EMSEAL Safety Data Sheet
Product Package
Chemseal System
1. Identification of the Substance / Preparation

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

2. Hazardous Indentification

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

EMSEAL Chemseal is composed of polyurethane foam impregnated with a proprietary solid acrylic polymer bonded to a fully cured polysulfide sealant. It is classified as Non-Hazardous.

NOTE: Polysulfide facing is fully cured and therefore is Non-Hazardous. The composition of the polysulfide in its liquid state is comprised of the following:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% by Weight</th>
<th>GHS Classification</th>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary Polysulfide Resin Mixture</td>
<td>50.0–60.0</td>
<td>SELF CLASSIFICATION</td>
<td>Classification: Combustible Liquid Cat. 4</td>
<td>H22 Hazard Statement Codes: H22</td>
</tr>
<tr>
<td>Tetramethylthiuram Disulfide</td>
<td>137-26-8</td>
<td>1.0–3.0</td>
<td>Classification: Combustible Liquid Cat. 4, Acute Oral Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4, STOT (Central Nervous System, Brain) RE Cat. 2, Skin Irritation Cat. 2, Eye Irritation Cat. 2A, Skin Sensitization Cat. 1, Aquatic Acute Toxicity Cat. 1, Aquatic Chronic Toxicity Cat. 1</td>
<td>Hazard Statement Codes: H227, H302 + H332, H373, H315, H319, H317, H400, H410</td>
</tr>
</tbody>
</table>

Water and other components.
Each of the other components are proprietary.
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. Material can support an open flame or smoldering ignition. The foam can melt while burning which can contribute fire to spread.
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 white 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.
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 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 >= 1%.

### 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Hazardous ingredients</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>&gt;= 25 - &lt; 50 %</td>
</tr>
<tr>
<td>bisphenol-A-(epichlorhydrin) epoxy resin</td>
<td>25068-38-6</td>
<td>&gt;= 10 - &lt; 20 %</td>
</tr>
<tr>
<td>oxirane, mono(C12-14-alkyloxy)methyl</td>
<td>derivatives</td>
<td>68609-97-2</td>
</tr>
</tbody>
</table>
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.

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: 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

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

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

**Basis
ACGIH. Threshold Limit Values (TLV)
OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)
OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant
OSHA P2. Permissible Exposure Limits (PEL), Table Z-2
OSHA Z3. Table Z-3, Mineral Dust

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

Personal protective equipment

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

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Hand protection
Remarks: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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

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

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

9. Physical and chemical properties

Appearance: 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
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part A

Water solubility : Note: insoluble
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
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.
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

Carcinogenicity
May cause cancer by inhalation.

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>bisphenol-A- (epichlorhydrin) epoxy</td>
<td>LC50</td>
</tr>
</tbody>
</table>
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.
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part A

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>x</td>
</tr>
</tbody>
</table>

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
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part A

Revision Date 12/05/2019

Material number: 577437
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 (Lungs) through prolonged or repeated exposure.

GHS label elements

Hazard pictograms : ⱜ ⱝ ⱞ

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.
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 >= 1%.

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### 3. Composition/information on ingredients

**Hazardous ingredients**
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.
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part B

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.
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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Basis **</th>
<th>Value</th>
<th>Exposure limit(s)* / Form of exposure</th>
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<td>Quartz (SiO2)</td>
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<td>OSHA Z-3</td>
<td>TWA</td>
<td>10 mg/m^3 / %SiO2+2 respirable</td>
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<td>TWA</td>
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<td></td>
<td></td>
<td>OSHA P0</td>
<td>TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.025 mg/m^3 Respirable fraction</td>
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<td></td>
<td>OSHA Z-1</td>
<td>TWA</td>
</tr>
<tr>
<td>m-phenylenebis(methylamine)</td>
<td>1477-55-0</td>
<td>ACGIH</td>
<td>C</td>
<td>0.1 mg/m^3</td>
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<td></td>
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<td>OSHA P0</td>
<td>C</td>
</tr>
</tbody>
</table>

*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: 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
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
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.
Aspiration toxicity
Not classified based on available information.

Carcinogenicity
May cause cancer by inhalation.

**IARC**
Quartz (SiO2) 14808-60-7
Group 1: Carcinogenic to humans

**NTP**
Quartz (SiO2) 14808-60-7
Known to be human carcinogen

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)** 1477-55-0
Toxicity 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**
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: 154
- Guidebook Number

**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 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))
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part B

Revision Date 12/05/2019  Print Date 12/05/2019

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

Marine pollutant no

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
Safety Data Sheet

Northern Manufacturing Construction Grade Epoxy Part B

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>X</td>
</tr>
</tbody>
</table>

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
SECTION 1. IDENTIFICATION

Product name : DOW CORNING(R) 748 NON-CORROSIVE SEALANT
Product code : 00000000002184346

Manufacturer or supplier's details
Company name of supplier : Dow Corning Corporation
Address : South Saginaw Road
           Midland Michigan 48686
Telephone : (989) 496-6000
Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900
                     CHEMTREC : (800) 424-9300

Recommended use of the chemical and restrictions on use
Recommended use : Adhesive, binding agents

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Skin sensitization : Category 1

GHS Label element
Hazard pictograms :

Signal Word : Warning
Hazard Statements : H317 May cause an allergic skin reaction.
Precautionary Statements : Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing must not be allowed out of
the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/
attention.
P363 Wash contaminated clothing before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste dis-
posal plant.
SAFETY DATA SHEET

DOW CORNING(R) 748 NON-CORROSIVE SEALANT

Version 2.1
Review Date: 05/01/2018
MSDS Number: 848716-00003
Date of last issue: 03/30/2015
Date of first issue: 11/28/2014

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Sealant

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Methyltrimethoxysilane</td>
<td>1185-55-3</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Stearic acid</td>
<td>57-11-4</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde
Metal oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-
mine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice.
Keep away from water.
Protect from moisture.
Take care to prevent spills, waste and minimize release to the environment.

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

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>TWA (Respirable)</td>
<td>5 mg/m3 (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
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<td>TWA (total)</td>
<td>10 mg/m3 (Calcium carbonate)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>TWA (total dust)</td>
<td>15 mg/m3</td>
<td>OSHA Z-1</td>
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<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 mg/m3 (Titanium dioxide)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Methyltrimethoxysilane</td>
<td>1185-55-3</td>
<td>TWA</td>
<td>50 ppm</td>
<td>DCC OEL</td>
</tr>
<tr>
<td>Stearic acid</td>
<td>57-11-4</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>ACGIH</td>
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<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>ACGIH</td>
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<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
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</table>
SAFETY DATA SHEET

DOW CORNING(R) 748 NON-CORROSIVE SEALANT

Version 2.1       Review Date: 05/01/2018       MSDS Number: 848716-00003       Date of last issue: 03/30/2015       Date of first issue: 11/28/2014

<table>
<thead>
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<th>Occupational exposure limits of decomposition products</th>
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<tr>
<td>Ingredients</td>
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<tr>
<td>Methanol</td>
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<table>
<thead>
<tr>
<th>Biological occupational exposure limits</th>
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</thead>
<tbody>
<tr>
<td>Ingredients</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Methanol</td>
</tr>
</tbody>
</table>

**Engineering measures**
- Processing may form hazardous compounds (see section 10).
- Ensure adequate ventilation, especially in confined areas.
- Minimize workplace exposure concentrations.
- Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m³ - total dust, 5 mg/m³ - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m³ - respirable particles, 10 mg/m³ - inhalable particles.

**Personal protective equipment**
- **Respiratory protection**: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled
Hand protection

Material : Impervious gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection

: Wear the following personal protective equipment:
  Safety glasses

Skin and body protection

: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures

: Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste
Color : white
Odor : alcohol-like
Odor Threshold : No data available
pH : Not applicable
Melting point/freezing point : No data available
Initial boiling point and boiling range : Not applicable
Flash point : Not applicable
SAFETY DATA SHEET

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Evaporation rate : Not applicable
Flammability (solid, gas) : Not classified as a flammability hazard
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapor pressure : Not applicable
Relative vapor density : No data available
Relative density : 1.34

Solubility(ies)
   Water solubility : No data available
   Partition coefficient: n-octanol/water : No data available
   Autoignition temperature : No data available
   Decomposition temperature : No data available

Viscosity
   Viscosity, dynamic : Not applicable

Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.
Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : Exposure to moisture.
Incompatible materials : Oxidizing agents
   Water
SAFETY DATA SHEET

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Hazardous decomposition products
Contact with water or humid air: Methanol
Thermal decomposition: Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Skin contact
Ingestion
Eye contact
Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Ingredients:
Calcium carbonate:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity: LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

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

Acute inhalation toxicity: LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**Methyltrimethoxysilane:**

Acute oral toxicity
: LD50 (Rat): 12.3 ml/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity
: LC50 (Rat): > 42.1 mg/l
Exposure time: 6 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on test data

Acute dermal toxicity
: LD50 (Rabbit): > 9,500 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

**Stearic acid:**

Acute oral toxicity
: LD50: > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity
: LC50 (Rat): > 0.1621 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity
: LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

**Methanol:**

Acute oral toxicity
: Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgment

Acute inhalation toxicity
: Acute toxicity estimate (Humans): 3 mg/l
Test atmosphere: vapor
Method: Expert judgment

Acute dermal toxicity
: Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgment

**Skin corrosion/irritation**

Not classified based on available information.
Ingredients:

**Calcium carbonate:**
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

**Titanium dioxide:**
Species: Rabbit
Result: No skin irritation

**Methyltrimethoxysilane:**
Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

**Stearic acid:**
Species: Rabbit
Result: No skin irritation

**Methanol:**
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation
Not classified based on available information.

Ingredients:

**Calcium carbonate:**
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

**Titanium dioxide:**
Species: Rabbit
Result: No eye irritation

**Methyltrimethoxysilane:**
Species: Rabbit
Result: No eye irritation
Remarks: Based on test data

**Stearic acid:**
Species: Rabbit
Result: No eye irritation

**Methanol:**
Species: Rabbit
Result: No 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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**Ingredients:**

**Calcium carbonate:**
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

**Titanium dioxide:**
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

**Methyltrimethoxysilane:**
Assessment: Probability or evidence of low to moderate skin sensitization rate in humans
Test Type: Buehler Test
Species: Guinea pig
Remarks: Based on test data

**Stearic acid:**
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

**Methanol:**
Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

**Germ cell mutagenicity**
Not classified based on available information.

**Ingredients:**

**Calcium carbonate:**
Genotoxicity in vitro: Test Type: In vitro mammalian cell gene mutation test
Result: negative

**Titanium dioxide:**
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo: Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

**Methyltrimethoxysilane:**
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on test data
Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on test data

Germ cell mutagenicity - Assessment: Animal testing did not show any mutagenic effects.

Stearic acid:
Genotoxicity in vitro: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Methanol:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  Method: OECD Test Guideline 476
  Result: negative

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity
Not classified based on available information.

Ingredients:
Titanium dioxide:
Species: Rat
Application Route: inhalation (dust/mist/fume)
Exposure time: 24 Months
Method: OECD Test Guideline 453
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans. The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment: Limited evidence of carcinogenicity in inhalation studies with animals.

Methanol:
Species: Mouse
Application Route: inhalation (vapor)
Exposure time: 18 Months
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Method: OECD Test Guideline 453
Result: negative

IARC
Group 2B: Possibly carcinogenic to humans

Titanium dioxide
13463-67-7

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

Ingredients:

Calcium carbonate:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Methyltrimethoxysilane:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fertility.
Remarks: Based on test data

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fetal development.
Remarks: Based on test data

Reproductive toxicity - Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Stearic acid:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

**Methanol:**

Effects on fertility: Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: negative

Effects on fetal development: Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: positive
Remarks: The effects were seen only at maternally toxic doses.

**STOT-single exposure**
Not classified based on available information.

**Ingredients:**

**Methanol:**
Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

**STOT-repeated exposure**
Not classified based on available information.

**Ingredients:**

**Methyltrimethoxysilane:**
Routes of exposure: inhalation (vapor)
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Routes of exposure: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Repeated dose toxicity**

**Ingredients:**
Calcium carbonate:
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Ingestion
Exposure time: 6 w
Method: OECD Test Guideline 422

Titanium dioxide:
Species: Rat
NOAEL: 24,000 mg/kg
Application Route: Ingestion
Exposure time: 28 d

Species: Rat
NOAEL: 10 mg/m3
Application Route: inhalation (dust/mist/fume)
Exposure time: 2 y
Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Methyltrimethoxysilane:
Species: Rat
Application Route: inhalation (vapor)
Remarks: Based on test data

Species: Rat
Application Route: Ingestion
Remarks: Based on test data

Stearic acid:
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Ingestion
Exposure time: 42 d
Method: OECD Test Guideline 422

Methanol:
Species: Rat
NOAEL: 1.06 mg/l
Application Route: inhalation (vapor)
Exposure time: 90 d

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:
Calcium carbonate: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae:
ErC50 (Desmodesmus subspicatus (green algae)): > 14 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Titanium dioxide:
Toxicity to fish:
LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae:
EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
Exposure time: 72 h

Toxicity to bacteria:
EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Methyltrimethoxysilane:
Toxicity to fish:
LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia sp.): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae:
ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to bacteria:
EC50: > 100 mg/l
Method: OECD Test Guideline 209

Stearic acid:
Toxicity to fish:
LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l
Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): > 4.8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.9 mg/l
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- **Exposure time:** 72 h  
  **Method:** OECD Test Guideline 201  
  **Remarks:** No toxicity at the limit of solubility.

- **Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):** NOEC (Daphnia magna (Water flea)): > 0.22 mg/l  
  **Exposure time:** 21 d  
  **Method:** OECD Test Guideline 211  
  **Remarks:** No toxicity at the limit of solubility.

- **Toxicity to bacteria:** EC10 (Pseudomonas putida): 883 mg/l  
  **Exposure time:** 16 h

### Methanol:

- **Toxicity to fish:** LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l  
  **Exposure time:** 96 h

- **Toxicity to daphnia and other aquatic invertebrates:** EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
  **Exposure time:** 48 h

- **Toxicity to algae:** EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l  
  **Exposure time:** 96 h  
  **Method:** OPPTS 850.5400

- **Toxicity to fish (Chronic toxicity):** NOEC (Oryzias latipes (Orange-red killfish)): 15,800 mg/l  
  **Exposure time:** 200 h

- **Toxicity to bacteria:** EC50: 20,000 mg/l  
  **Exposure time:** 15 h

### Persistence and degradability

**Ingredients:**

- **Methyltrimethoxysilane:**  
  **Stability in water:** Degradation half life: 2.2 h pH: 7

- **Stearic acid:**  
  **Biodegradability:** Result: Readily biodegradable.  
  **Biodegradation:** 93%  
  **Exposure time:** 28 d  
  **Method:** OECD Test Guideline 301B

- **Methanol:**  
  **Biodegradability:** Result: Readily biodegradable.  
  **Biodegradation:** 95%  
  **Exposure time:** 20 d

### Bioaccumulative potential

**Ingredients:**

- **Methyltrimethoxysilane:**  
  **Partition coefficient: n-octanol/water:** log Pow: -2.36
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Stearic acid:
Bioaccumulation : Species: Fish
   Bioconcentration factor (BCF): 238 - 288
   Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: > 5

Methanol:
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
   Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water : log Pow: -0.77

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Resource Conservation and Recovery Act (RCRA) : This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation
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49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Acute Health Hazard

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

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

US State Regulations

Pennsylvania Right To Know
- Dimethyl siloxane, trimethoxysilyl-terminated: Not Assigned
- Calcium carbonate: 471-34-1
- Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated: 68083-19-2
- Titanium dioxide: 13463-67-7
- Methanol: 67-56-1
- Dimethyl siloxane, trimethoxysilyl-terminated: Not Assigned
- Calcium carbonate: 471-34-1
- Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated: 68083-19-2
- Titanium dioxide: 13463-67-7
- Stearic acid: 57-11-4
- Methyltrimethoxysilane: 1185-55-3
- Methanol: 67-56-1

New Jersey Right To Know
- Dimethyl siloxane, trimethoxysilyl-terminated: Not Assigned
- Calcium carbonate: 471-34-1
- Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated: 68083-19-2
- Titanium dioxide: 13463-67-7
- Stearic acid: 57-11-4
- Methyltrimethoxysilane: 1185-55-3
- Methanol: 67-56-1

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

Methanol: 67-56-1
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The ingredients of this product are reported in the following inventories:

- **REACH**: All ingredients (pre-)registered or exempt.
- **TSCA**: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
- **AICS**: All ingredients listed or exempt.
- **IECSC**: All ingredients listed or exempt.
- **ENCS/ISHL**: All components are listed on ENCS/ISHL or exempted from inventory listing.
- **KECI**: All ingredients listed, exempt or notified.
- **PICCS**: All ingredients listed or exempt.
- **DSL**: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

**NFPA:**

- Flammability: 1
- Health: 2
- Special hazard:

**HMIS III:**

- HEALTH: 2
- FLAMMABILITY: 1
- PHYSICAL HAZARD: 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Full text of other abbreviations

- **ACGIH**: USA. ACGIH Threshold Limit Values (TLV)
- **ACGIH BEI**: ACGIH - Biological Exposure Indices (BEI)
- **DCC OEL**: Dow Corning Guide
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NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
DCC OEL / TWA : Time weighted average
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA : 8-hour time weighted average


Revision Date : 05/01/2018'

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

US / Z8