



BUILDING TRUST



Sika Emseal Safety Data Sheet Product Package

Emshield® DFR-FP

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EMSEAL Joint Systems, Ltd.

25 Bridle Lane, Westborough, MA 01581 USA

www.emseal.com

Preparation Date March 15, 2015

Revision Date March 13, 2019

Safety Data Sheet DFR Foam

1. Identification of the Substance / Preparation

Product identifier	Emshield DFR
Other identifier or names	DFR, DFR2, DFR3
UN ID number	None
Manufacturer Address	EMSEAL LLC 111 Royal Group Crescent Woodbridge, Ontario L4H 1X9 Canada
Company Phone	(508) 836-0280 M-F 9am - 5pm
Emergency Phone	CHEMTREC (800) 424-9300 (24 Hours)

2. Hazardous Identification

Hazardous Classification	This product is not classified as hazardous when used as intended.
Signal Word	None
Pictograms	None
Emergency Overview:	No emergency requirements.

3. Composition / Information on Ingredients

EMSHIELD DFR is composed of polyurethane foam impregnated with a proprietary solid inorganic fire retardant bonded to a fully cured silicone sealant. It is classified as Non-Hazardous.

NOTE: Silicone facing is fully cured. The composition of the silicone in its liquid state is comprised of the following:

Chemical Name	CAS #	% by Weight	GHS Classification Hazard Statements
Polydimethyl Siloxane Diol	70131-67-8 3	0.0-60.0	SELF CLASSIFICATION Classification: Not Applicable
Calcium Carbonate (Limestone)	1317-65-3		SELF CLASSIFICATION
Synthetic Calcium Carbonate	371-34-1	10.0-40.0	Classification: Not Applicable
Phenyl Oximino Silane	34036-80-1	1.0-5.0	Classification: STOT RE Cat. 2, Skin Sensitization Cat. 1, Aquatic, Chronic Toxicity Cat. 3 Hazard Statement Codes: H373, H317, H412
Silicon Dioxide, Fumed	112945-52-5	1.0-5.0	SELF CLASSIFICATION Classification: Not Applicable
Mineral Spirits	8052-41-3	0.0-1.0	Classification: Carcinogenic Cat. 1B, Mutagenic Cat. 1B, Aspiration Hazard Cat. 1 Hazard Statement Codes: H350, H340, H304
Quartz	14808-60-7 14464-46-1	Trace	SELF CLASSIFICATION Classification: Carcinogenic Cat. 1B Hazard Statement Codes: H350

Water and other components.

Each of the other components is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).

Classification: Not Applicable



4. First Aid Measures

- 4.1 EYES:** Flush with water for at least 15 minutes, and call physician if problems persist.
- 4.2 SKIN:** Product may leave a sticky residue, and mild irritation if prolonged exposure. Scrub with soapy water until adhesive is removed.
- 4.3 INGESTION:** Do not eat – call physician if ingested.

5. Fire-fighting Measures

- 5.2 FLAMMABILITY:** Slight. The material composition does not support combustion.
- 5.2 FLASH POINT:** Unknown.
- 5.3 AUTO-IGNITION TEMPERATURE:** Unknown.
- 5.4 EXTINGUISHING MEDIA:** Large volumes of water, or ABC chemical may be appropriate for initial control or small volumes of impregnated foam.
- 5.5 HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon di/mon oxides will be formed as well as other noxious and toxic fumes upon combustion – do not breath combustion products.

6. Accidental Release Measures

If material is unusable pick up pieces and dispose of in accordance with local regulations; material and all components are non-toxic and normal landfill will most often be acceptable.

7. Handling and Storage

Store in original packaging below 35°C. There are no special handling instructions.

8. Exposure Controls / Personal Protection

- 8.1 RESPIRATORY PROTECTION:** Not required
- 8.2 EYE PROTECTION:** Not required
- 8.3 SKIN PROTECTION:** Gloves of any material are suitable if desired, but not required. No other protection is required.

9. Physical and Chemical Properties

- 9.1 APPEARANCE:** Dark grey / charcoal colored foam and colored silicone with product identifying packaging.
- 9.2 ODOR:** Slight characteristic odor.
- 9.3 PERCENT SOLIDS BY WEIGHT:** 100%
- 9.4 PHYSICAL STATE:** Solid
- 9.5 PERCENT VOLATILE:** <1% wt/wt
- 9.6 DENSITY:** 0.4g/cm³
- 9.7 DECOMPOSITION:** > 300°C
- 9.8 SOLUBILITY IN WATER:** None



10. Stability and Reactivity

Stable under normal conditions – avoid temperatures in excess of 300°C, strong acids and bases, and open flame.

11. Toxicological Information

Unknown.

12. Ecological Information

Unknown

13. Disposal Considerations

No known hazard. Dispose of in accordance with local regulations; material and all components are non-toxic and disposal in normal landfill will most often be acceptable.

14. Transportation Information

Not hazardous – safe for non-hazardous shipping.

15. Regulatory Information

Unknown.

16. Other Information

No other information provided.

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1. Identification

Product name : Northern Manufacturing Construction Grade Epoxy Part A

Supplier : Northern Manufacturing
111 Royal Group Crescent, Unit NM
Woodbridge, ON L4H 1X9 Canada

Telephone : 416-740-2090 (8AM - 5PM EST) (M-F)

Emergency telephone : Chemtrec 1-800-424-9300 (24 Hours)


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

2. Hazards identification

GHS Classification

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 : 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

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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.
 - 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.
- Storage:**
 - P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 - 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 (%)
Quartz (SiO ₂)	14808-60-7	$\geq 25 - < 50 \%$
bisphenol-A-(epichlorhydrin) epoxy resin	25068-38-6	$\geq 10 - < 20 \%$
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	68609-97-2	$\geq 5 - < 10 \%$

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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. |

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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 : Prevent unauthorized access.
Store in original container.
Keep in a well-ventilated place.
Observe label precautions.
Store in accordance with local regulations.
- Materials to avoid : No data available
-

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8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
Quartz (SiO2)	14808-60-7	OSHA Z-3	TWA	10 mg/m3 / %SiO2+2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO2+5 respirable
		OSHA P0	TWA	0.1 mg/m3 Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-1	TWA	0.05 mg/m3 Respirable dust

*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.

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.

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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	: paste
Color	: white
Odor	: aromatic
Odor Threshold	: No data available
Flash point	: > 212 °F (> 100 °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	: 1.99 g/cm3

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Water solubility	:	Note: insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm ² /s
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	5 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

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

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.

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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.

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
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 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.

Component:

bisphenol-A-(epichlorhydrin) epoxy	25068-38-6	<u>Toxicity to fish:</u> LC50
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resin

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 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.

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SARA304 Reportable Quantity

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

SARA 311/312 Hazards : 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)

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		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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Material number: 577437

Northern Manufacturing Construction Grade Epoxy Part B

Revision Date 12/05/2019

Print Date 12/05/2019

1. Identification

Product name : Northern Manufacturing Construction Grade Epoxy Part B

Supplier : Northern Manufacturing
111 Royal Group Crescent, Unit NM
Woodbridge, ON L4H 1X9 Canada

Telephone : 416-740-2090 (8AM - 5PM EST) (M-F)

Emergency telephone : Chemtrec 1-800-424-9300 (24 Hours)

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

2. Hazards identification**GHS Classification**

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.
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

: H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H350i May cause cancer by inhalation.
H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

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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.
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/ protective clothing/ eye protection/ face protection.
P281 Use personal protective equipment as required.

Response:
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:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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**

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Chemical name	CAS-No.	Concentration (%)
Quartz (SiO ₂)	14808-60-7	>= 25 - < 50 %
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	10563-29-8	>= 3 - < 5 %
m-phenylenebis(methylamine)	1477-55-0	>= 1 - < 2 %
Benzyl alcohol	100-51-6	>= 1 - < 2 %
salicylic acid	69-72-7	>= 1 - < 2 %
triethylenetetramine	112-24-3	>= 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.
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 : Health injuries may be delayed.
corrosive effects
irritant effects
sensitizing effects
carcinogenic effects
- Cough
Respiratory disorder
Allergic reactions
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.
- May cause an allergic skin reaction.
Causes serious eye damage.

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May cause respiratory irritation.
May cause cancer by inhalation.
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.

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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.
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 (SiO2)	14808-60-7	OSHA Z-3	TWA	10 mg/m3 / %SiO2+2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO2+5 respirable
		OSHA P0	TWA	0.1 mg/m3 Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-1	TWA	0.05 mg/m3 Respirable dust
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

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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 : paste
- Color : dark gray
- Odor : amine-like
- Odor Threshold : No data available
- Flash point : > 212 °F (> 100 °C)
- Ignition temperature : No data available
- Decomposition temperature : No data available

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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	: 2.01 g/cm3
Water solubility	: Note: slightly soluble
Partition coefficient: n- octanol/water	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: > 20.5 mm2/s
Relative vapor density	: No data available
Evaporation rate	: No data available
Burning rate	: No data available
Volatile organic compounds (VOC) content	: 5 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**

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Not classified based on available information.

Components:**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

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

salicylic acid:

Acute oral toxicity : LD50 Oral (Rat): 891 mg/kg

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

triethylenetetramine:

Acute oral toxicity : LD50 Oral (Rat): 1,716 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): 1,465 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

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.

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.

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

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Aspiration toxicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC

Group 1: Carcinogenic to humans

NTPQuartz (SiO₂) 14808-60-7
Known to be human carcinogenQuartz (SiO₂) 14808-60-7**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.**Component:**m-phenylenebis(methylamine)
1477-55-0Toxicity to fish:

LC50

Species: Oryzias latipes (Japanese medaka)

Dose: > 10 - 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: > 10 - 100 mg/l

Exposure time: 48 h

Benzyl alcohol 100-51-6

Toxicity to fish:

LC50

Species: Fish

Dose: > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Dose: > 100 mg/l

Exposure time: 48 h

triethylenetetramine 112-24-3

Toxicity to fish:

LC50

Species: Pimephales promelas (fathead minnow)

Dose: > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50

Species: Daphnia

Dose: 10 - 100 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50

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Species: Pseudokirchneriella subcapitata (green algae)
 Dose: 10 - 100 mg/l
 Exposure time: 72 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

UN number	1760
Description of the goods	Corrosive liquids, n.o.s. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, m-phenylenebis(methylamine))
Class	8
Packing group	III
Labels	8
Emergency Response Guidebook Number	154

IATA

UN number	1760
Description of the goods	Corrosive liquid, n.o.s. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, m-phenylenebis(methylamine))
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	1760
Description of the goods	CORROSIVE LIQUID, N.O.S. (N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine, m-phenylenebis(methylamine))

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Revision Date 12/05/2019

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Class	8
Packing group	III
Labels	8
EmS Number 1	F-A
EmS Number 2	S-B

Marine pollutant	no
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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
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Carcinogenicity
 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

Northern Manufacturing Construction Grade Epoxy Part B

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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 – www.P65Warnings.ca.gov

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.

Revision Date 12/05/2019

Material number: 579211



Setting Bed A SAFETY DATA SHEET

Issuing Date 10-Sep-2015

Revision Date 06-Nov-2015

Revision Number 2

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Name Expansion Joint Setting Bed A

Other means of identification

Product Code(s) SETBED A

Product Technology Epoxy A side

None

FOR INDUSTRIAL USE ONLY.

Restrictions on use: Do not use this product for any use other than intended

Manufacturer Address

Emseal Joint
Systems, LTD
25 Bridle Lane
Westborough, MA 01581
USA

Company Phone Numbe: 508-836-0280

Emergency Telephone: Chemtrec 1-800-424-9300 (24 Hours)

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Emergency Overview

WARNING

Hazard statements

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction



Appearance Opaque Grey

Physical state Liquid

Odor Mild

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves, protective clothing, eye protection, face protection
 Avoid breathing dust, fumes, or vapors
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Call a POISON CENTER or doctor/physician if you feel unwell
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

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

Hazards Not Otherwise Classified (HNOC)

Other Information

Toxic to aquatic life with long lasting effects
 5.00000532% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Substance

Chemical Family Epoxy A Side
Chemical nature Epoxy resin mixture.

Chemical name	CAS No.	Weight-%	Trade secret
Bisphenol A diglycidyl ether resin	25068-38-6	70 - 100	*

* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.

Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	Not an expected route of exposure. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.
Self-protection of the first aider	First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Foam, Dry Chemical, Carbon Dioxide (CO₂);

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous combustion products

Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a cool, well-ventilated place. Store and handle away from heat, flames and oxidizing materials.

Incompatible materials Acids; Bases; Strong oxidizing agents;

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Splash Goggles. Avoid contact with eyes.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Mild
Appearance	Opaque	Odor threshold	N/A
Color	Grey		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	N/A	
Melting point / freezing point	N/A	
Boiling point / boiling range	> 250 °C	
Flash point	> 220 °C	
Evaporation rate	N/A	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	N/A	

Relative density	1.18
Water solubility	Negligible
Solubility in other solvents	N/A
Partition coefficient	N/A
Autoignition temperature	N/A
Decomposition temperature	N/A
Kinematic viscosity	N/A
Dynamic viscosity	N/A
Explosive properties	Not an explosive
Oxidizing properties	N/A

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	9.84 pounds/gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Keep out of reach of children. Incompatible materials. Extremes of temperature and direct sunlight.

Incompatible materials

Acids; Bases; Strong oxidizing agents;

Hazardous decomposition products

Carbon oxides; Nitrogen oxides (NOx). Aldehydes. Aromatic hydrocarbons. May emit toxic fumes under fire conditions.

11. Toxicological Information

Information on likely routes of exposure

Product Information	The product has not been tested.
Inhalation	Remove to fresh air.
Eye contact	Vapor may cause irritation. Avoid contact with eyes. Contact with eyes may cause irritation.
Skin contact	Avoid contact with skin. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Not an expected route of exposure. Do NOT taste or swallow. May be harmful if swallowed.
Component Information	Caution - This preparation contains a substance not yet fully tested

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Bisphenol A diglycidyl ether resin 25068-38-6	= 11400 mg/kg (Rat)	-	-

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin. Repeated or prolonged contact may cause skin irritation and dermatitis.
Serious eye damage/eye irritation	Irritating to eyes.
Irritation	Irritating to eyes and skin.
Sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	N/A.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	N/A.
STOT - single exposure	N/A.
STOT - repeated exposure	N/A.
Chronic Toxicity	Repeated skin contact may lead to irritation and to sensitization, possible with cross-sensitization to other epoxies.
Target organ effects	Eyes, Skin.
Aspiration hazard	N/A.

Numerical measures of toxicity - Product Information

Unknown acute toxicity	5.00000532% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document	
ATEmix (oral)	12,030.00 mg/kg mg/l

12. Ecological Information

Ecotoxicity

N/A
5.23999 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

N/A

Other adverse effects

N/A

Ozone depletion potential (ODP) N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. Transport Information

Note: A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards.

DOT Not regulated

ICAO (air)

IATA

UN/ID no.	UN3082
Proper shipping name	Environmentally Hazardous substance Liquid N.O.S. (Bisphenol A epoxy resin)
Hazard Class	9
Packing Group	III

IMDG

UN/ID no.	UN3082
Proper shipping name	Environmentally Hazardous Substance Liquid N.O.S. (Bisphenol A epoxy resin)
Hazard Class	9
Packing Group	III
Marine pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. Regulatory Information

International Inventories

TSCA All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen
Carbon Black - 1333-86-4	Carcinogen
Glycidyl phenyl ether - 122-60-1	Carcinogen Male Reproductive
Epichlorohydrin - 106-89-8	Carcinogen Male Reproductive
Silicon dioxide - 14808-60-7	Carcinogen

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

<u>NFPA</u>	Health hazards 2	Flammability 1	Instability 0	Physical and chemical properties -
<u>HMIS</u>	Health hazards 2*	Flammability 1	Physical hazards 0	Personal Protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

Prepared By	Compliance
Issuing Date	10-Sep-2015
Revision Date	06-Nov-2015

Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Setting Bed B SAFETY DATA SHEET

Issuing Date 10-Sep-2015

Revision Date 06-Nov-2015

Revision Number 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Name Expansion Joint Setting Bed B

Other means of identification

Product Code(s) SETBED B

Product Technology Epoxy B side

None

Curing chemical. FOR INDUSTRIAL USE ONLY.

Restrictions on use: Do not use this product for any use other than intended

Manufacturer Address

Emseal Joint
Systems, LTD
25 Bridle Ln
Westborough, MA 01581,
USA

Company Phone Number 508-836-08280

Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).


Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Skin sensitization	Category 1

Emergency Overview

DANGER

Hazard statements

Causes severe skin burns and eye damage
May cause an allergic skin reaction
Harmful if inhaled
Harmful if swallowed



Appearance Clear Light yellow
Physical state Liquid
Odor Mild amine odor

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Do not breathe dust, fumes, or vapors
 Wear protective gloves, protective clothing, eye protection, face protection
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: 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 or doctor/physician if you feel unwell
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

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

Hazards Not Otherwise Classified (HNOC)

Other Information

Toxic to aquatic life with long lasting effects
 72% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Substance

Chemical Family Epoxy B Side

Chemical name	CAS No.	Weight-%	Trade secret
m-Xylylenediamine	1477-55-0	15 - 30	*
1,4,7,10,13-Pentazatridecane	112-57-2	1 - 10	*

* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. If symptoms persist, call a physician.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.
Self-protection of the first aider	First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Foam, Dry Chemical, Carbon Dioxide (CO₂);

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous combustion products

Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Acids; Bases; Strong oxidizing agents;

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
m-Xylylenediamine 1477-55-0	S* Ceiling: 0.1 mg/m ³	(vacated) S* (vacated) Ceiling: 0.1 mg/m ³	Ceiling: 0.1 mg/m ³

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Splash Goggles. Avoid contact with eyes.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Mild amine odor
Appearance	Clear	Odor threshold	N/A
Color	Light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10.5	
Melting point / freezing point	N/A	
Boiling point / boiling range	N/A	
Flash point	> 110 °C	
Evaporation rate	N/A	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	N/A	
Relative density	0.98	
Water solubility	Negligible	
Solubility in other solvents	N/A	
Partition coefficient	N/A	
Autoignition temperature	N/A	
Decomposition temperature	N/A	
Kinematic viscosity	459 cSt	
Dynamic viscosity	450 cps @ 25° C	
Explosive properties	Not an explosive	
Oxidizing properties	N/A	

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	8.23 pounds/gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Keep out of reach of children. Avoid moisture. Incompatible materials.

Incompatible materials

Acids; Bases; Strong oxidizing agents;

Hazardous decomposition products

Carbon oxides; Nitrogen oxides (NOx). Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. Toxicological Information

Information on likely routes of exposure

Product Information	The product has not been tested.
Inhalation	Remove to fresh air. Harmful by inhalation.
Eye contact	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions

with susceptible persons. Causes burns.

Ingestion

Not an expected route of exposure. Do NOT taste or swallow. Harmful if swallowed.

Component Information

Caution - This preparation contains a substance not yet fully tested

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
m-Xylylenediamine 1477-55-0	= 1040 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 2.4 mg/kg (Rat) 4 h
1,4,7,10,13-Pentaazatridecane 112-57-2	= 3990 mg/kg (Rat)	= 660 µL/kg (Rabbit)	-

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Irritating to skin. Repeated or prolonged contact may cause skin irritation and dermatitis. Causes burns.

Serious eye damage/eye irritation

Irritating to eyes. Risk of serious damage to eyes.

Irritation

Irritating to eyes and skin.

Corrosivity

Corrosive to living tissue.

Sensitization

May cause sensitization by skin contact.

Germ cell mutagenicity

N/A.

Carcinogenicity

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity

N/A.

STOT - single exposure

N/A.

STOT - repeated exposure

N/A.

Chronic Toxicity

Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.

Target organ effects

Eyes, Skin.

Aspiration hazard

N/A.

Numerical measures of toxicity - Product Information**Unknown acute toxicity**

72% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	618.00 mg/kg
ATEmix (dermal)	1,702.00 mg/kg
ATEmix (inhalation-dust/mist)	0.64 mg/l
ATEmix (inhalation-vapor)	445.00 mg/l

12. Ecological Information

Ecotoxicity

N/A

94 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
1,4,7,10,13-Pentaazatridecane 112-57-2	2.1: 72 h Pseudokirchneriella subcapitata mg/L EC50	420: 96 h Poecilia reticulata mg/L LC50 static	24.1: 48 h Daphnia magna mg/L EC50

Persistence and degradability

N/A

Chemical name	Partition coefficient
1,4,7,10,13-Pentaazatridecane 112-57-2	1

Other adverse effects

N/A

Ozone depletion potential (ODP) N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. Transport Information

DOT Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory Information

International Inventories

TSCA All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
m-Xylylenediamine 1477-55-0	X	X	X
1,4,7,10,13-Pentaazatridecane 112-57-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

<u>NFPA</u>	Health hazards 2	Flammability 1	Instability 0	Physical and chemical properties - Personal Protection X
<u>HMIS</u>	Health hazards 2	Flammability 1	Physical hazards 0	

Prepared By	Compliance
Issuing Date	10-Sep-2015
Revision Date	06-Nov-2015

Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



EMSEAL

EMSEAL Joint Systems, Ltd.

25 Bridle Lane, Westborough, MA 01581

www.emseal.com

Safety Data Sheet

Issue Date 19-Jan-2015

Revision Date 31-Jul-2015

1. IDENTIFICATION

Chemical Name or Synonym:

Crystalline Silica (Quartz), Sand, Silica Sand, Flint, Ground Silica, Fine Ground Silica, Silica Flour.

THIS PRODUCT IS A COMPONENT OF THE EMCRETE SYSTEM. IT HAS BEEN SOURCED FROM AN OEM. IT IS NOT INTENDED FOR ANY USE HEREIN OTHER THAN ITS EMCRETE APPLICATION. CONTENT IN THIS SHEET IS PROVIDED BY AND VERIFIED BY THE OEM SOURCE.

Product Identifier

Product name Crystalline Sand (Quartz)

Other Means of Identification

Product Code Crystalline Sand (Quartz)

FOR INDUSTRIAL USE ONLY. This product contains isocyanates.
Restrictions on use: Do not use this product for any use other than intended

Manufacturer Address

EMSEAL Joint Systems, Ltd.
25 Bridle Lane, Westborough,
MA 01581 USA

Company Phone Number 508-836-0280 (9AM - 5PM EST) (M-F)

Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health
Not Hazardous	Carcinogen Category 1A Specific Target Organ Toxicity – Repeated Exposure Category 1



DANGER

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

Response:

If exposed or concerned: Get medical advice.

Disposal:

Dispose of contents/containers in accordance with local regulation

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Do not eat, drink or smoke when using this product.
Wear protective gloves and safety glasses or goggles.
In case of inadequate ventilation wear respiratory protection.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Percent
Crystalline Silica (quartz)	14808-60-7	95-99.9

4. FIRST-AID MEASURES

Inhalation: First aid is not generally required. If irritation develops from breathing dust, move the person from the overexposure and seek medical attention if needed.

Skin contact: First aid is not required.

Eye contact: Wash immediately with plenty of water. Do not rub eyes. If irritation persists, seek medical attention.

Ingestion: First aid is not required.

Most important symptoms/effects, acute and delayed: Particulates may cause abrasive eye injury. Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath. Prolonged inhalation of respirable crystalline silica above certain concentrations may cause lung diseases, including silicosis and lung cancer.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not required.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use extinguishing media appropriate for surrounding fire.

Specific hazards arising from the chemical: Product is not flammable, combustible or explosive.

Special protective equipment and precautions for fire-fighters: None required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and respiratory protection (see Section 8). Avoid generating airborne dust during clean-up.

Environmental precautions: No specific precautions. Report releases to regulatory authorities if required by local, state and federal regulations.

Methods and materials for containment and cleaning up: Avoid dry sweeping. Do not use compressed air to clean spilled sand or ground silica. Use water spraying/flushing or ventilated or HEPA filtered vacuum cleaning system, or wet before sweeping. Dispose of in closed containers.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid generating dust. Do not breathe dust. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud. Use adequate exhaust

ventilation and dust collection to reduce respirable crystalline silica dust levels to below the permissible exposure limit ("PEL"). Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Keep airborne dust concentrations below permissible exposure limits.

Where necessary to reduce exposures below the PEL or other applicable limit (if lower than the PEL), wear a respirator approved for silica containing dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Do not alter the respirator. Do not wear a tight-fitting respirator with facial hair such as a beard or mustache that prevents a good face to face piece seal between the respirator and face. Maintain, clean, and fit test respirators in accordance with applicable standards. Wash or vacuum clothing that has become dusty.

Participate in training, exposure monitoring, and health surveillance programs to monitor any potential adverse health effects that may be caused by breathing respirable crystalline silica. The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community "right-to-know" laws and regulations should be strictly followed.

Conditions for safe storage, including any incompatibilities: Use dust collection to trap dust produced during loading and unloading. Keep containers closed and store bags to avoid accidental tearing, breaking, or bursting.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Crystalline Silica (quartz)	10 mg/m ³ %SiO ₂ + 2 TWA (respirable dust)	0.025 mg/m ³ TWA (respirable dust)	0.05 mg/m ³ TWA (respirable dust)
	30 mg/m ³ %SiO ₂ + 2 TWA (total dust)		

If crystalline silica (quartz) is heated to more than 870°C, quartz can change to a form of crystalline silica known as tridymite; if crystalline silica (quartz) is heated to more than 1470°C, quartz can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as tridymite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

Appropriate engineering controls: Use adequate general or local exhaust ventilation to maintain concentrations in the workplace below the applicable exposure limits listed above.

Respiratory protection: If it is not possible to reduce airborne exposure levels to below the OSHA PEL or other applicable limit with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the NIOSH Respirator Selection Logic, 2004, Chapter III, Table 1, "Particulate Respirators". The full document can be found at www.cdc.gov/niosh/nppt/topics/respirators; the user of this MSDS is directed to that site for information concerning respirator selection and use. The assigned protection factor (APF) is the maximum anticipated level

of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m³, then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m³. In using chemical cartridges, consideration must be given to selection of the correct cartridge for the chemical exposure and the maximum use concentration for the cartridge. In addition a cartridge change-out schedule must be developed based on the concentrations in the workplace.

Assigned protection factor ¹	Type of Respirator (Use only NIOSH-certified respirators)
10	Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter. ² Appropriate filtering facepiece respirator. ^{2,3} Any air-purifying full facepiece respirator equipped with appropriate type of particulate filter. ² Any negative pressure (demand) supplied-air respirator equipped with a half-mask.
25	Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter. Any continuous flow supplied-air respirator equipped with a hood or helmet.
50	Any air-purifying full facepiece respirator equipped with N-100, R-100, or P-100 filter(s). Any powered air-purifying respirator equipped with a tight-fitting facepiece (half or full facepiece) and a high-efficiency filter. Any negative pressure (demand) supplied-air respirator equipped with a full facepiece. Any continuous flow supplied-air respirator equipped with a tight-fitting facepiece (half or full facepiece). Any negative pressure (demand) self-contained respirator equipped with a full facepiece.
1,000	pressure-demand supplied-air respirator equipped with a half-mask.
1. The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910.134), (2) the use of NIOSH-certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers. 2. Appropriate means that the filter medium will provide protection against the particulate in question. 3. An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.	

Skin protection: Maintain good industrial hygiene. Protection recommended for workers suffering from dermatitis or sensitive skin.

Eye protection: Safety glasses with side shields or goggles recommended if eye contact is anticipated.

Other: None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): White or tan sand: granular, crushed or ground to a powder.

Odor: None.

Odor threshold: Not determined	pH: 6-8
Melting point/freezing point: 3110°F/1710°C	Boiling point/range: 4046°F/2230°C
Flash point: Not applicable	Evaporation rate: Not applicable
Flammable limits: LEL: Not applicable	UEL: Not applicable
Vapor pressure: Not applicable	Vapor density: Not applicable
Relative density: 2.65	Solubility(ies): Insoluble in water

Partition coefficient: n-octanol/water: Not applicable	Auto-ignition temperature: Not determined
Decomposition temperature: Not determined	Viscosity: Not applicable
Flammability (solid, gas): Not applicable	

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions of use.

Chemical stability: Stable

Possibility of hazardous reactions: Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires.

Conditions to avoid: Avoid generation of dust in handling and use.

Incompatible materials: Powerful oxidizers such as fluorine, chlorine trifluoride, and oxygen difluoride and hydrofluoric acid.

Hazardous decomposition products: Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:

Inhalation: Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath.

Ingestion: Ingestion in an unlikely route of exposure. If dust is swallowed, it may irritate the mouth and throat.

Skin contact: No adverse effects are expected.

Eye contact: Particulates may cause abrasive injury.

Chronic effects: Prolonged inhalation of respirable crystalline silica may cause lung disease, silicosis, lung cancer and other effects as indicated below.

The method of exposure that can lead to the adverse health effects described below is inhalation.

A. SILICOSIS

Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute:

Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years (10 to 20 or more) of prolonged repeated inhalation of relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Complicated silicosis or PMF symptoms, if present, are shortness of breath and cough. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pulmonale).

Accelerated Silicosis can occur with prolonged repeated inhalation of high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except

that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur after the repeated inhalation of very high concentrations of respirable crystalline silica over a short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weakness and weight loss. Acute silicosis is fatal.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that "crystalline silica in the form of quartz or cristobalite dust is *carcinogenic to humans (Group 1)*". For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "A Review of Human Carcinogens: Arsenic, Metals, Fibres and Dusts " (2011).

NTP classifies "Silica, Crystalline (respirable size)" as Known to be a human carcinogen.

C. AUTOIMMUNE DISEASES

Several studies have reported excess cases of several autoimmune disorders -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to tuberculosis bacteria. Individuals with chronic silicosis have a three-fold higher risk of contracting tuberculosis than similar individuals without silicosis.

E. KIDNEY DISEASE

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", *Nephron*, Volume 85, pp. 14-19 (2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

Sources of information:

The *NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica* published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica".

For a more recent review of the health effects of respirable crystalline silica, the reader may consult *Fishman's Pulmonary Diseases and Disorders*, Fourth Edition, Chapter 57. "Coal Workers' Lung Diseases and Silicosis".

Finally, the US Occupational Safety and Health Administration (OSHA) published a summary of respirable crystalline silica health effects in connection with OSHA's Proposed Rule regarding occupational exposure to

respirable crystalline silica. The summary was published in the September 12, 2013 Federal Register, which can be found at www.federalregister.gov/articles/2013/09/12/2013-20997/occupational-exposure-to-respirable-crystalline-silica.

Numerical measures of toxicity:

Crystalline Silica (quartz): LD50 oral rat >22,500 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity: Crystalline silica (quartz) is not known to be ecotoxic.

Persistence and degradability: Silica is not degradable.

Bioaccumulative potential: Silica is not bioaccumulative.

Mobility in soil: Silica is not mobile in soil.

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Discard any product, residue, disposable container or liner in full compliance with national regulations.

14. TRANSPORT INFORMATION

UN number: None

UN proper shipping name: Not regulated

Transport hazard classes(es): None

Packing group, if applicable: None

Environmental hazards: None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not determined

Special precautions: None known.

15. REGULATORY INFORMATION

UNITED STATES (FEDERAL AND STATE)

TSCA Status: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: This product is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): This product contains the following chemicals subject to SARA 302 or SARA 313 reporting: None above the de minimus concentrations.

Clean Air Act: Crystalline silica (quartz) mined and processed is not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

California Proposition 65: Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic non-cancer effect REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no non-cancer health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is “toxic” for purposes of the Massachusetts Toxic Use Reduction Act.

Pennsylvania Worker and Community Right to Know Act: Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

Texas Commission on Environmental Quality: The Texas CEQ has established chronic and acute Reference Values and short term and long term Effects Screening Levels for crystalline silica (quartz). The information can be accessed through www.tceq.texas.gov.

CANADA

Domestic Substances List: U. S. Silica Company products, as naturally occurring substances, are on the Canadian DSL.

WHMIS Classification: D2A

OTHER NATIONAL INVENTORIES

Australian Inventory of Chemical Substances (AICS): All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

China: Silica is listed on the IECSC inventory or exempt from notification requirements.

Japan Ministry of International Trade and Industry (MITI): All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law Registry Number 1-548.

Korea Existing Chemicals Inventory (KECI) (set up under the Toxic Chemical Control Law): Listed on the ECL with registry number 9212-5667.

New Zealand: Silica is listed on the HSNO inventory or exempt from notification requirements.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed for PICCS.

Taiwan: Silica is listed on the CSNN inventory or exempt from notification requirements.

16. OTHER INFORMATION

Date of preparation/revision: February 10, 2015

Hazardous Material Information System (HMIS):

Health *

Flammability 0

Physical Hazard 0

Protective Equipment E

* For further information on health effects, see Sections 2, 8 and 11 of this MSDS.

National Fire Protection Association (NFPA):

Health 0

Flammability 0

Instability 0

Web Sites with Information about Effects of Crystalline Silica Exposure:

The U.S. National Institute for Occupational Safety and Health (NIOSH) and Occupational Safety and Health Administration (OSHA) maintain sites with information about crystalline silica and its potential health effects. For NIOSH, <http://www.cdc.gov/niosh/topics/silica>; for OSHA, <http://www.osha.gov/dsg/topics/silicacrystalline/index>.

The IARC Monograph that includes crystalline silica, Volume 100C, can be accessed in PDF form at the IARC web site, <http://monographs.iarc.fr/ENG/Monographs/PDFs/index.php>.

Company Disclaimer

The information and recommendations contained herein are based upon data believed to be up to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our silica. Customers and users of silica must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.



1. Identification

Product name : Sikasil® WS-295

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.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361f: Suspected of damaging fertility.
Specific target organ systemic toxicity - repeated exposure, Category 2 (Oral)	H373: May cause damage to organs through prolonged or repeated exposure if swallowed.

GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

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.

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.

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.

P363 Wash contaminated clothing 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 (%)
2-butanone-O,O',O''-(phenylsilylidyne)trioxime	34036-80-1	$\geq 2 - < 5\%$
butan-2-one-O,O',O''-(methylsilylidyne)trioxime	22984-54-9	$\geq 1 - < 2\%$
N-(2-aminoethyl)-N'-[3-(trimethoxysilyl)propyl]ethylenediamine	35141-30-1	$\geq 1 - < 2\%$
octamethylcyclotetrasiloxane	556-67-2	$< 1\%$

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 Allergic reactions Excessive lachrymation See Section 11 for more detailed information on health effects and symptoms. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure if swallowed.
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 (CO ₂)
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.
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 : Store in original container.
Keep in a well-ventilated place.
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
calcium carbonate	471-34-1	CAL PEL	PEL	10 mg/m ³ Total dust
		CAL PEL	PEL	5 mg/m ³ respirable dust fraction



*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	: paste
Color	: various
Odor	: mild musty
Odor Threshold	: No data available
Flash point	: 185 °F (85 °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.1.12 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	: 37 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**

Not classified based on available information.

Ingredients:**N-(2-aminoethyl)-N'-[3-(trimethoxysilyl)propyl]ethylenediamine:**

Acute oral toxicity : LD50 Oral (Rat): 7,758 mg/kg

Acute dermal toxicity : LD50 Dermal (Rat): 16,640 mg/kg

octamethylcyclotetrasiloxane:

Acute inhalation toxicity : LC50 (Rat): 36 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Skin corrosion/irritation

Not classified based on available information.

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

Suspected of damaging fertility.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure if swallowed.

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.
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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 : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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! This product contains a chemical known in the State of California to cause cancer.

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

16. Other information

HMIS Classification

Health	*	2
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

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Revision Date 01/26/2017

Safety Data Sheet

Sikasil® WS-295



Revision Date 01/26/2017

Print Date 01/26/2017

Material number: 481215



Safety Data Sheet

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Document Group:	09-5451-1	Version Number:	26.00
Issue Date:	06/20/14	Supersedes Date:	08/18/13

SECTION 1: Identification

1.1. Product identifier

3M Brand Fire Barrier CP-25WB+

Product Identification Numbers

42-0016-4710-8, 42-0016-4715-7, 42-0016-4716-5, 98-0400-5380-7, 98-0400-5381-5, 98-0400-5382-3, 98-0400-5383-1, 98-0400-5406-0, 98-0400-5456-5, 98-0400-5562-0, 98-0400-5573-7, 98-0400-5610-7, 98-0400-5629-7

1.2. Recommended use and restrictions on use

Recommended use

Fire Protection, Used as Firestop in buildings.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

2.2. Label elements

Signal word

Warning

Symbols

Not applicable

Pictograms

Not applicable

Hazard Statements

Causes eye irritation.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Wash thoroughly after handling.

Response:

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.

2.3. Hazards not otherwise classified

None.

25% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Zinc Borate 2335	138265-88-0	10 - 30 Trade Secret *
Polymer (NJTS Reg. No. 04499600-7270)	Trade Secret*	10 - 30 Trade Secret *
Water	7732-18-5	10 - 30 Trade Secret *
Sodium Silicate	1344-09-8	10 - 30 Trade Secret *
Ethylhexyldiphenyl phosphate	1241-94-7	3 - 7 Trade Secret *
Oxide glass chemicals	65997-17-3	1 - 5 Trade Secret *
Iron oxide	1309-37-1	1 - 5 Trade Secret *
Polyethylene Glycol	25322-68-3	1 - 5 Trade Secret *
Triphenyl phosphate	115-86-6	< 1.0 Trade Secret *
Di-2-ethylhexylphenyl phosphate	16368-97-1	< 1.0 Trade Secret *
Polyoxyethylene monoocetylphenyl ether	9036-19-5	< 1.0 Trade Secret *
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	55965-84-9	< 0.001 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid eye contact. Keep out of reach of children. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities

Keep cool. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Triphenyl phosphate	115-86-6	ACGIH	TWA:3 mg/m3	
Triphenyl phosphate	115-86-6	OSHA	TWA:3 mg/m3	

Iron oxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	
Iron oxide	1309-37-1	OSHA	TWA(as fume):10 mg/m3	
ROUGE	1309-37-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Polyethylene Glycol	25322-68-3	AIHA	TWA(as particulate):10 mg/m3	
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
 AIHA : American Industrial Hygiene Association
 CMRG : Chemical Manufacturer's Recommended Guidelines
 OSHA : United States Department of Labor - Occupational Safety and Health Administration
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber

Neoprene

Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form: Solid
Specific Physical Form: Paste
Odor, Color, Grade: Red with negligible odor

Odor threshold	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Flash Point	No flash point
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>

Specific Gravity	1.35 [<i>Ref Std: WATER=1</i>]
Solubility in Water	Complete
Solubility- non-water	<i>No Data Available</i>
Autoignition temperature	<i>Not Applicable</i>
Decomposition temperature	<i>No Data Available</i>
Volatile Organic Compounds	< 1 g/l
VOC Less H2O & Exempt Solvents	< 1 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Oxides of Phosphorus	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient

classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Polymer (NJTS Reg. No. 04499600-7270)	Ingestion	Rat	LD50 > 2,000 mg/kg
Zinc Borate 2335	Dermal	Rabbit	LD50 > 10,000 mg/kg
Zinc Borate 2335	Ingestion	Rat	LD50 > 10,000 mg/kg
Sodium Silicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium Silicate	Ingestion	Rat	LD50 500 mg/kg
Ethylhexyldiphenyl phosphate	Dermal	Rabbit	LD50 > 7,940 mg/kg
Ethylhexyldiphenyl phosphate	Ingestion	Rat	LD50 > 24,000 mg/kg
Iron oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron oxide	Ingestion	Not available	LD50 3,700 mg/kg
Polyethylene Glycol	Dermal	Rabbit	LD50 > 20,000 mg/kg
Polyethylene Glycol	Ingestion	Rat	LD50 32,770 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Polyoxyethylene monoocetylphenyl ether	Dermal	Rabbit	LD50 > 3,000 mg/kg
Polyoxyethylene monoocetylphenyl ether	Ingestion	Rat	LD50 > 500 mg/kg
Triphenyl phosphate	Dermal	Rabbit	LD50 > 7,900 mg/kg
Triphenyl phosphate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Triphenyl phosphate	Ingestion	Rat	LD50 > 3,000 mg/kg
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Dermal	Rabbit	LD50 87 mg/kg
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.33 mg/l

3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Rat	LD50 40 mg/kg
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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polymer (NJTS Reg. No. 04499600-7270)	Rabbit	Minimal irritation
Sodium Silicate	Rabbit	Corrosive
Iron oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Minimal irritation
Oxide glass chemicals		No significant irritation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Polymer (NJTS Reg. No. 04499600-7270)		Mild irritant
Sodium Silicate	Rabbit	Corrosive
Iron oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Mild irritant
Oxide glass chemicals		No significant irritation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Sodium Silicate	Mouse	Not sensitizing
Iron oxide	Human	Some positive data exist, but the data are not sufficient for classification
Polyethylene Glycol	Guinea pig	Not sensitizing
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Human and animal	Sensitizing

Photosensitization

Name	Species	Value
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Sodium Silicate	In Vitro	Not mutagenic
Sodium Silicate	In vivo	Not mutagenic
Iron oxide	In Vitro	Not mutagenic
Polyethylene Glycol	In Vitro	Not mutagenic
Polyethylene Glycol	In vivo	Not mutagenic
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	In vivo	Not mutagenic
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Iron oxide	Inhalation	Human	Some positive data exist, but the data are not

			sufficient for classification
Polyethylene Glycol	Ingestion	Rat	Not carcinogenic
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Dermal	Mouse	Not carcinogenic
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 200 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not toxic to male reproduction	Rat	NOAEL 5699 +/- 1341 mg/kg/day	5 days
Polyethylene Glycol	Not Specified	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL N/A	
Polyethylene Glycol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 562 mg/animal/day	during gestation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to female reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to male reproduction	Rat	NOAEL 10 mg/kg/day	2 generation
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Ingestion	Not toxic to development	Rat	NOAEL 15 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Polyethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.008 mg/l	2 weeks
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Sodium Silicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Silicate	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	blood	All data are negative	Rat	NOAEL 804	3 months

					mg/kg/day	
Sodium Silicate	Ingestion	heart liver	All data are negative	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Iron oxide	Inhalation	pulmonary fibrosis pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.008 mg/l	2 weeks
Polyethylene Glycol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Polyethylene Glycol	Ingestion	heart endocrine system hematopoietic system liver nervous system	All data are negative	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Oxide glass chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Test Organism	Test Type	Result
Water flea, Daphnia magna	48 hours Aquatic Toxicity - Acute	27 mg/l
Green algae, Pseudokirchneriella subcapitata	72 hours Aquatic Toxicity - Chronic	2.6 mg/l

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Zinc Borate 2335 (ZINC COMPOUNDS)	138265-88-0	10 - 30

15.2. State Regulations

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

15.4. International Regulations

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 1 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 1 Physical Hazard: 0 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	09-5451-1	Version Number:	26.00
Issue Date:	06/20/14	Supersedes Date:	08/18/13

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3M USA SDSs are available at www.3M.com



1. Identification

Product name	:	Sika AnchorFix®-2 Part A
Supplier	:	Sika Corporation
Address	:	201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887 ehs@sika-corp.com
Recommended use of the chemical and restrictions on use	:	For further information, refer to the product technical data sheet.

2. Hazards identification

GHS Classification

Skin sensitization , Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity , Category 2	H351: Suspected of causing cancer.
Specific target organ systemic toxicity - repeated exposure , Category 1, Lungs (Inhalation)	H372: Causes damage to organs through prolonged or repeated exposure if inhaled.

GHS Label element

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H317 May cause an allergic skin reaction. H351 Suspected of causing cancer. H372 Causes damage to organs (Lungs) 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. P264 Wash skin thoroughly after handling. 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.

P281 Use personal protective equipment as required.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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.

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 (%)
Quartz (SiO ₂)	14808-60-7	$\geq 50 - \leq 100$ %
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	$\geq 20 - < 25$ %
Quartz (SiO ₂) $< 5\mu\text{m}$	14808-60-7	$\geq 20 - < 25$ %
titanium dioxide	13463-67-7	< 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 : 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.
Induce vomiting immediately and call a physician.
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 : sensitizing effects
- Allergic reactions
See Section 11 for more detailed information on health effects and symptoms.
- May cause an allergic skin reaction.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure if inhaled.
- 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
Quartz (SiO ₂)	14808-60-7	ACGIH	TWA	0.025 mg/m ³ Respirable fraction
		OSHA Z-3	TWA	30 mg/m ³ / %SiO ₂ +2 total 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 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



Quartz (SiO ₂) <5µm		ACGIH	TWA	0.025 mg/m ³ Respirable fraction
		OSHA Z-3	TWA	30 mg/m ³ / %SiO ₂ +2 total 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 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
titanium dioxide	13463-67-7	OSHA P0	TWA	10 mg/m ³ Total
		OSHA Z-1	TWA	15 mg/m ³ total dust
		OSHA P0	TWA	10 mg/m ³ Total dust
		ACGIH	TWA	10 mg/m ³

*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.

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 : viscous liquid
- Color : gray
- Odor : characteristic
- Odor Threshold : No data available
- Flash point : > 302 °F (> 150 °C)
- Ignition temperature : Not applicable
- 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
Autoignition temperature	:	No data available
pH	:	No data available
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	No data available
Density	:	ca.1.65 g/cm ³
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	:	43 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

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: May cause an allergic skin reaction.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Suspected of causing cancer.

IARC

Group 2B: Possibly carcinogenic to humans

titanium dioxide 13463-67-7

Group 1: Carcinogenic to humans

Quartz (SiO₂) 14808-60-7

Quartz (SiO₂) <5µm 14808-60-7

NTP

Known to be human carcinogen

Quartz (SiO₂) 14808-60-7

Quartz (SiO₂) <5µm 14808-60-7

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Causes damage to organs (Lungs) 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.

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.

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 : Chronic Health Hazard
Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Sika AnchorFix®-2 Part A



Revision Date 04/29/2015

Print Date 04/29/2015

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 12 (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! This product contains a chemical known in the State of California to cause cancer.

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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Revision Date 04/29/2015

Material number: 417890



1. Identification

Product name	:	Sika AnchorFix®-2 Part B
Supplier	:	Sika Corporation
Address	:	201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887 ehs@sika-corp.com
Recommended use of the chemical and restrictions on use	:	For further information, refer to the product technical data sheet.

2. Hazards identification

GHS Classification

Eye irritation, Category 2A
Skin sensitization, Category 1
Carcinogenicity, Category 1A

H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.
H350: May cause cancer.

GHS Label element

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H350 May cause cancer.

Precautionary Statements

: **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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.

P363 Wash contaminated clothing before reuse.

Storage:

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 (%)
Quartz (SiO ₂)	14808-60-7	≥ 25 - < 50 %
dibenzoyl peroxide	94-36-0	≥ 10 - < 20 %
Quartz (SiO ₂) $< 5\mu\text{m}$	14808-60-7	< 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. Induce vomiting immediately and call a physician.



	<p>Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.</p>
<p>Most important symptoms and effects, both acute and delayed</p>	<p>: Allergic reactions Excessive lachrymation See Section 11 for more detailed information on health effects and symptoms.</p> <p>irritant effects sensitizing effects carcinogenic effects</p> <p>May cause an allergic skin reaction. Causes serious eye irritation. May cause cancer.</p>
<p>Protection of first-aiders</p>	<p>: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.</p>
<p>Notes to physician</p>	<p>: Treat symptomatically.</p>

5. Fire-fighting measures

<p>Suitable extinguishing media</p>	<p>: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p>
<p>Specific extinguishing methods</p>	<p>: Use water spray to cool unopened containers. 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.</p>
<p>Special protective equipment for fire-fighters</p>	<p>: In the event of fire, wear self-contained breathing apparatus.</p>

6. Accidental release measures

<p>Personal precautions, protective equipment and emergency procedures</p>	<p>: Use personal protective equipment. Deny access to unprotected persons.</p>
<p>Environmental precautions</p>	<p>: 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.</p>
<p>Methods and materials for containment and cleaning up</p>	<p>: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.</p>



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 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
Glycerol	56-81-5	OSHA P0	TWA	10 mg/m3 Total
		ACGIH	TWA	10 mg/m3
Quartz (SiO ₂)	14808-60-7	ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-3	TWA	30 mg/m3 / %SiO ₂ +2 total dust
		OSHA Z-3	TWA	10 mg/m3 / %SiO ₂ +2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO ₂ +5 respirable
		OSHA P0	TWA	0.1 mg/m3



				Respirable fraction
		OSHA P0	TWA	0.1 mg/m3 respirable dust fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
dibenzoyl peroxide	94-36-0	ACGIH	TWA	5 mg/m3
		OSHA Z-1	TWA	5 mg/m3
		OSHA P0	TWA	5 mg/m3
Quartz (SiO2) <5µm	14808-60-7	ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-3	TWA	30 mg/m3 / %SiO2+2 total dust
		OSHA Z-3	TWA	10 mg/m3 / %SiO2+2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO2+5 respirable
		OSHA P0	TWA	0.1 mg/m3 Respirable fraction
		OSHA P0	TWA	0.1 mg/m3 respirable dust fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction



*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.

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	: various
Odor	: slight
Odor Threshold	: No data available
Flash point	: Note: Not applicable
Ignition temperature	: Not applicable
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
Autoignition temperature	: No data available
pH	: No data available
Melting point/range / Freezing point	: No data available
Boiling point/boiling range	: No data available
Vapor pressure	: No data available
Density	: ca.1.55 g/cm ³ at 68 °F (20 °C)
Water solubility	: No data available
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	: 43 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

Not classified based on available information.

Ingredients:

dibenzoyl peroxide:

Acute oral toxicity	: LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 24.3 mg/l Exposure time: 4 h

Skin corrosion/irritation

Not classified based on available information.

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.

Carcinogenicity

May cause cancer.

IARC Group 1: Carcinogenic to humans

Quartz (SiO ₂)	14808-60-7
Quartz (SiO ₂) <5µm	14808-60-7
NTP	Known to be human carcinogen

Quartz (SiO ₂)	14808-60-7
Quartz (SiO ₂) <5µm	14808-60-7

Reproductive toxicity

Not classified based on available information.

**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.

12. Ecological information

Other information	<p>Do not empty into drains; dispose of this material and its container in a safe way.</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.</p> <p>Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>May be harmful to the environment if released in large quantities.</p> <p>Water polluting material.</p>
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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. (dibenzoyl peroxide, nonylbenzoate, branched and linear)
Class	9
Packing group	III
Labels	9
Packing instruction (cargo aircraft)	964
Packing instruction	964



(passenger aircraft)
Packing instruction Y964
(passenger aircraft)

IMDG

UN number 3082
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(dibenzoyl peroxide, nonylbenzoate, branched and linear)
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.

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 : Acute Health Hazard
Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

dibenzoyl peroxide	94-36-0	15.00 %
zinc distearate	557-05-1	3.00 %



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 12 (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! This product contains a chemical known in the State of California to cause cancer.

16. Other information

HMIS Classification

Health	*	3
Flammability		0
Physical Hazard		0
Personal Protection	x	

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Safety Data Sheet

Sika AnchorFix®-2 Part B



Revision Date 04/29/2015

Print Date 04/29/2015

Material number: 426081