.3. Canadian Regulations

Freedom Gray™	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Copper (7440-50-8)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Zinc (7440-66-6)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Tin (7440-31-5)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

GHS Full Text Phrases:

Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Comb. Dust	Combustible Dust
	May form combustible dust concentrations in air
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

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T: 800-448-1776 or 315-338-2022

Revision Date: 5/31/2015

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Revere Copper Products, Inc. based on our current knowledge, believes the information contained herein to be accurate and reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product. Final determination of occupational safety and health and environmental compliance and suitability of this material is the sole responsibility of the user.

Stainless Steel



Safety Data Sheet (SDS)

Revision Date: May- 2015

Supersedes: January - 2012

Section 1		Chemical Product and Company Identification		
GHS Production Identifier:	Stainless Steel (200, 300, 400 Series, 17-7, A286, and 21-6-9)	CAS Number:	Mixture	
Other means of identifier:	None			
Supplier's Information:	Precision Specialty Metals, Inc. 3301 Medford Street Los Angeles, California 90063	Contact Number:	323.475.3200 (Mon – Fri, 8 AM – 4 PM)	
Section 2		Hazards Identification		
<p>Stainless steel is not hazardous according to the criteria specified in European Directives 67/548/EEC and 1999/45/EC. Solid metallic products are classified as “articles” and are not hazardous material under the definitions of OSHA Hazard Communication Standard (29 CFR 1910.1200).</p> <p>Stainless steel products in their solid state present no inhalation, ingestion or contact health hazard. However, inhaling dusts fumes or mists which may be generated during certain manufacturing procedures such as burning, melting, welding, sawing, brazing, grinding and machining may be hazardous to your health. Dusts may also be irritating to the unprotected skin and eyes.</p> <p>Short Term exposure to fumes/dust generated from stainless steel use and processing may produce irritation of the eyes and respiratory system. Inhalation of high concentrations of freshly formed oxide fumes of iron, manganese and copper may cause metal fume fever, characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza-like symptoms.</p> <p>Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly have a synergistic effect and increase the risk of lung cancer development in workers exposed to pulmonary carcinogens.</p> <p>Chromium and nickel and their compounds are listed in NTP's 7th Annual Report on Carcinogens. Exposure to dust and fumes can cause sensitization dermatitis, inflammation and/or ulceration of upper respiratory tract, and cancer of nasal passages and lungs.</p> <p>NTP classifies nickel metal and certain nickel compounds as “reasonably anticipated to be carcinogens.” IARC classifies nickel metal as a possible human carcinogen (Group 2B) and certain nickel compounds as known human carcinogens (Group 1).</p> <p>NTP reports that there is inadequate evidence for the carcinogenicity of chromium metal and most trivalent chromium (CrIII) compounds in humans and experimental animals. However, NTP classifies certain hexavalent chromium compounds as “known to be carcinogens.” Similarly, IARC indicates that chromium metal and trivalent chromium compounds are not classifiable as human carcinogens (Group 3), but that certain hexavalent chromium compounds are known carcinogens (Group 1). Since the hexavalent form of chromium may be produced during welding, heat-treating and alkaline descaling processes, an industrial hygiene evaluation of such process should be conducted to determine if exposure to hexavalent chromium is present.</p>				
Section 3		Composition/Information on Ingredients		
Component		CAS Number	EC Number	% weight ¹
Iron [Iron oxide] Alloying Elements	(Fe)	7439-89-6	231-096-4	60 - 88
Chromium ³ (Metal)	(Cr)	7440-47-3	231-157-5	10 - 30
Nickel ³ (Metal)	(Ni)	7440-02-0	231-111-4	0 - 46
Manganese [elemental & inorganic cpds]	(Mn)	7439-96-5	231-105-1	0 - 15
Molybdenum	(Mo)	7439-98-7	231-107-2	< 8
Copper ³	(Cu)	7440-50-8	231-159-6	< 6
Titanium ³ [metal & dioxide]	(Ti)	13463-67-7	231-142-3	< 6
Carbon	(C)	7440-44-0	231-153-3	< 2
Aluminum ³	(Al)	7429-90-5	231-072-3	< 2

Section 3		Composition/Information on Ingredients (Continue)		
Phosphorus [yellow]	(P)	7723-14-0	231-768-7	< 0.2
Silicon	(Si)	7440-21-3	231-130-8	< 2
Niobium	(Nb)	7440-03-1	231-113-5	< 2
Tantalum [metal & oxide]	(Ta)	7440-25-7	231-135-5	< 2
Tin [metal]	(Sn)	7440-31-5	231-141-8	< 2
Cobalt ³ [elemental & inorganic cpds]	(Co)	7440-48-4	231-158-0	< 2
Lead ³ [elemental & inorganic cpds]	(Pb)	7439-92-1	231-100-4	< 0.1

CAS – Chemical Abstract Service

EC – European Community

¹Percent of alloying element varies with grade.

²Not classifiable as a human carcinogen

³SARA, Title III, Section 313 Toxic Chemical

⁴Ceiling limit not to be exceeded

⁵Animal carcinogen

*All commercial metals may contain small amounts of various elements in addition to those specified. These small quantities (less than 0.1%) frequently referred to as “trace” or “residual” elements, generally originate in the raw material used. These elements may include, but are not limited to the following: Arsenic, Cadmium, Nitrogen, and Zirconium.

Section 4

First Aid Measures

Description of necessary first aid measures:

- **Inhalation:** If large amounts of dust, fumes, and/or particulates are generated, move person to fresh air. If symptoms develop, seek medical attention.
 - **Eye contact:** If eyes contact with dust or particulates, flush eyes with running water for 15 minutes. Eye injuries from solid particles should be treated by a physician immediately.
 - **Skin contact:** If skin contact with dusts or powders, wash immediately with soap and water. Any cuts or abrasions should be treated promptly with thorough cleansing of the affected area.
 - **Ingestion:** If ingested no first aid needed, however if symptoms develop, seek immediate medical attention.
- For Ingestion of dusts or powder:** *If swallowed*, call a poison center or doctor/physician if you feel unwell. Rinse mouth thorough.

Important acute and chronic symptoms/effects:

Stainless steel products in their usual physical form do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing, machining and grinding may result in the following effects if exposures exceed recommended limits as listed in Section 8 – Exposure Controls/Personal Protection.

Acute Effects:

- **Inhalation:** Excessive exposure to high concentrations of dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract. Excessive inhalation of fumes of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02 - 0.05 microns from many metals can produce an acute reaction known as “metal fume fever”. Symptoms consist of chills and fever (very similar to and easily mistaken with flu symptoms), metallic taste in the mouth, dryness and irritation of the throat followed by weakness and muscle pain. The symptoms come on in a few hours after excessive exposures and usually last for 12 – 48 hours. Long-term effects from metal fume fever have not been noticed. Freshly formed oxide fumes of manganese have been associated with causing metal fume fever. Inhalation of chromium compounds may cause upper respiratory tract irritation. Inhalation of silica dusts may result in silicosis. Nickel compounds are respiratory tract irritants.
- **Eye:** Excessive exposure to high concentrations of dust may cause irritation and/or sensitization to the eyes. Particles of iron or iron compounds, which become imbedded in the eye, may cause rust stains unless removed promptly. Molybdenum compounds are eye irritants.
- **Skin:** Repeated or prolonged contact with dusts may cause skin irritation or sensitization, possibly leading to dermatitis and allergic sensitization. Molybdenum compounds are skin irritants.
- **Ingestion:** Ingestion of harmful amounts of this product as distributed is unlikely due to its solid insoluble form. Ingestion of dust may cause nausea or vomiting.

Chronic Effects by components:

- **Iron (Iron Oxide):** Chronic inhalation of excessive concentrations of iron oxide fumes or dusts may result in the development of a benign pneumoconiosis, called siderosis, which is observable as an X-ray change. No physical impairment of lung function has been associated with siderosis. Inhalation of excessive concentrations of ferric oxide may enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Iron oxide is listed as a Group 3 (not classifiable carcinogen by IARC).

Chronic Effects by components (Continue):

- **Chromium:** The health hazards associated with exposure to chromium are dependent upon its oxidation state. The metal form (chromium as it exists in this product) is of very low toxicity. However, the hexavalent form is very toxic, repeated or prolonged exposure to hexavalent chromium compounds may cause respiratory irritation, nosebleed, ulceration and perforation of the nasal septum. Industrial exposure to certain forms of hexavalent chromium has been related to an increased incidence of cancer. The National Toxicology Program (NTP) Fourth Annual report on Carcinogens cites "certain Chromium compounds" as human carcinogens. American Conference of Industrial Hygienists (ACGIH) has reviewed the toxicity data and concluded that chromium metal is not classifiable as a human carcinogen. Hexavalent chromium may cause genetic defects and is suspected of damaging the unborn child. Developmental toxicity in the mouse, suspected of damaging fertility or the unborn child.
- **Nickel:** Exposure to nickel dusts and fumes can cause sensitization dermatitis, respiratory, irritation, asthma, pulmonary fibrosis, edema, and may cause nasal or lung cancer in humans. Causes damage to lungs through prolonged or repeated inhalation exposure. IARC lists nickel and certain nickel compounds as Group 2B carcinogens (sufficient animal data). ACGIH lists insoluble nickel compounds as confirmed human carcinogens. Suspected of damaging the unborn child.
- **Manganese:** Chronic exposure to high concentrations of manganese fumes and dusts may adversely affect the central nervous system with symptoms including languor, sleepiness, weakness, emotional disturbances, spastic gait, mask-like facial expression and paralysis. Animal studies indicate that manganese exposure may increase susceptibility to bacterial and viral infections. Occupational overexposure (Manganese) is a progressive, disabling neurological syndrome that typically begins with relatively mild symptoms and evolves to include altered gait, fine tremor, and sometimes-psychiatric disturbances. May cause damage to lungs with repeated or prolonged exposure.
- **Copper:** Inhalation of high concentrations of freshly formed oxide fumes and dusts of copper can cause metal fume fever. Chronic inhalation of copper dust has caused, in animals, hemolysis of the red blood cells, deposition of hemofuscin in the liver and pancreas, injury to lung cells gastrointestinal symptoms.
- **Molybdenum:** Certain handling operations, such as burning and welding, may generate both insoluble molybdenum compounds (metal and molybdenum dioxide) and soluble molybdenum compounds (molybdenum trioxide). Molybdenum compounds generally exhibit a low order of toxicity with the trioxide the more toxic. However, some reports indicate that the dust of the molybdenum metal, molybdenum dioxide and molybdenum trioxide may cause eye, skin, nose and throat irritation in animals. Also has been reported to cause induction of tumors in experimental animals, suspected of causing cancer. Molybdenum oxide is suspected of causing cancer in humans.
- **Silicon:** Silicon dusts are a low health risk by inhalation and should be treated as a nuisance dust. Eye contact with pure material can cause particulate irritation. Skin contact with silicon dusts may cause physical abrasion.
- **Aluminum:** Chronic inhalation of finely divided powder has been reported to cause pulmonary fibrosis and emphysema. Repeated skin contact has been associated with bleeding into the tissue, delayed hypersensitivity and granulomas. Chronic exposure to aluminum flake has been reported to cause pneumoconiosis in workers. Repeat oral exposure to aluminum results in decrements in neurobehavioral function and development.
- **Vanadium:** Is considered non-toxic. Excessive long term or repeated exposures to vanadium compounds, especially vanadium pentoxide, may result in chronic pulmonary changes such as emphysema or bronchitis. Vanadium pentoxide is suspected of damaging fertility or the unborn child. Vanadium pentoxide is fatal if swallowed or inhaled. It causes damage to lungs by single, repeated or prolonged exposure.
- **Boron:** Boron oxide dusts and fumes may cause upper respiratory tract and eye irritation, dryness of the mouth, nose or throat, and sore throat and productive cough.
- **Tungsten:** Tungsten has been shown to act by antagonizing the action of the essential trace element, Molybdenum. Tungsten metal powder administered to animals has been shown in several studies as not totally inert. One study found that guinea pigs treated orally or intravenously with tungsten suffered from anorexia, colic, incoordination of movement, trembling, dyspnea and weight loss. Long industrial experience has indicated no pneumoconiosis to develop among workers exposed solely to tungsten or its insoluble compounds (at air concentrations of the order of 5 mg/m³). In NIOSH's criteria document, two Russian studies were cited which indicated an incidence of 9 - 11% pulmonary fibrosis among employees exposed to tungsten without cobalt co-exposure.
- **Titanium:** There is no evidence of a health hazard from inhalation of titanium dioxide at airborne concentrations below 10 mg/m³. Rats (but not mice) exposed to ultrafine TiO₂ particles at 10 mg/m³ developed lung tumors; probably results from inhibited particle clearance from lung. The toxicity of titanium dioxide has been found to be relatively inert. Eye contact with pure material can cause particulate irritation. Skin contact with titanium dusts may cause physical abrasion Long-term inhalation exposure to high concentrations (over-exposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects.

Carcinogenicity: IARC, NTP, and OSHA do not list steel products as carcinogens. IARC identifies nickel and certain nickel compounds and welding fumes as Group 2B carcinogens that are possibly carcinogenic to humans. ACGIH lists insoluble nickel compounds as confirmed human carcinogens. IARC lists chromium metal and trivalent chromium compounds as Group 3 carcinogens, not classifiable as to their human carcinogenicity. Hexavalent chromium compounds are listed by IARC as Group 1 carcinogens that are carcinogenic to humans. NTP Fourth Annual report on Carcinogens cites "certain Chromium compounds" as human carcinogens. ACGIH has reviewed the toxicity data and concluded that chromium metal is not classifiable as a human carcinogen. Medical Conditions Aggravated by Long-Term Exposure: Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure. SARA Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

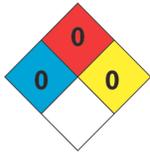
Suitable Extinguishing Media: Not applicable for solid product. Use extinguishers appropriate for surrounding materials. For fine, use a Type-D fire extinguisher or table salt to control small fires. Stainless steel will generate fine turnings, chips or dust. Warning: May Form Combustible (Explosive) Dust - Air Mixtures. Keep away from all ignition sources including heat, sparks, and flame. Keep container closed and grounded. Prevent dust accumulations to minimize explosion hazard.

Specific Hazards arising from the chemical: Not applicable for solid product.

Explosion Hazard: Accumulated metal dust can be combustible. Avoid creating dust.

Section 5 Fire and Explosion Hazard Information (Continue)

Special Protective Equipment and Precautions for Fire Fighters: Self-contained MSHA/NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. DO NOT RELEASE RUNOFF FROM FIRE CONTROL METHODS TO SEWERS OR WATERWAYS.

Hazardous Material Identification System (HMIS) Classification		National Fire Protection Associate (NFPA)
HEALTH	0	 <p>HEALTH = 0, No Hazard beyond that of ordinary combustible materials. FIRE = 0, Materials that will not burn INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.</p>
FLAMMABILITY	0	
PHYSICAL HAZARD	0	

Section 6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Not applicable to nickel alloy in solid state. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations.

Environmental precautions: Not applicable to steel in solid state. Follow applicable federal, state, and local regulations.

Methods and materials for containment and clean up: Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

Section 7 Handling and Storage

Precautions for safe handling: Operations with the potential for generating concentrations above ½ the PEL of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing metal fumes and/or dust. Conditions for safe storage, including any incompatibilities: Store away from acids and incompatible materials.

Section 8 Exposure Controls / Personal Protection

Component	CAS #		% weight ¹	OSHA PEL-TWA	ACGIH TLV-TWA
Iron [Iron oxide] Alloying Elements	(Fe)	7439-89-6	60 - 88	10.0 mg/m ³ [fume]	5.0 mg/m ³ ; A4 ² [dust & fume]
Chromium ³ (Metal)	(Cr)	7440-47-3	10 - 30	1.0 mg/m ³ [metal] 0.5 mg/m ³ [Cr (III)] 5.0 µg/m ³ [Cr (VI)] 2.5 µg/m ³ [Cr (VI)] Action Level	0.5 mg/m ³ ; A ⁴ [metal & Cr (III)] 0.05 mg/m ³ ; A1;BEI [Water-Soluble Cr (VI) compounds] 0.01 mg/m ³ ; A1 [Insoluble Cr (VI) compounds]
Nickel ³ (Metal)	(Ni)	7440-02-0	0 - 46	0.5 mg/m ³ [metal] 0.1 mg/m ³ [Insoluble compounds]	1.5 mg/m ³ ; A5 [elemental] 0.2 mg/m ³ ; A1 [Insoluble compounds] 0.1 mg/mg3; A1 [Nickel subsulfide]
Manganese [elemental & inorganic cpds]	(Mn)	7439-96-5	0 - 15	0.2 mg/m ³ [respirable fraction] 3 mg/m ³ STEL	0.02 mg/m ³ ; A4 [respirable fraction] 0.1 mg/m ³ ; A4 [Inhalable fraction]
Molybdenum	(Mo)	7439-98-7	< 8	10.0 mg/m ³ [total dust] 3.0 mg/m ³ [respirable]	10.0 mg/m ³ [inhalable] 3.0 mg/m ³ [respirable]
Copper ³	(Cu)	7440-50-8	< 6	0.1 mg/m ³ [fume] 1.0 mg/m ³ [dust & mist]	0.2 mg/m ³ [fume] 1.0 mg/m ³ [dust & mist]
Titanium ³ [metal & dioxide]	(Ti)	13463-67-7	< 6	15.0 mg/m ³ [total dust]	10 mg/m ³ ; A4 [dust]
Carbon	(C)	7440-44-0	< 2	N/A	N/A

Section 8 Exposure Controls / Personal Protection (Continue)					
Aluminum ³	(Al)	7429-90-5	< 2	10.0 mg/m ³ [total dust]	10.0 mg/m ³ [metal oxide]
Phosphorus [yellow]	(P)	7723-14-0	< 0.2	0.1 mg/m ³	0.1 mg/m ³
Sulfur [sulfur dioxide]	(S)	7746-09-5	< 0.2	5.0 mg/m ³	0.65 mg/m ³ ; A4;STEL
Silicon	(Si)	7440-21-3	< 2	15.0 mg/m ³ [total] 5.0 mg/m ³ [respirable fraction]	10.0 mg/m ³ [total] 5.0 mg/m ³ [respirable fraction]
Niobium	(Nb)	7440-03-1	< 2	N/A	N/A
Tantalum [metal & oxide]	(Ta)	74440-25-7	< 2	5.0 mg/m ³ [dust & oxide]	5.0 mg/m ³ [dust]
Tin [metal]	(Sn)	7440-31-5	< 2	2.0 mg/m ³	2.0 mg/m ³
Cobalt ³ [elemental & inorganic cpds]	(Co)	7440-48-4	< 2	0.02 mg/m ³ [dust & fume]	0.02 mg/m ³ ; A3 ⁵ [dust & fume]
Lead ³ [elemental & inorganic cpds]	(Pb)	7439-92-1	< 0.1	0.05 mg/m ³ [dust & fume]	0.02 mg/m ³ ; A3 ⁵ [dust & fume]

Section 9 Physical and Chemical Properties			
Appearance and Odor:	Silver-gray metallic solid form Odorless	Water Solubility:	Insoluble
Odor Threshold:	Not Applicable	Fat Solubility:	Not Applicable
Vapor Pressure:	Negligible	Other Solubilities:	Not Applicable
Vapor Density (Air = 1):	Not Applicable	Boiling Point:	NIF for alloy product (Ni-5252/Cr-3992/Fe-5432°F)
Formula Weight:	Not Applicable	Viscosity:	Not Applicable
Density:	Not Applicable	Refractive Index:	Not Applicable
Specific Gravity (H ₂ O) = 1, 60 °F)	7 – 9	Surface Tension:	Not Applicable
pH:	Not Applicable	% Volatile by volume:	Not Applicable
Flash Point (closed cup):	Not Applicable	Evaporation Rate:	Not Applicable

Section 10 Stability and Reactivity	
<p>Reactivity: Not Determined (ND) for product as a whole.</p> <p>Stability: Nickel Alloy products are stable under normal storage and handling conditions.</p> <p>Polymerization: Hazardous polymerization cannot occur.</p> <p>Chemical Incompatibilities: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.</p> <p>Conditions to Avoid: Storage with strong acids or calcium hypochlorite</p> <p>Hazardous Decomposition/Combustion Products: Thermal oxidative decomposition can produce fumes containing oxides of iron and manganese as well as other alloying elements.</p> <p>Sensitivity to Mechanical Impact: ND</p> <p>Sensitivity to Static Discharge: ND</p>	

Section 11 Toxicology Information				
<p>Toxicological information has not been established for this product as sold. However, processing of this product in operations such as high temperature (burning, welding), sawing, brazing, machining and grinding may produce fumes and/or particulates, which would result in the material being classified as hazardous under OSHA 29 CFR 1910.1200. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated and are listed below:</p>				
Potential Hazard	Hazard Category	Hazard Symbol	Signal Word	Hazard Statement
Acute Toxicity Hazard	4 ^a		WARNING	Harmful if swallowed
Skin Irritation	3 ^b	No Symbol	WARNING	Causes skin irritation
Eye Damage / Irritation	2B ^c	No Symbol	WARNING	Causes eye irritation
Skin Sensitization	1 ^d		WARNING	May cause an allergic skin reaction
Carcinogenicity	2 ^g		WARNING	Suspected of causing cancer
Toxic Reproduction	2 ^h		WARNING	Suspected of damaging the unborn child
Specific Target Organ Systemic Toxicity (STOST) following Single Exposure	3 ⁱ		WARNING	May cause respiratory irritation

Section 11		Toxicology Information (Continue)		
STOST following Repeating Exposure	1 ^j		WARNING	Causes damage to lungs through prolonged or repeated inhalation exposure. Causes damage to the central nervous system
<p>Notes:</p> <p>a. No LC₅₀ or LD₅₀ has been established for Stainless Steel (semi-finished steel products). The following data has been determined for the components:</p> <ul style="list-style-type: none"> • Iron: LD50= 1060 mg/kg (Oral/ Rat) • Manganese: Mn single oral exposures, LD50 ranged from 275 to 804 mg/kg body weight per day for manganese chloride in different rat strains • Chromium (as Cr +VI): LD50 = 80 mg/kg (Oral/Rat) • Silicon: LD50 = 3160 mg/kg (Oral/Rat); and as Silicon Dioxide: LD50 > 15,000 mg/kg (Oral/Rat) ; LD50 > 5000 mg/kg (Dermal/Rat); LC50 > 0.69 mg/l/4hr (Inhalation/Rat) • Nickel: LD50 > 9000 mg/kg (Oral/Rat); LC50 > 10.2 mg/l (Inhalation/Rat) • Boron: LD = 650 mg/kg (Oral/Rat) 				
<p>b. No Skin (Dermal) Irritation data available for Stainless Steel (semi-finished steel products) as a mixture. The following Skin (Dermal) Irritation information was found for the components:</p> <ul style="list-style-type: none"> • Iron: Causes skin irritation • Chromium (as Cr +VI): Corrosive. Human skin sensitizer • Nickel: Slight irritation only in rabbits • Molybdenum: Irritating • Tungsten: Skin contact may cause irritation due to abrasive action of the dust 				
<p>c. No Eye Irritation data available for Stainless Steel (semi-finished steel products) as a mixture. The following Eye Irritation information was found for the components:</p> <ul style="list-style-type: none"> • Iron, Molybdenum: Causes eye irritation • Silicon: Slight eye irritation in rabbit protocol • Chromium (as Cr +VI): Corrosive • Nickel: Slight eye irritation from particulate abrasion only. • Tungsten: Eye contact may cause irritation due to abrasive action of the dust 				
<p>d. No Skin (Dermal) Sensitization data available for Stainless Steel (semi-finished steel products) a mixture. The following Skin (Dermal) Sensitization information was found for the components:</p> <ul style="list-style-type: none"> • Nickel: Human skin sensitizer • Copper, Chromium (as Cr +VI): May cause allergic skin reaction • Copper: It is reported that copper may induce allergic contact dermatitis in susceptible individuals 				
<p>e. No Respiratory Sensitization data available for Stainless Steel (semi-finished steel products) a mixture. The following Respiratory Sensitization information was found for the components:</p> <ul style="list-style-type: none"> • Chromium (as Cr +VI): Occupational asthma reported in workers 				
<p>f. No Germ Cell Mutagenicity data available for Stainless Steel (semi-finished steel products) as a mixture. The following Mutagenicity and Genotoxicity information was found for the components:</p> <ul style="list-style-type: none"> • Iron: Some positive and negative findings in vitro • Chromium (as Cr +VI): Positive in in vitro and in vivo assays including cell transformation in vitro and dominant lethal in vivo • Nickel: Positive results in vitro and in vivo but insufficient data for classification • Aluminum: Not mutagenic in vitro; but has marginal effects in vivo 				
<p>g. Carcinogenicity: IARC, NTP, and OSHA do not list Stainless Steel (semi-finished steel products) as carcinogens. The following Carcinogenicity information was found for the components:</p> <ul style="list-style-type: none"> • Welding Fumes, IARC Group 2B carcinogen, a mixture that is possibly carcinogenic to humans. • Nickel and certain nickel compounds - IARC Group 2B carcinogens that are possibly carcinogenic to humans. Insoluble nickel compounds - ACGIH confirmed human carcinogen. Nickel - EURAR Insufficient evidence to conclude carcinogenic potential in animals or humans; suspect carcinogen classification Category 2 Suspected of causing cancer. Nickel Oxide – HSDB listed as Category 1a, may cause cancer. Human data in which exposure to nickel refinery dust caused lung and nasal tumors. • Chromium metal and trivalent chromium compounds - IARC Group 3 carcinogens, not classifiable as to their human carcinogenicity. Hexavalent chromium compounds - IARC as Group 1 carcinogens, carcinogenic to humans. Chromium metal – ACGIH not classifiable as a human carcinogen. NTP Fourth Annual report on Carcinogens cites “certain Chromium compounds” as human carcinogens. 				
<p>h. No Toxic Reproduction data available for Stainless Steel (semi-finished steel products) as a mixture. The following Toxic Reproduction information was found for the components:</p> <ul style="list-style-type: none"> • Hexavalent Chromium: Developmental toxicity in the mouse. • Nickel: Oral administration to experimental animals caused fetotoxicity. • Aluminum: May cause delay in development of neurobehavioral indices. 				
<p>i. No Specific Target Organ Systemic Toxicity (STOST) following a Single Exposure data available for Stainless Steel (semi-finished steel products) as a mixture. The following STOST following a Single Exposure data was found for the components:</p> <ul style="list-style-type: none"> • Iron, Molybdenum: May cause respiratory irritation. 				

Section 11 Toxicology Information (Continue)

j. No Specific Target Organ Systemic Toxicity (STOST) following Repeated Exposure data was available for Stainless Steel (semi-finished steel products) as a whole. The following STOST following Repeated Exposure data was found for the components:
• Aluminum: Chronic exposure to aluminum flake has been reported to cause pneumoconiosis in workers. Repeat oral exposure to aluminum results in decrements in neurobehavioral function and development.
• Manganese: Neurobehavioral alterations in worker populations with Mn and MnO including: speed and coordination of motor function are especially impaired
• Hexavalent Chrome: Inflammation of lung, skin irritation and ulceration with repeat exposures in workers.
• Nickel: Rats exposed to Nickel by inhalation at 1 mg/m3 for 90 days developed lung inflammation, hyperplasia and fibrosis.
• Boron: Mice exposed to amorphous boron at 72 mg/m3 for 6 weeks did not exhibit toxicity

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

Section 12 Ecological Information

Not applicable for solid alloy in its as-shipped form. No information has been found on specific alloy as a whole in order to determine its effect if released into the environment in finely divided form. It is believed that finely divided alloy, based on its components, will be hazardous to fish, animals, plants and the environment if released, the degree of which would depend on the particle size and quantity released. In addition, if particles are small enough, alloy may be ingested by wildlife, with possible toxic effects occurring.
The solid alloy is not expected to migrate easily into soil or groundwater based upon its insoluble form. However, finely-divided alloy can become mobile in water and contaminate soil and groundwater, if particles are small enough. Finely-divided alloy may persist in the environment for long periods, based upon the corrosion resistant, insoluble, and non-biodegradable properties of the alloy. In addition, heavy metals may contaminate the food chain and ultimately be consumed by humans.
Over time, steel will react with oxygen to form metallic oxides, the rate of which depends on various conditions. Iron oxidizes most rapidly in moist air. Metallic particulate discharged to a POTW may pass-through or contaminate sewage sludge, may interfere with the treatment system process, and may be non-compliant with a POTW permit or other regulations.

Hazard Category: Not Reported
Hazard Symbol: No Symbol
Signal Word: No Signal Word
Hazard Statement: No Hazard Statement
Ecotoxicity: No data available for the product, Stainless Steel as a whole However, individual components of the product have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife as follows:
• Hexavalent Chrome: EC50 and LD50 to algae and invertebrates < 1 mg.
• Aluminum: LC50> 100 mg/l for fish and algae
Mobility: No data available for the product, Stainless Steel (semi-finished steel products) as a whole. However, individual components of the product have been found to be absorbed by plants from soil.
Persistence & Degradability: No Data Available
Bioaccumulative Potential: No Data Available

Section 13 Disposal Considerations

Disposal: Steel scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.
Dusts from use and processing may be classified as a hazardous waste, depending on various properties of the dust (e.g. toxicity, solubility, flammability), which are defined further within 40 CFR Part 261 and other federal, state and/or local laws. Solid waste generated from product use and processing should be classified by a competent environmental professional and disposed, processed or recycled in accordance with all applicable federal state and local laws.
Container Cleaning and Disposal: Follow applicable Federal, state and local regulations. Observe safe handling precautions. European Waste Catalogue (EWC): 16-01-17 (ferrous metals), 12-01-99 (wastes not otherwise specified), 16 03 (off specification batches and unused products), or 15 01 04 (metallic packaging).
Please note this information is for Stainless Steel in its original form. Any alterations can void this information.

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101):
US Department of Transportation (DOT) under 49 CFR 172 does not regulate Stainless Steel (semi-finished steel products) as a hazardous material. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

Section 14 **Transport Information (Continue)**

Shipping Name: NA Shipping Symbols: NA Hazard Class: NA UN No.: NA Packing Group: NA DOT / IMO Label: NA Special Provisions (172.102): NA	Packaging Authorizations a) Exceptions: NA b) Group: NA c) Authorization: NA	Quantity Limitations a) Passenger, Aircraft, or Railcar: NA b) Cargo Aircraft Only: NA Vessel Stowage Requirements a) Vessel Stowage: NA b) Other: NA DOT Reportable Quantities: NA
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The International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

ADR - Regulations Concerning the International Carriage of Dangerous Goods by Road does not regulate Stainless Steel (semi-finished steel products) as a hazardous material.

Shipping Name: NA Classification Code: NA UN No.: NA Packing Group: NA ADR Label: NA Special Provisions: NA Limited Quantities: NA	Packaging a) Packing Instructions: NA b) Special Packing Provision: NA c) Mixed Packing Provisions: NA	Portable Tanks & Bulk Containers a) Instructions: NA b) Special Provision: NA
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IATA - International Air Transport Association (IATA) does not regulate Stainless Steel (semi-finished steel products) as a hazardous material.

Shipping Name: NA Class / Division: NA Hazard Label (s): NA UN No.: NA Packing Group: NA Excepted Quantities (EQ): NA	Passenger & Cargo Aircraft Limited Quantity (EQ)		Cargo Aircraft Only	Special Provisions: NA ERG Code: NA
	Package Instruction: NA Max Net Qty/Pkg: NA	Package Instruction: NA Max Net Qty/Pkg: NA	Package Instruction: NA Max Net Qty/Pkg: NA	

Pkg Inst - Packing Instructions **Max Net Qty/Pkg - Maximum Net Quantity per Package** **ERG - Emergency Response Drill Code**

Transport Dangerous Goods (TDG) Classification: Stainless Steel (semi-finished steel products) does not have a TDG classification.

Section 15 **Regulatory Information**

Regulatory Information: The following listing of regulations relating to an ATI Allegheny Ludlum product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities. This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, Stainless Steel (semi-finished steel products) as a whole is not listed. However, individual components of the product are listed: Refer to Section 8, Exposure Controls and Personal Protection

EPA Regulations: Stainless Steel (semi-finished steel products) is not listed as a whole. However, individual components of the product are listed:

Components	Regulations
Aluminum (Al)	SWDA, SARA 313
Chromium (Cr)	CAA, CWA, SARA 313, SDWA, CERCLA, RCRA
Copper (Cu)	CWA, CERCLA, SDWA, SARA 313
Iron (Fe)	SDWA
Manganese (Mn)	SARA 313, CAA, CERCLA, SDWA
Molybdenum (Mo)	SDWA
Nickel (Ni)	CAA, CWA, SARA 313, CERCLA, RCRA, SDWA
Vanadium (V)	SARA 313

SARA Title III Hazard Categorization: Product (dust and fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) health hazard as defined by 40 CFR 370.

SARA Title III Section 302 Extremely Hazardous Substances (EHSs): No components are listed as extremely hazardous substances.

Regulations Key:

CAA	Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06])
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 USC secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)
CWA	Clean Water Act (33 USC Secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])
RCRA	Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)
SARA	Superfund Amendments and Reauthorization Title III Section 302 Extremely Hazardous Substances (42 USC secs. 11023, 13106; 40 CFR Sec. 372.65) and Section 313 Toxic Chemicals (42 USC secs. 11023, 13106; 40 CFR sec. 372.65 [as of 6/30/05])
TSCA	Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])
SDWA	Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

Section 313 Supplier Notification: This product, Stainless Steel (semi-finished steel products) contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372:

CAS #	Chemical Name	Max Percent by Weight
7429-90-5	Aluminum	30
7440-47-3	Chromium	46
7440-50-8	Copper	4

Section 15 Regulatory Information (Continue)

CAS #	Chemical Name	Max Percent by Weight
7439-96-5	Manganese	10
7440-02-0	Nickel	1.1
7440-62-2	Vanadium	4

This information should be included in all MSDSs that are copied and distributed for this material.

State Regulations: The product, Stainless Steel (semi-finished steel products) as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

Pennsylvania Right to Know: Contains regulated material in the following categories:

- Hazardous Substances: Chromium, Nickel, Manganese, Copper, Molybdenum, Tantalum, Tungsten, Aluminum, and Silicon
- Environmental Hazards: Aluminum (dust and Fume), Nickel, Tantalum Manganese, Copper, Vanadium and Chromium
- Special Hazard Substances: Chromium, Nickel and Iron

California Prop. 65: This product contains chromium and nickel metals/compounds known to the State of California to cause cancer. This product may contain trace amounts of other heavy metals, including arsenic, cadmium, cobalt and lead, known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey: Contains regulated material in the following categories:

- Special Health Hazard Substances: Manganese, Nickel, and Chromium
- Hazardous Substance List: Iron Oxide (fume), Silicon, Titanium, Molybdenum, Vanadium, Tantalum, Tungsten, Aluminum (dust and fume), Chromium, Nickel, Manganese, Boron, and Copper
- Environmental Hazards: Tungsten, Nickel, Cobalt, and Chromium compounds

Minnesota: Iron Oxide (fume), Silicon, Nickel (elemental, soluble, and insoluble compounds), Aluminum (dust and fume), Chromium (metal), Copper, Cobalt, and Manganese (elemental and compounds)

Massachusetts: Aluminum (dust and fume), Silicon (dust), Nickel, Copper, Cobalt, Chromium (compounds), Manganese, Vanadium Molybdenum, Tungsten, and Iron

Other Regulations:

WHMIS Classification (Canadian): Stainless Steel (semi-finished steel products) is not listed as a whole. However individual components are listed.

Ingredients	WHMIS Classification
Copper	D2B, B4
Iron	B4, D2B
Manganese	B4, D2A
Molybdenum	B4, D2B
Nickel	D2B
Silicon	B4
Titanium	D26
Vanadium	D3B

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

ABBREVIATIONS/ACRONYMS:

ACGIH American Conference of Governmental Industrial Hygienists	NIF No Information Found
BEIs Biological Exposure Indices	NIOSH National Institute for Occupational Safety and Health
CAS Chemical Abstracts Service	NTP National Toxicology Program
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act	ORC Organization Resources Counselors
CFR Code of Federal Regulations	OSHA Occupational Safety and Health Administration
CNS Central Nervous System	PEL Permissible Exposure Limit
GI, GIT Gastro-Intestinal, Gastro-Intestinal Tract	PNOR Particulate Not Otherwise Regulated
HMIS Hazardous Materials Identification System	PNOC Particulate Not Otherwise Classified
IARC International Agency for Research on Cancer	PPE Personal Protective Equipment
LC50 Median Lethal Concentration	ppm parts per million
LD50 Median Lethal Dose	RCRA Resource Conservation and Recovery Act
LD_{Lo} Lowest Dose to have killed animals or humans	RTECS Registry of Toxic Effects of Chemical Substances
LEL Lower Explosive Limit	SARA Superfund Amendment and Reauthorization Act
µg/m³ microgram per cubic meter of air	SCBA Self-contained Breathing Apparatus
mg/m³ milligram per cubic meter of air	SDS Safety Data Sheet
mppcf million particles per cubic foot	STEL Short-term Exposure Limit
MSDS Material Safety Data Sheet	TLV Threshold Limit Value
MSHA Mine Safety and Health Administration	TWA Time-weighted Average
NFPA National Fire Protection Association	UEL Upper Explosive Limit

Section 16**Other Information (Continue)**

While the information provided in this SDS is believed to provide a useful summary of the hazards of stainless steel as it is commonly used, the SDS cannot anticipate and provide all of the information that might be needed in every situation the user may experience. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this MSDS should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation. Professional industrial hygiene and/or safety engineering advice should be sought to assist you in this regard.

The information provided herein was believed by Precision Specialty Metals, Inc. to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product, and to determine the suitability of the product for its intended use.



Tin / Lead Solid Solder SAFETY DATA SHEET

Control # 900 date: 5/29/15

SECTION: 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

- 1.1 Product Name: Tin / Lead Solder
Product Identification: 50Sn/50Pb Solder
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:
- 1.2.1 Relevant identified uses: For solder consumables and related products.
- 1.2.2 Uses advised: Reference the [7. Handling and storage]
- 1.3 Details of the supplier of the safety data sheet:
- Supplier: Weldcote Metals Inc.
842 Oak Grove Rd.
Kings Mountain, NC 28086
- Emergency telephone number: (800) 424-9300 or (704) 739-4115
- Email: info@weldcotemetals.com

SECTION: 2 HAZARDS IDENTIFICATION

- 2.1 Classification of the mixture:
The product is placed on the market in solid form

2.1.1 Classification in accordance with GHS-US

Acute Tox. 4 (Oral)	H302
STOT RE2	H373
Repr. 2	H361
Resp.Sens 1B	H334
Skin Sens. 1	H317
Aquatic Chronic 4	H413

- 2.2 Label elements:

GHS-US labeling

Hazard Pictograms (GHS-US):



GHS07



GHS08

Signal word (GHS-US): Danger

Hazard statements (GH5-US):

<u>H302</u>	Harmful if swallowed
<u>H334</u>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<u>H317</u>	May cause an allergic skin reaction
<u>H361</u>	Suspected of damaging fertility or the unborn child.
<u>H373</u>	May cause damage to organs through prolonged or repeated exposure.
<u>H413</u>	May cause long lasting harmful effects to aquatic life.

Precautionary statements:

<u>P270</u>	Do not eat, drink or smoke with using this product.
<u>P280</u>	Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P341 IF INHALED: if breathing is difficult, remove person to fresh air and keep comfortable for

breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P402 Store in a dry place.

P501 Dispose of contents and container in accordance with local regional/national international regulations.

- 2.3 Other hazards: No additional information available
- 2.4 Unknown acute toxicity (GHS-US): No data available.

SECTION: 3 COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances: No data available
Full text of H-phrases: see section 16
- 3.2 Mixtures: The mixture contains dangerous substances:



Tin / Lead Solid Solder

SAFETY DATA SHEET

Substance name		Product Identifier (CAS No)	% Percent	GHS-US classification
Tin	Sn	7440-31-5	49.5-51.5	Not classified
Lead	Pb	7439-92-1	44-48.5	Carc. 2 H351; Repr. 2, H361; STOT RE2; Aqutic Chronic 4, H413

SECTION: 4 FIRST AID

4.1 Description of first aid measures:

First-aid measures after inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get medical attention.

First-aid measures after skin contact: Flush with water for at least 15 minutes. Seek medical attention if irritation develops or persists.

First-aid measures after eye contact: Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if discomfort persists.

First-aid measures after ingestion: Do NOT induce vomiting. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

Symptoms/injuries after inhalation: Short-term (acute) overexposure to the gases, fumes, and dusts may include irritation of the eyes, lungs, nose, and throat. Some toxic gases associated with welding may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty in breathing, frequent coughing, or chest pain. The presence of chromium/chromate in fume can cause irritation of nasal membranes and skin. The presence of nickel compounds in fume can cause metallic taste, nausea, tightness of chest, fever, and allergic reaction. Excessive inhalation or ingestion of manganese can produce manganese poisoning. Overexposure to manganese compounds may affect the central nervous system, symptoms of which are languor, sleepiness, muscular weakness, emotional disturbances, and spastic gait resembling Parkinsonism. These symptoms can become progressive and permanent if not treated. Excessive inhalation of fumes may cause "Metal Fume Fever" with Flu-like symptoms such as chills, fever, body aches, vomiting, sweating, etc.

Symptoms/injuries after skin contact:

Dusts may cause irritation.

Symptoms/injuries after eye contact:

Causes eye irritation.

Symptoms/injuries after ingestion: Not an anticipated route of exposure during normal product handling. May be harmful if ingested.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

SECTION: 5 FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture: Fire may produce irritating or poisonous gases.

Fire hazard: Not flammable

Explosion hazard: None known

5.3 Advice for firefighters: In the event of fire, wear self-contained breathing apparatus and full protective gear.



Tin / Lead Solid Solder

SAFETY DATA SHEET

30f8

SECTION: 6 ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures:**
For non-emergency personnel: Wear appropriate personal protective equipment as specified in Section 8. Ensure adequate ventilation.
For emergency responders: No data available.
- 6.2 **Environmental precautions:** Avoid release into the environment. Avoid dispersal of spilled material and contact with soil, ground and surface water drains and sewers.
- 6.3 **Methods and material for containment and cleaning up:** Take up mechanically. Collect the material in labeled containers and dispose of according to local and regional authority requirements.
- 6.4 **Reference to other sections:** See Section 7 for information of safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION: 7 HANDLING AND STORAGE

- 7.1 **Precautions and safe handling:** Welding may produce dust, fumes and gases hazardous to health. Avoid breathing dust, fumes and gases. Use adequate ventilation. Keep away from sources of ignition. Avoid contact with skin, eyes and clothing. Do not eat, drink and smoke in work areas.
- 7.2 **Conditions for safe storage, including and incompatibilities:** Store in cool, dry and well-ventilated place. Keep away from incompatible materials. Keep away from heat and open flame.
- 7.3 **Specific end use(s):** For welding consumables and related products.

SECTION: 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 **Control parameters:** Exposure limits were not established for this product

Tin (CAS No) 7440-31-5		
USA ACGIH	ACGIH (TWA) (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³
Lead (CAS No) 7439-92-1		
USA ACGIH	ACGIH (TWA) (mg/m ³)	0.05 mg/m ³
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	50 µg/m ³

8.2 **Exposure controls:**

Appropriate engineering controls: local exhaust and general ventilation must be adequate to meet exposure standards.

Hand protection: Wear welding gloves.

Eye protection: Wear helmet or face shield with filter lens of appropriate shade number. See ANSI/ASC Z49.1 Section 4.2. Provide protective screens and flash goggles, if necessary, to shield others.

Skin and body protection: Wear head and body protection, which help to prevent injury from radiation, sparks, flame and electrical shock.

See ANSI Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the employee not to touch live electrical parts and to insulate him/herself from work and ground. Welders should not wear short sleeve shirts or short pants.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.



Tin / Lead Solid Solder

SAFETY DATA SHEET

SECTION: 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical state:	- Solid
Appearances:	- Wire, wire ribbon, or preformed shapes with a core of flux
Color:	- Silver gray
Odor:	- Mild
Odor threshold:	- No data available
pH:	- No data available
Relative evaporation rate (butyl acetate = 1):	- No data available
Melting point:	- 183 – 238 C (361 – 460 F)
Freezing point:	- No data available
Initial boiling point and boiling range:	- No data available
Flash point:	- No data available
Self ignition temperature:	- No data available
Decomposition temperature:	- No data available
Flammability (solid, gas):	- No data available
Vapour pressure:	" No data available
Relative vapour density at 20· C:	- No data available
Relative density:	- No data available
Solubility(ies)	- No data available
Log Pow:	- No data available
Log Kow:	- No data available
Viscosity, kinematic:	- No data available
Viscosity, dynamic:	- No data available
Explosive properties:	- No data available
Oxidizing properties:	- No data available
Explosive limits:	- No data available

9.2 Other information: No additional information available.

SECTION: 10 STABILITY AND REACTIVITY

10.1 Reactivity: No additional information available.

10.2 Chemical stability: The product is stable under normal conditions. When using it may produce dangerous fumes and gases.

10.3 Possibility of hazardous reactions: Will not occur.

10.4 Conditions to avoid: None

10.5 Incompatible materials: None

10.6 Hazardous decomposition products: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and welding consumables used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coating on the metal being welded (i.e. paint, painting, galvanizing), the number of welders, the volume of the work area, the quality and the amount of ventilation, the position of the welders head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from the cleaning and degreasing activities).

When an electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Fume and gas decomposition, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration. Also, new compounds not in the electrodes may form. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the materials shown in Section 3, plus those from the base metal coating, etc., as noted above. Reasonable expected fume constituents of this product would include: Complex oxides of iron, manganese, silicon, chromium, nickel, columbium, molybdenum, copper, carbon dioxide, carbon monoxide, ozone and nitrogen Oxides. Some products will also contain antimony, barium, molybdenum, aluminum, columbium, magnesium, strontium, tungsten, and or zirconium. Fume limit for chromium, nickel and or manganese may be reached before limit of 5 mg/m3 of general welding fumes is reached.

Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. See ANSI/AWS F1., F1.3 and F1.5, available from the American Welding Society, 550 N.W. Lejeune Road, Miami, FL 33126.

SECTION: 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity: Harmful if swallowed

Substance name	CAS number	LD50 oral rat (mg/kg)	ATE (oral) (mg/kg)	Comments
Tin	7440-31-5			No Data
Lead	7439-92-1			No Data

Skin corrosion/irritation: Poss irritant
 Serious eye damage/irritation: Poss irritant
 Respiratory or skin sensitization: May cause an allergic skin reaction.
 Germ cell mutagenicity: Not classified
 Carcinogenicity: May cause cancer.

Substance name	CAS number	Agency	Risk Factor
Lead	7439-92-1	IARC Group	2B Possibly carcinogenic 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

SECTION: 12 ECOLOGICAL INFORMATION

12.1 Toxicity:

Ecology - general: Very toxic to aquatic life.

Tin	(CAS No) 7440-31-5
BCF fish 1	(no bioaccumulation expected)
Lead	(CAS No) 7493-92-1
BCF fish 1	(no bioaccumulation expected)

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: No additional information available.



Tin / Lead Solid Solder

SAFETY DATA SHEET

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SECTION: 13 DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods: Dispose of in accordance with local and national regulations.
Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION: 14 TRANSPORT INFORMATION

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

- 14.1 UN Number: Not a dangerous good in sense of transport regulations
- 14.2 UN proper shipping name: Not applicable

SECTION: 15 REGULATORY INFORMATION

- 15.1 US Federal Regulations:

Tin	(CAS No) 7440-31-5
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	
Lead	(CAS No) 7439-92-1
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	



Tin / Lead Solid Solder

SAFETY DATA SHEET

15.2 US State Regulations:

Tin (CAS No) 7440-31-5				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				

Lead (CAS No) 7439-92-1				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. California - Proposition 65 - Reproductive Toxicity - Female	U.S. California - Proposition 65 - Reproductive Toxicity - Male	No Significance risk level (NSRL)
Yes				

Tin (CAS No) 7440-31-5	
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
Lead (CAS No) 7439-92-1	
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION: 16 OTHER INFORMATION

Full text of H-phrases:

H302	Harmful if swallowed
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

<u>NFPA health hazard:</u>	2 – Hazardous, use breathing apparatus.
<u>NFPA fire hazard:</u>	1 – Must be preheated to burn.
<u>NFPA reactivity:</u>	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



<u>HMS III Rating</u>	
<u>Health:</u>	2 - Moderate Hazard - Temporary or minor injury may occur
<u>Flammability:</u>	1 – Slight Harard
<u>Physical:</u>	0 - Minimal Hazard

We believe that the information contained herein is believed to be true and accurate as of the date of this SDS. All statements or suggestions are made without any warranty, expressed or implied, regarding the accuracy of the information, the hazard connected with the use of this material or the results to be obtained for use thereof. As the condition or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material. It is the user's obligation to determine the conditions of safe use of these products.

All chemical products can in fact present unknown risks to health, safety and / or the environment, even in relation to the different operating conditions, and they must therefore be used with care. For this reason we cannot guarantee that the risk described in this form are the only foreseeable risks. The user must therefore satisfy himself as to the particular conditions under which it is intended to be use in. Moreover, it must be noted that the user is obliged to comply with all the legislative, administrative and regulatory provisions regarding the product and its use in terms of occupational hygiene and safety, and environmental protection, apart from the information given in the form, given purely as guidance.

Technical Department

SAFETY DATA SHEET

SUPERIOR RUBYFLUID

DATE REVISED: January 1, 2016

Product Name: Superior Rubyfluid

Manufacturer: Superior Flux & Mfg. Co. 6615 Parkland Blvd. Cleveland, OH 44139

Emergency Phone Number: 1-800-424-9300 (CHEMTREC)

Other Information Calls: (440) 349-3000

To the Purchaser: This SDS contains important environmental, health, and toxicology information for your employees who have ordered this product. Please be sure this information is given to them. If you resell this product, a copy of the SDS should be given to the buyer.

H.M.I.S. INFORMATION: HEALTH = 2 FLAMMABILITY = 0 REACTIVITY = 1

SECTION I - IDENTIFICATION

Common Name: Superior Rubyfluid

Chemical Family: Soft Soldering Flux

CAS Number: NA

Chemical Name: NA

Formula: See below

SECTION II – HAZARDS IDENTIFICATION

Classification of Substance or Mixture:

Classification (CLP): Corrosive

Label Elements (CLP): Corrosive



Corrosive Irritant Environmentally Damaging

Signal Word: Danger

Precautionary Phrases: P264, P270, P273, P280, P301+P312, P305+P351+P338, P330, P337+P313, P301+P330+P331, P304+P340, P309+P311

Risk Phrases: R36/37/38, R34

Safety Phrases: S-26, S-27, S-36/37/39, S-45, S18, S61, S62, S64

See section XVI for full text description of S and R phrases

Other Hazards: None if used properly

SECTION III- COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL	H Phrases
Zinc Chloride	7646-85-7	30-45	1 mg/m ³	H302, H314, H319, H335, H400, H401

Unlisted percentages are non-hazardous stabilizers, and water. None of the materials in this product are listed in NTP, IARC, or OSHA as carcinogens.

SECTION IV – FIRST AID MEASURES

Inhalation: Remove to fresh air
Eyes: Flush with water for fifteen (15) Minutes. Call physician.
Skin: Wash thoroughly with soap and water.
Ingestion: If patient is fully conscious, give large amounts of water. Obtain medical attention immediately.

Most Important Symptoms and effects, both acute and delayed

Primary Routes of Entry into Body: Fume inhalation, ingestion, skin, and eyes.

Symptoms of Overexposure: Salivation, coughing, choking, chills, may cause weight loss, brittle bones, anemia, and stiff joints.

Medical Conditions Generally Aggravated by Exposure: Any weakness of the lungs, kidneys or liver will be aggravated.

Chemical Listed as Carcinogen or Potential Carcinogen: None

OSHA Permissible Exposure Limit (PEL): NA

ACGIH Threshold Limit Value (TLV): NA

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA

Flammable Limits: NA

Extinguishing Media: Dry chemical, CO₂ foam

Auto Ignition Temperature: None

Special Fire Fighting Procedures: Normal cautions when dealing with chemicals.

Unusual Fire and Explosion Hazards: Will release small amounts of HCl upon decomposition

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Spilled: First neutralize with soda ash or sodium bicarbonate, dilute with water and dispose of in accordance with EPA regulations.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in plastic containers in cool area, away from heat.

Handling Precautions: Safe precautionary practices to avoid spills and exposure to skin and fumes.

Other Precautions: NA

SECTION VIII - CONTROL MEASURES

Respiratory Protection (TYPE): NIOSH approved respirator.

Ventilation: Yes

Mechanical (General): Explosion proof

Local Exhaust: Yes

Protective Gloves: Recommended, NIOSH approved

Other Protective Clothing or Equipment: Rubber apron is recommended.

Eye Protection: Safety Glasses

Regulatory Information: The chemical components are listed on TSCA and DSL inventory. See composition section ii for CAS numbers

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: 107°C/225°F

Specific Gravity (Water = 1): 1.32

Vapor Pressure (mm Hg): <18 mm Hg @ 20°C

Percent Volatile by Volume: 73.5%

Evaporation Rate (Butyl Acetate = 1): <1

Freezing Point: <30°F

Solubility in Water: Unlimited

pH: 4 – 5 @ 20 - 25°C

Appearance and Odor: Red-colored liquid, no characteristic odor

SECTION X - STABILITY AND REACTIVITY

Stability: Product is stable

(Conditions to Avoid): Metals

Incompatibility: Alkaline, strong oxidizing or reducing materials, cyanides or combustible materials.

Hazardous Decomposition Products: HCl, zinc chloride, zinc oxide, ammonium.

Hazardous Polymerization: Will not occur

(Conditions to Avoid): Excessive heat or cold

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Toxicity Data

- 1) **Oral:** LD-50 (rat): Not available
- 2) **Inhalation:** LC-50 (rat): Not available
- 3) **Dermal:** LD-50 (rabbit): Not available
- 4) **Skin Irritation:** (rabbit): Not available

Chronic Toxicity Data

- 1) **Repeated Skin Application:** (rat): Not available
 - 2) **Eye Irritation:** (rabbit): Not available
-

SECTION XII - ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with EPA regulations

SECTION XIV- TRANSPORTATION

D.O.T. Proper Shipping Name: Zinc Chloride Solution (Contains Zinc Chloride)

Hazard Class: 8

Identification Number: UN1840

Packing Group: III

Type D.O.T Label Required Information: Corrosive

Ground USA: (1-gallon and smaller)

Classified as **ORM-D**. Refer to USA CFR 49 Regulations.

Recommended Shipper be trained and certified.

Ground Canada: (1-gallon and smaller)

Classified as **Consumer Commodity**.

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations).

Recommended Shipper be trained and certified.

SECTION XV - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: NA

Carcinogenicity Classification: (Components Present at 0.1% or More)

International Agency for Research on Cancer (IARC): NA

American Conference of Governmental Industrial Hygienists (ACGIH): NA

National Toxicology Program (NTP): NA

Occupational Safety and Health Administration (OSHA): NA

All Components of this Product are Listed on the U.S. Toxic Substances Control Act Inventory or Otherwise Comply with TSCA Pre-manufacture Notification Requirements.

This product is RoHS compliant.

SECTION XVI - OTHER INFORMATION

The labeling of this product is indicated in Section II. The full text of all abbreviations indicated by codes in the MSDS are as follows:

R34	Causes burns
R36	Irritating to eyes
R37	Irritating to respiratory system
R38	Irritating to skin
S-18	Handle and open container with care
S-26	In case of eye contact, rinse thoroughly and get medical attention
S-27	Take off immediately contaminated clothing
S-36/37/39	Wear suitable protective clothing, gloves, and eye/face protection
S-45	In case of accident or if feel unwell call medical advice immediately
S61	Avoid release to the environment. Refer to special instructions/safety data sheet
S62	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label where possible

- S64 If swallowed, rinse mouth with water (only if the person is conscious)
- P264 Wash ... thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P273 Avoid release to the environment
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P301+P312 IF SWALLOWED: 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
- P330 Rinse mouth
- P337+P313 If eye irritation persists get medical advice/attention
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P309+P311 IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician
-
- H302 Harmful if swallowed
- H319 Causes serious eye irritation
- H401 Toxic to aquatic life
- H314 Causes severe skin burns and eye damage
- H335 May cause respiratory irritation
- H400 Very toxic to aquatic life

Further information:

Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. Reasonable care has been taken in the preparation of this material, but there are NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Synonyms

Polyiso Foam with Glass Reinforced Facer

Chemical Family

POLYISOCYANURATE Foam

Product Description

This product is as an article in accordance with 29 CFR 1910.1200.

Product Use

Thermal Insulation foams

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Component Related Regulatory Information

The components listed above are part of a product that is considered an “article” as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered “manufactured articles” as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS. Under normal conditions of use, these components do not pose a hazard in the workplace or to the building occupants. Since this “article” poses no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, “articles” are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

GHS Label Elements

Symbol(s)

None needed according to classification criteria.

Signal Word



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

None needed according to classification criteria.

Hazard Statement(s)

None needed according to classification criteria.

Precautionary Statement(s)

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent by weight
Not available	Polyisocyanurate Foam	75-80
109-66-0	Pentane	< 10
65996-61-4	Cellulose pulp	15-23
65997-17-3	Fiberglass	1-5

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

Get medical advice/attention if you feel unwell.

Inhalation

If dust is inhaled, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get medical advice/attention if you feel unwell.

Skin

If skin irritation or rash occurs: Wash with plenty of soap and water. Get medical attention if irritation develops or persists.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Eyes

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do, prior to rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Delayed

No information on significant adverse effects.

Section 5 - FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Regular dry chemical, carbon dioxide, foam, water fog.

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Fumes from heating may cause irritation, allergic reactions.

Hazardous Combustion Products

Oxides of carbon.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Avoid generating dust in the air.

Environmental Precautions

Prevent environmental discharge consistent with regulatory requirements.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Minimize dust generation and accumulation. Eliminate all sources of ignition. Do not breathe dust. Do not eat, drink or smoke when using this product. Do not get foam dust in eyes. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Refer to handling and storage guidelines provided by the manufacturer.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria. Store on flat foundation. Elevate 3-4" above foundation to prevent contact with moisture. Keep only in original packaging. If packaging is opened, place waterproof but breathable tarp on product. Refer to handling and storage guidelines provided by the manufacturer.

Incompatible Materials

Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, dimethyl formamide.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Pentane	109-66-0
OSHA (US):	This component has exposure limits. However, this component is present in what is considered an "article" as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and a "manufactured article" as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3). Therefore, the exposure limits for this component are unnecessary to provide safe exposure controls. This component will not be released from the product under normal working conditions.

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation where dust may be generated. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Safety glasses or goggles are recommended when there is a potential for eye contact.

Skin Protection

Work clothes with long sleeves and pants are recommended, but not required.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Respiratory Protection

If respirable dusts are generated, respiratory protection may be needed. Consult with a health and safety professional for specific respirators appropriate for your use.

Glove Recommendations

Protective gloves are not required, but recommended.

Protective Materials

Recommended equipment: Provide emergency eye wash supplies in the immediate work area.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light yellow foam	Physical State	solid
Odor	odorless to slight odor	Color	light yellow
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not applicable
Freezing point	Not applicable	Evaporation Rate	Not applicable
Boiling Point Range	Not applicable	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not applicable
Lower Explosive Limit	Not applicable	Decomposition	Not available
Upper Explosive Limit	Not applicable	Vapor Pressure	Not applicable
Vapor Density (air=1)	Not applicable	Specific Gravity (water=1)	1.5 - 2.5
Water Solubility	Insoluble	Partition coefficient: n-octanol/water	Not applicable
Viscosity	Not applicable	Solubility (Other)	Not available
Density	1.5 - 2.5 lbs/ft3	VOC	contains Pentane

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid dust generation and accumulation. Avoid heat, flames, sparks and other sources of ignition. Avoid contact with water or incompatible materials.

Incompatible Materials

Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, dimethyl formamide.

Hazardous decomposition products

Oxides of carbon.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Dust may cause irritation of the nose, throat and upper respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Skin Contact

Dust may cause mechanical irritation. May cause allergic skin reaction.

Eye Contact

Direct contact with dust may cause mechanical irritation of the eyes.

Ingestion

No information on significant adverse effects.

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:

Pentane (109-66-0)

Non-hazardous acute toxicity values

Immediate Effects

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Respiratory Sensitization

May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

May cause allergic reactions.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability

No studies have been established for this product.

Bioaccumulative Potential

No studies have been established for this product.

Mobility

No studies have been established for this product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Product is not an EPA hazardous waste. 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

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

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
Pentane	109-66-0	Yes	Yes	Yes	Yes	Yes
Fiberglass	65997-17-3	No	No	Yes	No	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

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.

Pentane	109-66-0
	1 %



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Component Analysis - Inventory

Pentane (109-66-0)

US	Yes
----	-----

Cellulose pulp (65996-61-4)

US	Yes
----	-----

Fiberglass (65997-17-3)

US	Yes
----	-----

Section 16 - OTHER INFORMATION

Summary of Changes

Revision Date: September 25, 2019

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; 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; Kow - Octanol/water partition coefficient; 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; OSHA - Occupational Safety and Health Administration; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; 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. 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



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

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.

Material Safety Data Sheet

Date of Preparation: 09/13/2013

Revision: 000

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Densdeck, Densdeck Prime, Securock

Chemical Formula:

General Use: Overlayment board for commercial roofing

Manufacturer: Carlisle SynTec Systems, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-479-6832

24 Hour Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol

Hazardous Ingredients:

This product is considered to be a finished article as defined by 29 CFR 1910.1200 and is exempt from the requirements of the Hazard Communication standard. This product is non-hazardous as per 29 CFR 1910.1200.

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Potential Health Effects

Primary Entry Routes: None

Target Organs: None known.

Acute Effects : Sensitive individuals may exhibit eye, nose, throat or dermal irritation with prolonged exposure to product.

Carcinogenicity: IARC, NTP, and OSHA do not list this product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: None known.

Chronic Effects: None known.

HMIS	
H	0
F	1
P	0
PPE†	
†Sec. 8	

Section 4 - First Aid Measures

Inhalation: NA

Eye Contact: Flush with water. Get medical attention if reaction develops and irritation persists.

Skin Contact: Wash with soap and water. Get medical attention if reaction develops and irritation persists.

Ingestion: Get medical attention.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: NA

Special Precautions/Procedures: None known.

Section 5 - Fire-Fighting Measures

Flammability Classification: Not flammable.

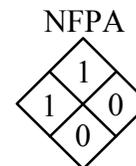
Extinguishing Media: Standard fire extinguishers-water fog followed by coarse stream.

Unusual Fire or Explosion Hazards: Oil "bleeds" from material when burning

Hazardous Combustion Products: Toxic gases or vapors, such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

Fire-Fighting Instructions: Wear respirator; avoid breathing smoke.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Handle as normal solid waste.

Small Spills: None required.

Large Spills: None required.

Containment: None required .

Cleanup: None required.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: None required.
Storage Requirements: None required.
Regulatory Requirements: None required.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: None required.
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls: None required.
Respiratory Protection: None required.
Protective Clothing/Equipment: Gloves are recommended to prevent skin contact.
Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Solid	Water Solubility: Insoluble
Appearance and Odor: Rubber-like odor, black or white sheet	Boiling Point(°C): NA
Odor Threshold: NA	Freezing/Melting Point (°C): NA
Vapor Pressure: NA	Viscosity: NA
Vapor Density (Air=1): NA	Refractive Index: NA
Formula Weight: NA	Surface Tension: NA
Density: NA	% Volatile: NA
Specific Gravity (H₂O=1, at 4 °C): Varies	Evaporation Rate(nBuAc=1): NA
pH: N/A	

Section 10 - Stability and Reactivity

Stability: Stable.
Polymerization: Will not occur.
Chemical Incompatibilities: None.
Conditions to Avoid: Open flames.
Hazardous Decomposition Products: Toxic gases or vapors, such as carbon monoxide, carbon dioxide, or oxides of nitrogen may be released in a fire.

Section 11- Toxicological Information

	Toxicity Data:
Eye Effects: This product has not been tested. No data available.	Acute Inhalation Effects: No data available.
	Acute Oral Effects: No data available.
Skin Effects: No data available.	Chronic Effects: No data available.
	Carcinogenicity: No data available.
	Mutagenicity: No data available.
	Teratogenicity: No data available.

Section 12 - Ecological Information

Ecotoxicity: This product has not been tested. No data available.
Environmental Fate: No data available.
Environmental Degradation: No data available.
Soil Absorption/Mobility: No data available.

Section 13 - Disposal Considerations

Disposal: Dispose of in accordance with all local, state, and federal regulations.
Disposal Regulatory Requirements: NA

Container Cleaning and Disposal: NA

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Not a DOT regulated material.
(United States)

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

SARA 311/312 Codes:

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

State Regulations:

This product is considered to be a finished article as defined by 29 CFR 1910.1200 and is exempt from the requirements of the Hazard Communication standard. This product is non-hazardous as per 29 CFR 1910.1200.

Section 16 - Other Information

Prepared By: Research & Development

Revision Notes: New format

Additional Hazard Rating Systems:

Disclaimer: The information contained in this document is based upon data that was supplied to Carlisle by other companies and organizations. No warranty of merchantability or fitness for a particular purpose is expressed or implied regarding the accuracy or completeness of the data and/or information in this material safety data sheet.

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier: Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Recommended Use: Concrete Repair
Use Restrictions: For industrial use only
Company: US Concrete Products
Address: 16 Greenmeadow Drive #202
 Timonium, MD 21093
Phone: 1-866-827-8727
Website: www.uscproducts.com
Emergency: 1-800-424-9300

2. HAZARD IDENTIFICATION



Physical Hazards: Not Classified

Health Hazards: Skin Corrosion/Irritation Category 2
 Serious Eye Damage/Irritation Category 1
 Sensitization, Skin Category 1
 Carcinogenicity Category 1A
 STOT, Repeated Exposure Category 2 (Lung)

Environmental Hazards: Not Classified.

Signal Word: **DANGER!**

Hazard Statements: Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. Causes damage to organs (lungs) 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/protective clothing/eye protection/face protection. Do not breathe dust, fumes, or vapors. Use only outdoors or in a well-ventilated area. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Contaminated clothing should not be allowed out of the workplace.

Response: If on skin: Wash with plenty of water. If skin irritation or rash 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 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.

Storage: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise Classified (HNOC): Can form explosive air-dust mixtures, avoid creating dust.

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
 SAFETY DATA SHEET

3. COMPOSITION INFORMATION

Chemical Name	CAS Number	Weight %
Crystalline Silica, Quartz	14808-60-7	40-60
Portland Cements	65997-15-1	20-40

Composition Note: This product is a mixture. Hazardous ingredients are listed above. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

4. FIRST-AID MEASURES

- Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If you experience redness, burning, blurred vision, or swelling **consult a physician immediately.**
- Skin Contact:** Remove contaminated clothing and product, immediately wash affected area with soap and water. Do not apply greases or ointments. If rash or irritation occurs **consult a physician.**
- Ingestion:** Rinse mouth immediately. Do not induce vomiting. **Consult a physician.**
- Inhalation:** Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**
- Most Important Symptoms:** Irritant effects. Symptoms include itching, burning, redness and tearing. Permanent eye damage, including blindness could result. Discomfort in the chest, shortness of breath, coughing.
- General Information:** Provide general supportive measures and treat symptomatically. Symptoms may be delayed. 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:** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- Additional Information:** Can form explosive air-dust mixtures, avoid creating dust.
- Hazards during Fire-Fighting:** During a fire, gases hazardous to health may be formed.
- Fire-Fighting Procedures:** Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Keep unnecessary personnel away. Avoid generating dust. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust. Ensure adequate ventilation. If the concentration of dust exceeds the permissible exposure limit wear a respirator.
- Clean-up Methods:** Avoid dry sweeping. Do not use compressed air to clean spilled silica sand. Use water spraying/flushing or ventilated or HEPA filtered vacuum cleaning system. Dispose of in closed containers.
- 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.

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
SAFETY DATA SHEET

7. HANDLING AND STORAGE

Handling: Avoid generating dust. Mechanical ventilation or local exhaust ventilation is recommended. Use all available work practices to control dust exposure, such as water sprays. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Do not breathe dust. Wear a respirator if dust concentrations exceed permissible exposure limits. Do not permit dust to collect and build up on work surfaces, use good housekeeping. Avoid contact with unhardened cement products. Observe good industrial hygiene practices.

Storage: Use dust collection to trap dust produced during loading and unloading. Store in a closed container away from incompatible materials (See Section 10 of the SDS). Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Protect against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.

Eye Protection: Wear chemical splash goggles or safety glasses with side shield.

Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.

Skin and Body Protection: Wear long sleeve shirt/long pants and other clothing as required to minimize contact. In case of dust production, dust-proof clothing. Avoid contact with unhardened cement products, if contact occurs wash immediately with soap and water.

Respirator Protection: Use a NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.

General Hygiene: 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.

Engineering Controls: Mechanical ventilation or local exhaust ventilation is recommended. 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 and emergency shower.

Exposure Limits:

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Quartz (CAS 14808-60-7)	$\frac{10}{\%SiO_2 + 2} \text{ mg/m}^3$ (respirable)	0.025 mg/m ³ (respirable)	0.05 mg/m ³ (respirable)
Portland Cements (CAS 65997-15-1)	5 mg/m ³ (Respirable) 15 mg/m ³ (Total dust)	1 mg/m ³ (respirable)	5 mg/m ³ (Respirable) 15 mg/m ³ (Total dust)

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Freezing/Melting Point:	N/A
Form:	Powder	Boiling Point:	N/A
Color:	Gray	Flash Point:	N/A
Odor:	Characteristic	Evaporation Rate:	N/A
Odor Threshold:	N/A	Specific Gravity:	2.7
pH:	N/A	VOC:	0 g/L
Flammability:	N/A	U/L Flammability:	N/A
Vapor Pressure:	N/A	Vapor Density:	N/A
Solubility:	N/A	Kow:	N/A
Decomposition:	N/A	Viscosity:	N/A

10. STABILITY AND REACTIVITY

Reactivity:	Stable and non-reactive under normal conditions of use and storage.
Chemical Stability:	Stable and non-reactive under normal conditions of use and storage.
Condition to Avoid:	Conditions which generate dust. Avoid unintentional contact with water.
Substances to Avoid:	Strong oxidizers. Strong acids and bases. Ammonium salts. Aluminum metal.
Hazardous Reactions:	The product is stable if stored and handled as prescribed/indicated. Strong bases are formed on the addition of water.
Decomposition Products:	Carbon dioxide, carbon monoxide, oxides of nitrogen, other organic compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Ingestion:	Expected to be a low ingestion hazard.
Inhalation:	Irritation to nose and respiratory tract.
Skin contact:	Causes skin irritation. May cause sensitization by skin contact.
Eye contact:	Causes serious eye damage. Particles can cause corneal abrasion.

Information on toxicological effects:

Acute toxicity:	Occupational exposure to the substance or mixture may cause adverse effects.
Skin corrosion/irritation:	Causes skin irritation.
Eye damage/eye irritation:	Causes serious eye damage.
Respiratory sensitization:	Not a respiratory sensitizer.
Skin sensitization:	May cause sensitization by skin contact.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	May cause cancer.
	IARC Monographs. Overall Evaluation of Carcinogenicity
	Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.
	NTP Report on Carcinogens
	Quartz (CAS 14808-60-7) Known To Be Human Carcinogen
Reproductive toxicity:	No data available.
Aspiration hazard:	No data available.
Specific target organ toxicity:	
Single exposure	No data available.
Repeated exposure	Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation). Repeated or prolonged exposure to Respirable silica dust will cause lung damage in the form of silicosis. Symptoms include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal.

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
SAFETY DATA SHEET

Further information: Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with certain pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. ECOLOGICAL INFORMATION

Ecotoxicity: This material is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential: Not expected to bioaccumulate.

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 product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal of Substance: Do not allow 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.

Container Disposal: Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal of Cured Product: Grind or chip off surface. Solid material does not require special disposal considerations

14. TRANSPORTATION INFORMATION

United States Department Of Transportation (USDOT): Not regulated as a hazardous material by DOT.

International Air Transportation Association (IATA): Not regulated as a dangerous good.

International Maritime Dangerous Goods Code (IMDG): Not regulated as a dangerous good.

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.

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
Cementitious Repair Concrete
 SAFETY DATA SHEET

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.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories:				
Immediate	Delayed	Fire	Pressure	Reactivity
Yes	Yes	No	No	No

SARA 302 Extremely hazardous substance: No
SARA 311/312 Hazardous chemical: Yes
SARA 313 (TRI reporting): Not regulated.

US State Right-To-Know Lists

Chemical	Massachusetts RTK	New Jersey Work and Community RTK Act	Pennsylvania Worker and Community RTK Law	Rhode Island RTK
Portland Cement (65997-15-1)	Listed	Listed	Listed	
Quartz (14808-60-7)	Listed	Listed	Listed	

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

Component	Regulation	% In Blend (approx.)	Remark
Quartz (14808-60-7)	ACGIH	60-75	Carcinogenic

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

WHMIS Hazard Classification

	
Class E: Corrosive Material	Class D-2A: Material Causing other toxic effects

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)
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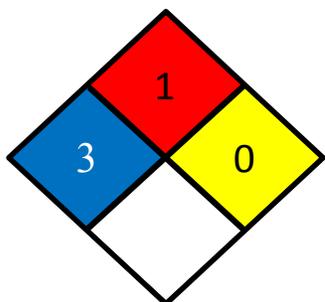
International Inventories

Country or Region	Inventory	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)	Yes
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
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. OTHER INFORMATION

Date Prepared or Revised: December 2014
Supersedes: July 2013

NFPA Ratings



HMIS Rating

HEALTH HAZARD	2
FLAMMABILITY HAZARD	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	E

Legend

- ACGIH:** American Conference of Governmental Industrial Hygienists
- CAS No.:** Chemical Abstract Service Registry Number
- CERCLA:** Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
- CPR:** Controlled Product Regulations (Canada)
- DOT:** Department of Transportation (U.S.)
- EPA:** Environmental Protection Agency (U.S.)
- GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- HEPA:** High-Efficiency Particulate Air
- HMIS:** Hazardous Materials Identification System
- IARC:** International Agency for Research on Cancer
- IATA:** International Air Transport Association
- IMDG:** International Maritime Dangerous Goods code
- LPP:** Limité Permissible Ponderado (Chile)
- NIOSH:** National Institute of Occupational Safety and Health (U.S.)

US Deck Mix (AE, FP, SP, PM, SCC, SCC-PM)

Cementitious Repair Concrete

SAFETY DATA SHEET

NFPA:	National Fire Protection Association (US)
NTP:	National Toxicology Program (US)
OSHA:	Occupational Safety and Health Administration (U.S.)
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendments and Reauthorization Act (U.S. EPA)
SDS:	Safety Data Sheet
STEL:	Short Term Exposure Limit (15 minute Time Weighted Average)
STOT:	Specific Target Organ Toxicity (GHS Classification)
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act (U.S.)
TWA:	Time Weighted Average (exposure for 8-hour workday)
U.S.:	United States
VOC:	Volatile Organic Compounds
WHMIS:	Canadian Workplace Hazardous Materials Information System

Safety Data Sheet (SDS) is prepared in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this SDS. This SDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Carlisle 725TR

Synonyms

Self-Adhering Rubberized Asphalt Membrane

Chemical Family

Rubber Asphalt products

Product Use

Waterproofing membrane

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Corrosion/Irritation - Category 2

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 2 (liver, kidneys, thymus)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Causes skin irritation

May damage fertility or the unborn child

May cause damage to organs

Precautionary Statement(s)

Prevention

Safety Data Sheet

Material Name: Carlisle 725TR

**Product #:310632
330170**

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 or concerned: Call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Specific treatment (see label)

Storage

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-52-5	Distillates, petroleum, hydrotreated heavy naphthenic	5-10
8052-42-4	Asphalt	0-75
64742-93-4	Asphalt, oxidized	0-75
68955-27-1	Distillates, petroleum, petroleum residues vacuum	0-75
64741-56-6	Residues, petroleum, vacuum	0-75
Mixture	Fatty acids, tall-oil, low-boiling	0.8

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Inhalation unlikely due to physical form. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

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Skin

Wash exposed skin with soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

Eyes

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Causes skin irritation. May cause damage to the kidneys, liver, thymus.

Delayed

May damage fertility or the unborn child.

Note to Physicians

Contains ASPHALT.

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.

Hazardous Combustion Products

Oxides of carbon, hydrocarbons

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Remove all sources of ignition. Avoid inhalation of material or combustion by-products. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Dispose in accordance with all applicable regulations.

Environmental Precautions

Avoid release to the environment.

Section 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. Avoid contact with eyes, skin and clothing. 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. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Store in a cool, dry place. Keep container tightly closed and in a well-ventilated place. Keep away from heat and ignition sources. Keep away from incompatible materials. Do not cut, puncture, or weld on or near this container.

Incompatible Materials

Strong acids, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Asphalt	8052-42-4	
ACGIH:	0.5 mg/m ³ TWA as benzene soluble aerosol fume, inhalable fraction	
NIOSH:	5 mg/m ³ Ceiling fume 15 min	
Mexico:	5 mg/m ³ TWA LMPE-PPT	10 mg/m ³ STEL [LMPE-CT]
Hydrogen sulfide	7783-06-4	
ACGIH:	1 ppm TWA	5 ppm STEL
NIOSH:	10 ppm Ceiling 10 min; 15 mg/m ³ Ceiling 10 min	
	100 ppm IDLH	
Europe:	5 ppm TWA; 7 mg/m ³ TWA	10 ppm STEL; 14 mg/m ³ STEL
OSHA (US):	20 ppm Ceiling	
Mexico:	10 ppm TWA LMPE-PPT; 14 mg/m ³ TWA LMPE-PPT	
	15 ppm STEL [LMPE-CT]; 21 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Safety Data Sheet

Material Name: Carlisle 725TR

**Product #:310632
330170**

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 chemical resistant clothing and rubber boots when potential for contact with the material exists. Recommended material: protective skin cream.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black rubberized asphalt	Physical State	solid
Odor	Slight,petroleum	Color	black
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	Not available	Evaporation Rate	<0.01
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	232°C (>450 °F)
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	1 - 1.2 (relative)		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Material Name: Carlisle 725TR

Product #:310632
330170**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, hydrocarbons

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

Not a likely route of exposure.

Skin Contact

Causes skin irritation.

Eye Contact

May cause mild eye irritation.

Ingestion

May cause gastrointestinal irritation.

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:

Asphalt (8052-42-4)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Asphalt, oxidized (64742-93-4)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Distillates, petroleum, petroleum residues vacuum (68955-27-1)

Oral LD50 Rat 4320 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Residues, petroleum, vacuum (64741-56-6)

Oral LD50 Rat 4320 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Hydrogen sulfide (7783-06-4)

Inhalation LC50 Rat 0.99 mg/L 1 h

Fatty acids, tall-oil, low-boiling (Mixture)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Immediate Effects

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330170**

Causes skin irritation. May cause damage to the kidneys, liver, thymus.

Delayed Effects

May damage fertility or the unborn child.

Irritation/Corrosivity Data

May cause mild skin irritation. May cause mild eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Asphalt	8052-42-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)
IARC:	Monograph 103 [2013]; Supplement 7 [1987] (extracts of steam-refined and air-refined); Monograph 35 [1985] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 2 (considered to be carcinogenic for man, aerosol and vapor)
OSHA:	Present
Asphalt, oxidized	64742-93-4
IARC:	Monograph 103 [2013] (and their emissions during roofing) (Group 2A (probably carcinogenic to humans))
OSHA:	Present
Residues, petroleum, vacuum	64741-56-6
IARC:	Monograph 103 [2013] (Group 2B (possibly carcinogenic to humans))
OSHA:	Present
Polycyclic aromatic hydrocarbons	130498-29-2
NTP:	Reasonably Anticipated To Be A Human Carcinogen
OSHA:	Present

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

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kidneys, liver, thymus

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Distillates, petroleum, hydrotreated heavy naphthenic	64742-52-5
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
Asphalt, oxidized	64742-93-4
Algae:	EC50 72 h Pseudokirchneriella subcapitata 56 mg/L IUCLID
Distillates, petroleum, petroleum residues vacuum	68955-27-1
Fish:	LC50 96 h Brachydanio rerio 48 mg/L [semi-static]
Residues, petroleum, vacuum	64741-56-6
Fish:	LC50 96 h Brachydanio rerio 48 mg/L [semi-static]
Hydrogen sulfide	7783-06-4
Fish:	LC50 96 h Lepomis macrochirus 0.0448 mg/L [flow-through]; LC50 96 h Pimephales promelas 0.016 mg/L [flow-through]
Fatty acids, tall-oil, low-boiling	Mixture
Fish:	LC50 96 h Brachydanio rerio 50 - 100 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >10 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 70 mg/L IUCLID

Persistence and Degradability

No information available for the product.

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Material Name: Carlisle 725TR

**Product #:310632
330170**

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.

Hydrogen sulfide	7783-06-4
SARA 302:	500 lb TPQ
SARA 313:	1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ
OSHA (safety):	1500 lb TQ
SARA 304:	100 lb EPCRA RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactivity: No

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330170**

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
Asphalt	8052-42-4	Yes	Yes	Yes	Yes	Yes
Asphalt, oxidized	64742-93-4	No	No	No	Yes	No
Hydrogen sulfide	7783-06-4	Yes	Yes	Yes	Yes	Yes
Polycyclic aromatic hydrocarbons	130498-29-2	No	No	Yes	Yes	Yes

Not listed under California Proposition 65

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

Hydrogen sulfide	7783-06-4
	1 %

Component Analysis - Inventory

Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)

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

Asphalt (8052-42-4)

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

Asphalt, oxidized (64742-93-4)

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	No

Distillates, petroleum, petroleum residues vacuum (68955-27-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	No	No	No	Yes	No	Yes	No	No

Residues, petroleum, vacuum (64741-56-6)

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330170**

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

Hydrogen sulfide (7783-06-4)

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

Polycyclic aromatic hydrocarbons (130498-29-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	No	No	No	No	No	No	No	No	No	Yes

Fatty acids, tall-oil, low-boiling (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	No	No	No	Yes	No	Yes	Yes	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: May 18, 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

Safety Data Sheet

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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

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

CCW-702 LV

Chemical Family

Adhesive

Product Use

Low VOC Adhesive

Restrictions on Use

For industrial use only.

Phone Numbers:

Medical Emergency
CHEMTREC (USA): 800-424-9300

MSDS Assistance; 972-442-6545
Technical Assistance: 888-229-2199
Customer Service: 888-229-0199

Manufacturer Information

Carlisle Coatings and Waterproofing, Inc
900 Hensley Lane
Wylie, TX 75098
www.carlisleccw.com

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Acute Toxicity - Inhalation - Vapor - Category 4

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways

Harmful if inhaled

Safety Data Sheet

Material Name: CCW-702 LV

Product #: 316148

Causes skin irritation
Causes serious eye irritation
Causes damage to organs
May cause respiratory irritation. May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
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

In case of fire: Use appropriate media to extinguish
If exposed: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor 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 eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Statement of Unknown Toxicity

47.1415% 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
108-88-3	Toluene	7-13
67-64-1	Acetone	7-13
Trade Secret	Petroleum hydrocarbon resin	10-30
Mixture	Phthalo blue	0.1-1
4477-79-6	C.I. Solvent Red 26	0.1-1
540-88-5	tert-Butyl acetate	15-40

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. 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

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects**Acute**

May be fatal if swallowed and enters airways. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. Causes damage to central nervous system. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed

Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Safety Data Sheet

Material Name: CCW-702 LV

Product #: 316148

Note to Physicians

Contains toluene.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, hydrocarbons. Fumes may be irritating.

Advice for firefighters

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

Fire Fighting Measures

Cool containers with water spray until well after the fire is out. Avoid inhalation of material or combustion by-products.

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. 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

Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-

Safety Data Sheet

Material Name: CCW-702 LV

Product #: 316148

ventilated area. Avoid contact with eyes, skin and clothing. 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. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials

Strong acids, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m3 TWA	150 ppm STEL; 560 mg/m3 STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m3 TWA	100 ppm STEL; 384 mg/m3 STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m3 TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m3 TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m3 TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m3 TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m3 STEL [LMPE-CT]	

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Phthalo blue	Mixture	
Europe:	50 ppm TWA; 275 mg/m3 TWA	100 ppm STEL; 550 mg/m3 STEL
	Possibility of significant uptake through the skin	
tert-Butyl acetate	540-88-5	
ACGIH:	200 ppm TWA	
NIOSH:	200 ppm TWA; 950 mg/m3 TWA	1500 ppm IDLH (10% LEL)
OSHA (US):	200 ppm TWA; 950 mg/m3 TWA	
Mexico:	200 ppm TWA LMPE-PPT; 950 mg/m3 TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 1190 mg/m3 STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles with a faceshield to protect against skin and eye contact when appropriate.

Skin Protection

Wear work clothes with long sleeves. Wear protective shoes. Recommended material: protective skin cream.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Protective Materials

Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thick dark red liquid	Physical State	liquid
Odor	sweet,solvent	Color	dark red
Odor Threshold	Not available	pH	Not available
Melting Point	-95 °C (-139 °F)	Boiling Point	56 - 110 °C (133-231 °F)
Freezing point	Not available	Evaporation Rate	3.4

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Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	465 °C (869 °F)	Flash Point	-17.8 °C (0 °F)
Lower Explosive Limit	1.3 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	66.3 mmHg
Vapor Density (air=1)	3.9	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	450 cps	Solubility (Other)	Hydrocarbons
Density	0.9 (relative)	VOC	<250 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, hydrocarbons. Fumes may be irritating.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

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Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.

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:

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 Rabbit 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal LD50 Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

Coumarone-indene resin (63393-89-5)

Oral LD50 Rat >16000 mg/kg

Phthalo blue (Mixture)

Oral LD50 Rat 8532 mg/kg

Dermal LD50 Rabbit >5 g/kg

tert-Butyl acetate (540-88-5)

Oral LD50 4500 mg/kg

Dermal LD50 >2000 mg/kg

Inhalation LC50 Rat 12.52 mg/L 4 h

Immediate Effects

Harmful if inhaled. May be fatal if swallowed and enters airways. Cause skin irritation. Causes serious eye irritation. Causes damage to central nervous system. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects

Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

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IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

blood, central nervous system

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

Aspiration into the lungs may cause chemical pneumonitis.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA

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Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
Phthalo blue	Mixture
Fish:	LC50 96 h Pimephales promelas 161 mg/L [static]
Invertebrate:	EC50 48 h Daphnia magna >500 mg/L IUCLID
tert-Butyl acetate	540-88-5
Fish:	LC50 96 h Pimephales promelas 296 - 362 mg/L [flow-through]; LC50 96 hr Oncorhynchus mykiss 240 mg/L
Invertebrate:	EC50 48 hr Daphnia magna 350 mg/L

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:

Shipping Name: Adhesives

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Material Name: CCW-702 LV

Product #: 316148

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

TDG Information:

UN#: UN1133

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.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
tert-Butyl acetate	540-88-5
CERCLA:	5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **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
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
tert-Butyl acetate	540-88-5	Yes	Yes	Yes	Yes	Yes

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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 reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

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

Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %
tert-Butyl acetate	540-88-5
	1 %

Component Analysis - Inventory

Toluene (108-88-3)

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

Acetone (67-64-1)

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

Styrene/isoprene copolymer (25038-32-8)

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

Coumarone-indene resin (63393-89-5)

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

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Phthalo blue (Mixture)

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

C.I. Solvent Red 26 (4477-79-6)

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

tert-Butyl acetate (540-88-5)

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

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

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;

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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