

# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 116 LV GRAY 30 CTG/CS  
**Material:** 426712L 323

### Recommended use and restriction on use

**Recommended use:** Sealant  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

Tremco U.S Sealants  
3735 Green Road  
Beachwood OH 44122  
US

**Contact person:** EH&S Department  
**Telephone:** 216-292-5000  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

|                        |             |
|------------------------|-------------|
| Respiratory sensitizer | Category 1  |
| Skin sensitizer        | Category 1  |
| Germ Cell Mutagenicity | Category 1B |
| Carcinogenicity        | Category 1A |

#### Unknown toxicity - Health

|  |         |
|--|---------|
| Acute toxicity, oral                     | 34.06 % |
| Acute toxicity, dermal                   | 41.27 % |
| Acute toxicity, inhalation, vapor        | 97.73 % |
| Acute toxicity, inhalation, dust or mist | 99.12 % |

### Environmental Hazards

|  |            |
|--|------------|
| Acute hazards to the aquatic environment | Category 2 |
|--|------------|

#### Unknown toxicity - Environment

|  |         |
|--|---------|
| Acute hazards to the aquatic environment   | 78.43 % |
| Chronic hazards to the aquatic environment | 100 %   |

### Label Elements

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause genetic defects.  
May cause cancer.  
Toxic to aquatic life.

**Precautionary Statement:**

**Prevention:** Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

**Response:** If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Specific treatment (see this label). Wash contaminated clothing before reuse.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

#### Mixtures

| Chemical Identity                    | CAS number | Content in percent (%)* |
|--------------------------------------|------------|-------------------------|
| Calcium Carbonate (Limestone)        | 1317-65-3  | 10 - 30%                |
| Titanium dioxide                     | 13463-67-7 | 3 - 7%                  |
| Polyethylene                         | 9002-88-4  | 3 - 7%                  |
| Heavy aromatic naphtha               | 64742-94-5 | 1 - 5%                  |
| Aromatic petroleum distillates       | 64742-95-6 | 0.5 - 1.5%              |
| 1,2,4-Trimethylbenzene               | 95-63-6    | 0.5 - 1.5%              |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8   | 0.5 - 1.5%              |

|  |            |          |
|--|------------|----------|
| Aluminum oxide                           | 1344-28-1  | 0.1 - 1% |
| Polymethylene polyphenyl isocyanate      | 9016-87-9  | 0.1 - 1% |
| 1,3,5-Trimethylbenzene                   | 108-67-8   | 0.1 - 1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - 1% |

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
- Inhalation:** Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
- Skin Contact:** If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
- Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** May cause skin and eye irritation.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Symptoms may be delayed.

#### 5. Fire-fighting measures

**General Fire Hazards:** No unusual fire or explosion hazards noted.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up:** Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Notification Procedures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions:** Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**

**Precautions for safe handling:** Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

**Conditions for safe storage, including any incompatibilities:** Store locked up.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity                                    | type | Exposure Limit Values | Source  |
|--|------|-----------------------|---|
| Calcium Carbonate (Limestone) - Total dust.          | PEL  | 15 mg/m3              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate (Limestone) - Respirable fraction. | PEL  | 5 mg/m3               | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Titanium dioxide                                     | TWA  | 10 mg/m3              | US. ACGIH Threshold Limit Values (2011)                                     |
| Titanium dioxide - Total dust.                       | PEL  | 15 mg/m3              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Polyethylene - Inhalable particles.                  | TWA  | 10 mg/m3              | US. ACGIH Threshold Limit Values (03 2015)                                  |
| Polyethylene -                                       | TWA  | 3 mg/m3               | US. ACGIH Threshold Limit Values  |

|  |         |   |   |
|--|---------|---|---|
| Respirable particles.  |         |   | (03 2015)   |
| Polyethylene - Respirable fraction.                                | PEL     | 5 mg/m3   | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Polyethylene - Total dust.   | PEL     | 15 mg/m3  | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
|  | TWA     | 15 mg/m3  | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)                                |
|  | TWA     | 50 millions of particles per cubic foot of air  | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)                                |
| Polyethylene - Respirable fraction.                                | TWA     | 5 mg/m3   | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)                                |
|  | TWA     | 15 millions of particles per cubic foot of air  | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)                                |
| Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor | TWA     | 200 mg/m3                                       | US. ACGIH Threshold Limit Values (03 2014)                                  |
| Heavy aromatic naphtha   | PEL     | 100 ppm 400 mg/m3                               | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 1,2,4-Trimethylbenzene   | TWA     | 25 ppm  | US. ACGIH Threshold Limit Values (2011)                                     |
| 4,4'-Methylene bis(phenylisocyanate)                               | TWA     | 0.005 ppm                                       | US. ACGIH Threshold Limit Values (2011)                                     |
|  | Ceiling | 0.02 ppm 0.2 mg/m3                              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum oxide - Respirable fraction.                              | TWA     | 1 mg/m3   | US. ACGIH Threshold Limit Values (2011)                                     |
|  | PEL     | 5 mg/m3   | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum oxide - Total dust.                                       | PEL     | 15 mg/m3  | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Polymethylene polyphenyl isocyanate                                | TWA     | 0.005 ppm                                       | US. ACGIH Threshold Limit Values (2011)                                     |
|  | Ceiling | 0.02 ppm 0.2 mg/m3                              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 1,3,5-Trimethylbenzene   | TWA     | 25 ppm  | US. ACGIH Threshold Limit Values (2011)                                     |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.    | TWA     | 0.025 mg/m3                                     | US. ACGIH Threshold Limit Values (2011)                                     |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable.             | TWA     | 2.4 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)                                |

|  |     |           |  |
|--|-----|-----------|--|
|  | TWA | 0.1 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Crystalline Silica (Quartz)/ Silica Sand - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |

| Chemical name                               | type  | Exposure Limit Values | Source  |
|---|-------|-----------------------|---|
| Diisodecyl phthalate                        | TWAEV | 5 mg/m3               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Calcium Carbonate (Limestone) - Total dust. | STEL  | 20 mg/m3              | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|   | TWA   | 10 mg/m3              | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |

|  |       |           |   |
|--|-------|-----------|---|
| Calcium Carbonate (Limestone) - Respirable fraction.               | TWA   | 3 mg/m3   | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium Carbonate (Limestone) - Total dust.                        | TWA   | 10 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| Titanium dioxide - Total dust.                                     | TWA   | 10 mg/m3  | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide - Respirable fraction.                            | TWA   | 3 mg/m3   | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide   | TWAEV | 10 mg/m3  | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Titanium dioxide - Total dust.                                     | TWA   | 10 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| Polyethylene - Respirable fraction.                                | TWA   | 3 mg/m3   | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Polyethylene - Total dust.   | TWA   | 10 mg/m3  | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Polyethylene - Respirable particles.                               | TWAEV | 3 mg/m3   | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Polyethylene - Inhalable   | TWAEV | 10 mg/m3  | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Polyethylene - Total dust.   | TWA   | 10 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)  |
| Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor | TWA   | 200 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor | TWAEV | 200 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |

|                                      |         |           |             |   |
|--------------------------------------|---------|-----------|-------------|---|
| Heavy aromatic naphtha               | TWA     | 400 ppm   | 1,590 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)  |
| 1,2,4-Trimethylbenzene               | TWA     | 25 ppm    |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 1,2,4-Trimethylbenzene               | TWAEV   | 25 ppm    |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| 1,2,4-Trimethylbenzene               | TWA     | 25 ppm    | 123 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| 4,4'-Methylene bis(phenylisocyanate) | CEILING | 0.01 ppm  |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                      | TWA     | 0.005 ppm |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 4,4'-Methylene bis(phenylisocyanate) | TWAEV   | 0.005 ppm |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
|                                      | CEV     | 0.02 ppm  |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| 4,4'-Methylene bis(phenylisocyanate) | TWA     | 0.005 ppm | 0.051 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| Polymethylene polyphenyl isocyanate  | TWA     | 0.005 ppm |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                      | CEILING | 0.01 ppm  |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                      | TWA     | 0.005 ppm |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                      | CEILING | 0.01 ppm  |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |



|   |       |           |             |   |
|---|-------|-----------|-------------|---|
|   |       |           |             | as amended) (07 2007)   |
| Polymethylene polyphenyl isocyanate                             | TWAEV | 0.005 ppm |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
|   | CEV   | 0.02 ppm  |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Polymethylene polyphenyl isocyanate                             | TWA   | 0.005 ppm | 0.051 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| 1,3,5-Trimethylbenzene  | TWA   | 25 ppm    |             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 1,3,5-Trimethylbenzene  | TWAEV | 25 ppm    |             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| 1,3,5-Trimethylbenzene  | TWA   | 25 ppm    | 123 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA   |           | 0.025 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable.          | TWAEV |           | 0.10 mg/m3  | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)  |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.     | TWA   |           | 0.1 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)  |

**Appropriate Engineering Controls** Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

**Individual protection measures, such as personal protective equipment**

**General information:** Use personal protective equipment as required.

**Eye/face protection:** Wear goggles/face shield.

**Skin Protection**

**Hand Protection:** Use suitable protective gloves if risk of skin contact.

**Other:** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Hygiene measures:** Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

### Appearance

**Physical state:** solid

**Form:** Paste

**Color:** Gray

**Odor:** Mild

**Odor threshold:** No data available.

**pH:** No data available.

**Melting point/freezing point:** No data available.

**Initial boiling point and boiling range:** No data available.

**Flash Point:** 99 °C 210 °F(ISO 3679 (seta closed))

**Evaporation rate:** Slower than n-Butyl Acetate

**Flammability (solid, gas):** No

### Upper/lower limit on flammability or explosive limits

**Flammability limit - upper (%):** No data available.

**Flammability limit - lower (%):** No data available.

**Explosive limit - upper (%):** No data available.

**Explosive limit - lower (%):** No data available.

**Vapor pressure:** No data available.

**Vapor density:** Vapors are heavier than air and may travel along the floor and in the bottom of containers.

**Relative density:** 1.16

### Solubility(ies)

**Solubility in water:** Insoluble in water

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water):** No data available.

**Auto-ignition temperature:** No data available.

**Decomposition temperature:** No data available.

**Viscosity:** No data available.

## 10. Stability and reactivity

**Reactivity:** No data available.

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|  |   |
|--|---|
| <b>Chemical Stability:</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions:</b> | No data available.  |
| <b>Conditions to avoid:</b>                | Avoid heat or contamination.  |
| <b>Incompatible Materials:</b>             | Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture. |
| <b>Hazardous Decomposition Products:</b>   | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.   |

## 11. Toxicological information

### Information on likely routes of exposure

|                      |   |
|----------------------|---|
| <b>Ingestion:</b>    | May be ingested by accident. Ingestion may cause irritation and malaise.                      |
| <b>Inhalation:</b>   | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| <b>Skin Contact:</b> | Causes mild skin irritation. May cause an allergic skin reaction.                             |
| <b>Eye contact:</b>  | Eye contact is possible and should be avoided.  |

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

|                            |                         |
|----------------------------|-------------------------|
| <b>Oral Product:</b>       | ATEmix: 11,435.4 mg/kg  |
| <b>Dermal Product:</b>     | ATEmix: 21,029.43 mg/kg |
| <b>Inhalation Product:</b> | No data available.      |

|  |                    |
|--|--------------------|
| <b>Repeated dose toxicity Product:</b> | No data available. |
|--|--------------------|

|   |                    |
|---|--------------------|
| <b>Skin Corrosion/Irritation Product:</b> | No data available. |
|---|--------------------|

|  |   |
|--|---|
| <b>Specified substance(s):</b><br>Titanium dioxide | in vivo (Rabbit): Experimental result, Supporting study |
|--|---|

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|                                      |   |
|--------------------------------------|---|
| Heavy aromatic naphtha               | in vivo (Rabbit): Experimental result, Key study  |
| Aromatic petroleum distillates       | in vivo (Rabbit): Experimental result, Key study  |
| 1,2,4-Trimethylbenzene               | in vivo (Rabbit): Read-across from supporting substance (structural analogue or surrogate), Key study |
| 4,4'-Methylene bis(phenylisocyanate) | in vivo (Rabbit): Read-across based on grouping of substances (category approach), Key study          |
| Aluminum oxide                       | in vivo (Rabbit): Experimental result, Key study  |
| 1,3,5-Trimethylbenzene               | in vivo (Rabbit): Experimental result, Key study  |

**Serious Eye Damage/Eye Irritation****Product:** No data available.**Specified substance(s):**

|                                      |   |
|--------------------------------------|---|
| Titanium dioxide                     | in vivo (Rabbit, 24 hrs): Not irritating      |
| Heavy aromatic naphtha               | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Aromatic petroleum distillates       | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| 1,2,4-Trimethylbenzene               | in vivo (Rabbit, 30 min): Not irritating      |
| 4,4'-Methylene bis(phenylisocyanate) | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Aluminum oxide                       | in vivo (Rabbit, 24 hrs): Not irritating      |

**Respiratory or Skin Sensitization****Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause sensitization by inhalation.**Carcinogenicity****Product:** No data available.

## IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

|  |  |
|--|--|
| Titanium dioxide                               | Overall evaluation: Possibly carcinogenic to humans. |
| Crystalline Silica<br>(Quartz)/ Silica<br>Sand | Overall evaluation: Carcinogenic to humans.          |

## US. National Toxicology Program (NTP) Report on Carcinogens:

|  |                               |
|--|-------------------------------|
| Crystalline Silica<br>(Quartz)/ Silica<br>Sand | Known To Be Human Carcinogen. |
|--|-------------------------------|

## US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

### Germ Cell Mutagenicity

**In vitro**  
**Product:** No data available.

**In vivo**  
**Product:** No data available.

**Reproductive toxicity**  
**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**  
**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**  
**Product:** No data available.

**Aspiration Hazard**  
**Product:** No data available.

**Other effects:** No data available.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

**Fish**  
**Product:** No data available.

**Specified substance(s):**

1,2,4-Trimethylbenzene LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 7.19 - 8.28 mg/l Mortality

1,3,5-Trimethylbenzene LC 50 (Goldfish (*Carassius auratus*), 96 h): 9.89 - 15.05 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

1,2,4-Trimethylbenzene LC 50 (Scud (*Elasmopus pectinicus*), 24 h): 4.89 - 5.62 mg/l Mortality

1,3,5-Trimethylbenzene EC 50 (Water flea (*Daphnia magna*), 24 h): 50 mg/l Intoxication

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Titanium dioxide ED 0 (*Phoxinus phoxinus*, 30 d): >= 1,000 mg/l Experimental result, Supporting study  
 LC 10 (*Oncorhynchus mykiss*, 28 d): 0.981 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study  
 LC 50 (*Oncorhynchus mykiss*, 28 d): 7.31 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study  
 LC 1 (*Oncorhynchus mykiss*, 28 d): 0.191 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study  
 LC 0 (*Coregonus autumnalis migratorius* G., 30 d): 3 mg/l Experimental result, Supporting study

Heavy aromatic naphtha NOAEL (*Oncorhynchus mykiss*, 28 d): 0.098 mg/l QSAR QSAR, Key study

Aromatic petroleum distillates LL 50 (*Pimephales promelas*, 14 d): 5.2 mg/l Experimental result, Supporting study  
 EC 50 (*Daphnia magna*, 21 d): 10 mg/l Other, Key study  
 NOAEL (*Pimephales promelas*, 14 d): 2.6 mg/l Experimental result, Supporting study  
 NOAEL (*Daphnia magna*, 21 d): 2.6 mg/l Other, Key study

Aluminum oxide NOAEL (*Pimephales promelas*, 28 d): 4.7 mg/l Experimental result, Weight of Evidence study  
 IC 25 (*Pimephales promelas*, 7 d): 11.59 mg/l Experimental result, Weight of Evidence study  
 LOAEL (*Salvelinus fontinalis*, 60 d): 0.35 mg/l Experimental result, Weight of Evidence study  
 NOAEL (*Pimephales promelas*, 7 d): 0.4 mg/l Read-across based on grouping of substances (category approach), Weight of Evidence study  
 NOAEL (*Pimephales promelas*, 7 d): >= 0.831 mg/l Experimental result, Weight of Evidence study

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative Potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log K<sub>ow</sub>)****Product:** No data available.**Mobility in Soil:** No data available.**Other Adverse Effects:** Toxic to aquatic organisms.**13. Disposal considerations****Disposal instructions:** Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.**Contaminated Packaging:** No data available.**14. Transport information****TDG:**

Not Regulated

**CFR / DOT:**

Not Regulated

**IMDG:**

Not Regulated

**15. Regulatory information****US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

| <u>Chemical Identity</u> | <u>Reportable quantity</u>  |
|--------------------------|---|
| P-chlorobenzotrifluoride | De minimis concentration: 1.0% One-Time Export Notification only. |

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

| <u>Chemical Identity</u>             | <u>Reportable quantity</u> |
|--------------------------------------|----------------------------|
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs.                  |
| Polymethylene polyphenyl isocyanate  | 5000 lbs.                  |
| 2,4-Toluene diisocyanate             | 100 lbs.                   |
| Cumene                               | 5000 lbs.                  |
| Xylene                               | 100 lbs.                   |
| Toluene-2,6-Diisocyanate             | 100 lbs.                   |
| Ethylbenzene                         | 1000 lbs.                  |
| Chromium                             | 5000 lbs.                  |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Delayed (Chronic) Health Hazard  
Immediate (Acute) Health Hazards

**SARA 302 Extremely Hazardous Substance**

| <u>Chemical Identity</u> | <u>Reportable quantity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|----------------------------|------------------------------------|
| 2,4-Toluene diisocyanate | 100 lbs.                   | 500 lbs.                           |
| Toluene-2,6-Diisocyanate | 100 lbs.                   | 100 lbs.                           |

**SARA 304 Emergency Release Notification**

| <u>Chemical Identity</u>             | <u>Reportable quantity</u> |
|--------------------------------------|----------------------------|
| Diisodecyl phthalate                 |                            |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs.                  |
| Polymethylene polyphenyl isocyanate  | 5000 lbs.                  |
| 2,4-Toluene diisocyanate             | 100 lbs.                   |
| Cumene                               | 5000 lbs.                  |
| Xylene                               | 100 lbs.                   |
| Toluene-2,6-Diisocyanate             | 100 lbs.                   |
| Ethylbenzene                         | 1000 lbs.                  |
| Chromium                             | 5000 lbs.                  |



**SARA 311/312 Hazardous Chemical**

| <u>Chemical Identity</u>                    | <u>Threshold Planning Quantity</u> |
|---|------------------------------------|
| 2,4-Toluene diisocyanate                    | 500lbs                             |
| Toluene-2,6-Diisocyanate                    | 100lbs                             |
| Calcium Carbonate<br>(Limestone)            | 500 lbs                            |
| Titanium dioxide                            | 500 lbs                            |
| Polyethylene                                | 500 lbs                            |
| Heavy aromatic naphtha                      | 500 lbs                            |
| Aromatic petroleum<br>distillates           | 500 lbs                            |
| 1,2,4-Trimethylbenzene                      | 500 lbs                            |
| 4,4'-Methylene<br>bis(phenylisocyanate)     | 500 lbs                            |
| Aluminum oxide                              | 500 lbs                            |
| Polymethylene polyphenyl<br>isocyanate      | 500 lbs                            |
| 1,3,5-Trimethylbenzene                      | 500 lbs                            |
| Crystalline Silica (Quartz)/<br>Silica Sand | 500 lbs                            |

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Xylene                   | 100 lbs.                   |

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| 2,4-Toluene diisocyanate | 10000 lbs                  |
| Toluene-2,6-Diisocyanate | 10000 lbs                  |

**US State Regulations****US. California Proposition 65**

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

**US. New Jersey Worker and Community Right-to-Know Act**

| <u>Chemical Identity</u>                 |
|--|
| Calcium Carbonate (Limestone)            |
| Titanium dioxide                         |
| P-chlorobenzotrifluoride                 |
| Heavy aromatic naphtha                   |
| Crystalline Silica (Quartz)/ Silica Sand |

**US. Massachusetts RTK - Substance List****Chemical Identity**

Calcium Carbonate (Limestone)  
Titanium dioxide  
Heavy aromatic naphtha  
Crystalline Silica (Quartz)/ Silica Sand  
2,4-Toluene diisocyanate  
Toluene-2,6-Diisocyanate

**US. Pennsylvania RTK - Hazardous Substances****Chemical Identity**

Diisodecyl phthalate  
Calcium Carbonate (Limestone)  
Titanium dioxide  
Heavy aromatic naphtha

**US. Rhode Island RTK****Chemical Identity**

Diisodecyl phthalate

**Other Regulations:**

|  |        |
|--|--------|
| <b>Regulatory VOC (less water<br/>and exempt solvent):</b> | 38 g/l |
| <b>VOC Method 310:</b>                                     | 1.72 % |

**Inventory Status:**

|  |  |
|--|--|
| Australia AICS:                          | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List:               | All components in this product are listed on or exempt from the Inventory.             |
| EINECS, ELINCS or NLP:                   | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan (ENCS) List:                       | One or more components in this product are not listed on or exempt from the Inventory. |
| China Inv. Existing Chemical Substances: | One or more components in this product are not listed on or exempt from the Inventory. |
| Korea Existing Chemicals Inv. (KECI):    | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada NDSL Inventory:                   | One or more components in this product are not listed on or exempt from the Inventory. |
| Philippines PICCS:                       | One or more components in this product are not listed on or exempt from the Inventory. |

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|                                     |  |
|-------------------------------------|--|
| US TSCA Inventory:                  | All components in this product are listed on or exempt from the Inventory.             |
| New Zealand Inventory of Chemicals: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan ISHL Listing:                 | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan Pharmacopoeia Listing:        | One or more components in this product are not listed on or exempt from the Inventory. |

**16. Other information, including date of preparation or last revision**

|                             |   |
|-----------------------------|---|
| <b>Revision Date:</b>       | 03/30/2016  |
| <b>Version #:</b>           | 1.0   |
| <b>Further Information:</b> | No data available.  |
| <b>Disclaimer:</b>          | For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. |