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, Hazard Statement Codes: H22</td>
<td></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, Hazard Statement Codes: H227, H302 + H332, H373, H315, H319, H317, H400, H410</td>
<td></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 of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name EPOXY ADHESIVE PART A

Other Means of Identification

Product Code NOMAD-PART A
Product Technology Epoxy A side
None

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

Supplier Address
Northern Manufacturing
111 Royal Group Crescent
Woodbridge, ON. Canada
L4H 1X9

Company Phone Number 508-836-0280 (8AM - 5PM EST) (M-F)
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).

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>2</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
</tr>
</tbody>
</table>

EMERGENCY OVERVIEW

WARNING

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Appearance  Viscous  Off white  Physical State  Paste  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
61.69% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A diglycidyl ether resin</td>
<td>25068-38-6</td>
<td>20 - 40</td>
<td>*</td>
</tr>
<tr>
<td>Proprietary resin</td>
<td>17557-23-2</td>
<td>1 - 10</td>
<td>*</td>
</tr>
</tbody>
</table>

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

4. First Aid Measures

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. If eye irritation persists: Get medical advice/attention.
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, do not induce vomiting: seek medical advice immediately and show this container or label.

Self-Protection of the First Aider
First Aider: Pay attention to self-protection. Use personal protective equipment as required.

Most Important Symptoms and Effects, Both Acute and Delayed
Symptoms
No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to Physicians
Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media
Use CO2, dry chemical, or foam

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
Ventilate affected area. Extremely slippery when spilled.

Other Information
Use personal protective equipment as required.

For Emergency Responders
Use personal protective equipment as required.

Environmental Precautions

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

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. Store and handle away from heat, flames and oxidizing materials.

**Incompatible Materials**  

### 8. Exposure Controls/Personal Protection

#### Control Parameters

**Exposure Guidelines**  
.

**Appropriate Engineering Controls**  
Showers  
Eyewash stations  
Ventilation systems

**Individual Protection Measures, Such As Personal Protective Equipment**

**Eye/Face Protection**  
Splash Goggles.

**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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks  • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Paste</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Off white</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>&gt; 250 °C</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 220 °C</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Reactivity

No data available

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Extremes of temperature and direct sunlight. Mixture with or exposure to incompatible materials.

Incompatible Materials

Hazardous Decomposition Products

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. May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50 (Rat)</th>
<th>Dermal LD50 (Rabbit)</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A diglycidyl ether</td>
<td>11400 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25068-38-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietary resin</td>
<td>4500 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects
No information available.

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

- **Skin corrosion/irritation**: Irritating to skin.
- **Serious eye damage/eye irritation**: Irritating to eyes.
- **Irritation**: Irritating to eyes and skin.
- **Sensitization**: May cause sensitization of susceptible persons.
- **Germ Cell Mutagenicity**: No information available.
- **Carcinogenicity**: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
- **Reproductive Toxicity**: No information available.
- **STOT - Single Exposure**: No information available.
- **STOT - Repeated Exposure**: No information available.
- **Chronic Toxicity**: Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.
- **Aspiration Hazard**: No information available.

**Numerical Measures of Toxicity - Product Information**

- **Unknown Acute Toxicity**: 61.69% of the mixture consists of ingredient(s) of unknown toxicity
- **Ecotoxicity**: The following values are calculated based on chapter 3.1 of the GHS document
  - **ATEmix (oral)**: 9679 mg/kg

### 12. Ecological Information

- **Ecotoxicity**: No information available
  - 66.27998% of the mixture consists of components(s) of unknown hazards to the aquatic environment

- **Persistence and Degradability**: No information available

- **Other Adverse Effects**: No information available

### 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)**
- **IATA**
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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide - 13463-67-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>
| 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**

This product does not contain any substances regulated by state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

### 16. Other Information

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Prepared by Compliance
Issue Date 29-Jun-2015
Revision Date 07-May-2018

Revision note
No information available

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

Product identifier

Product Name EPOXY ADHESIVE PART B

Other means of identification

Product Code(s) NOMAD-PART 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

ManufacturerAddress
Northern Manufacturing
111 Royal Group Crescent
Woodbridge, ON. Canada
L4H 1X9

Company Phone Number 508-836-0280 (8AM - 5PM EST) (M-F)
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 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 1 |
| Respiratory sensitization | Category 1 |
| Skin sensitization | Category 1 |
| Germ cell mutagenicity | Category 2 |
| Reproductive toxicity | Category 2 |

Emergency Overview

DANGER

Hazard statements
Harmful if swallowed
Causes skin irritation
Causes serious eye damage
Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust, fumes, or vapors
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
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
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up
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
May be harmful in contact with skin, Very toxic to aquatic life with long lasting effects, Toxic to aquatic life
89.596% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substance</th>
<th>Chemical Family</th>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy B Side</td>
<td>N-Aminoethylpiperazine</td>
<td>140-31-8</td>
<td>1 - 3</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of damaging fertility or the unborn child
EPOXY ADHESIVE PART B

Revision Date March 13, 2019

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A</td>
<td>80-05-7</td>
<td>1 - 3</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>111-40-0</td>
<td>1 - 2</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched</td>
<td>84852-15-3</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>4-tert-Butylphenol</td>
<td>98-54-4</td>
<td>0.1 - 0.3</td>
</tr>
<tr>
<td>1,2-Ethylene diamine</td>
<td>107-15-3</td>
<td>0.1 - 0.3</td>
</tr>
</tbody>
</table>

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

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. 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; Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits
The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine</td>
<td>TWA: 1 ppm</td>
<td>(vacated) TWA: 1 ppm</td>
<td>TWA: 1 ppm</td>
</tr>
<tr>
<td>111-40-0</td>
<td>S*</td>
<td>(vacated) TWA: 4 mg/m³</td>
<td>TWA: 4 mg/m³</td>
</tr>
<tr>
<td>1,2-Ethylenediamine</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm</td>
<td>IDLH: 1000 ppm</td>
</tr>
<tr>
<td>107-15-3</td>
<td>S*</td>
<td>(vacated) TWA: 25 mg/m³</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 25 mg/m³</td>
<td>TWA: 25 mg/m³</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Paste</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild amine odor</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °C</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.96</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>N/A cSt</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>N/A cps @ 25° C</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Other Information</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>&lt;1 g/L</td>
<td></td>
</tr>
<tr>
<td>Liquid Density</td>
<td>16.3 pounds/gallon</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

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

Incompatible materials
Acids; Bases; Strong oxidizing agents; Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide.

Hazardous decomposition products
Carbon oxides; Nitrogen oxides (NOx). Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Nitric acid. Ammonia. Flammable hydrocarbon fragments.

11. Toxicological Information

Information on likely routes of exposure

Product Information
The product has not been tested.

Inhalation
Remove to fresh air.

Eye contact
Avoid contact with eyes. Irritating to eyes.

Skin contact
Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

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 inhalation and skin contact.

Germ cell mutagenicity
Contains a known or suspected mutagen.

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

Reproductive toxicity
Category 2: Substances which should be regarded as if they impair fertility in humans.

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. Contains a known or suspected reproductive toxin. May cause harm to the unborn child. May produce an allergic reaction.

Target organ effects
Eyes, Skin, Blood.

Aspiration hazard
N/A.

Numerical measures of toxicity - Product Information
12. Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects
91.108% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine 140-31-8</td>
<td>495: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Poecilia reticulata mg/L LC50 semi-static</td>
<td>32: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>2.5: 96 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>9.9: 96 h Brachydanio rerio mg/L LC50 static 4.0 - 5.5: 96 h Pimephales promelas mg/L LC50 static 4: 96 h Oncorhynchus mykiss mg/L LC50 3.6 - 5.4: 96 h Pimephales promelas mg/L LC50</td>
<td>9.2 - 11.4: 48 h Daphnia magna mg/L EC50 Static 3.9: 48 h Daphnia magna mg/L EC50 10.2: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subsipicatus mg/L EC50 1164: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>1014: 96 h Poecilia reticulata mg/L LC50 semi-static 430: 96 h Lepomis macrochirus mg/L LC50 static 248: 96 h Poecilia reticulata mg/L LC50</td>
<td>37: 24 h Daphnia magna mg/L EC50 15: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched 84852-15-3</td>
<td>0.16 - 0.72: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.48: 96 h Pseudokirchneriella subcapitata mg/L EC50 1.3: 72 h Desmodesmus subsipicatus mg/L EC50</td>
<td>0.135: 96 h Pimephales promelas mg/L LC50 flow-through 0.1351: 96 h Lepomis macrochirus mg/L LC50 flow-through</td>
<td>0.14: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>4-tert-Butylphenol 98-54-4</td>
<td>11.2: 72 h Desmodesmus subsipicatus mg/L EC50</td>
<td>6.9: 96 h Cyprinus carpio mg/L LC50 static 4.71 - 5.62: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td>3.4 - 4.5: 48 h Daphnia magna mg/L EC50 Static 3.9: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>151: 96 h Pseudokirchneriella subcapitata mg/L EC50 645: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>115.7: 96 h Pimephales promelas mg/L LC50 semi-static 191 - 254: 96 h Pimephales promelas mg/L LC50 flow-through 98.6 - 131.6: 96 h Pimephales promelas mg/L LC50 static 180 - 560: 96 h Poecilia reticulata mg/L LC50 semi-static</td>
<td>17: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability
N/A

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine 140-31-8</td>
<td>-1.48</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>2.2</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>-1.3</td>
</tr>
<tr>
<td>4-tert-Butylphenol 98-54-4</td>
<td>2.44</td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>-1.221</td>
</tr>
</tbody>
</table>

Other adverse effects
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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine</td>
<td>Toxic</td>
</tr>
<tr>
<td>111-40-0</td>
<td></td>
</tr>
<tr>
<td>1,2-Ethlenediamine</td>
<td>Toxic</td>
</tr>
<tr>
<td>107-15-3</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A - 80-05-7</td>
<td>80-05-7</td>
<td>1 - 3</td>
<td>1.0</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched - 84852-15-3</td>
<td>84852-15-3</td>
<td>&lt;1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Ethlenediamine</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Ethlenediamine</td>
<td>5000 lb</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A - 80-05-7</td>
<td>Female Reproductive</td>
</tr>
<tr>
<td>ethanol - 64-17-5</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1,2-Ethlenediamine 107-15-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other Information**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards 0</th>
<th>Flammability N/A</th>
<th>Instability N/A</th>
<th>Physical and chemical properties - Physical hazards 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health hazards 2*</td>
<td>Flammability 1</td>
<td>Physical hazards 0</td>
<td></td>
</tr>
</tbody>
</table>

* = Chronic Health Hazard

Prepared By: Key Polymer Corp Compliance\nIssuing Date: 05-Aug-2016
Revision Date: 07-May-2018

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
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

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 disposal 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>
<td></td>
<td></td>
<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>
</tr>
<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>
</tr>
<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>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
</tr>
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</table>
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<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>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>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>OSHA Z-1</td>
</tr>
</tbody>
</table>

Occupational exposure limits of decomposition products

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>Methanol</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>15 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

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...
release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

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
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<thead>
<tr>
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<th>Review Date</th>
<th>MSDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>05/01/2018</td>
<td>848716-0003</td>
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<td>11/28/2014</td>
</tr>
</tbody>
</table>

- 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
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.
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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:
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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:
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**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:**
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
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<thead>
<tr>
<th>Version</th>
<th>Review Date</th>
<th>MSDS Number</th>
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</tr>
</tbody>
</table>

**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 killifish)): 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
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>
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</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 30 - 50 %
- Calcium carbonate: 471-34-1 30 - 50 %
- Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated: 68083-19-2 5 - 10 %
- Titanium dioxide: 13463-67-7 1 - 5 %
- Methanol: 67-56-1 0.1 - 1 %

New Jersey Right To Know
- Dimethyl siloxane, trimethoxysilyl-terminated: Not Assigned 30 - 50 %
- Calcium carbonate: 471-34-1 30 - 50 %
- Dimethyl Siloxane, Dimethylvinylsiloxyl-terminated: 68083-19-2 5 - 10 %
- Titanium dioxide: 13463-67-7 1 - 5 %
- Stearic acid: 57-11-4 1 - 5 %
- Methyltrimethoxysilane: 1185-55-3 1 - 5 %
- Methanol: 67-56-1 0.1 - 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
SAFETY DATA SHEET

DOW CORNING(R) 748 NON-CORROSION SEALANT

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:

Health 2
Flammability 1
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
**SAFETY DATA SHEET**

**DOW CORNING(R) 748 NON-CORROSIVE SEALANT**

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<th>Review Date</th>
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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