# Vulkem 350NF/346/346

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# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 346 BEIGE
**Material:** 874714 805

**Recommended use and restriction on use**

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

**Manufacturer/Importer/Supplier/Distributor Information**

Tremco U.S Sealants
3735 Green Road
Cleveland 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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 3 |

**Health Hazards**

| | |
|---|---|
| Serious Eye Damage/Eye Irritation | Category 2B |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 16.09 % |
| Acute toxicity, dermal | 30.43 % |
| Acute toxicity, inhalation, vapor | 99.9 % |
| Acute toxicity, inhalation, dust or mist | 99.55 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 62.86 % |
| Chronic hazards to the aquatic environment | 100 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
Harmful to aquatic life.

**Precautionary Statement:**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. In case of fire: Use … to extinguish.

**Storage:** Store in well-ventilated place. Keep cool. 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:** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|

| | | |
|---|---|---|
| Xylene | 1330-20-7 | 15 - 40% |
| Talc | 14807-96-6 | 10 - 30% |
| Titanium dioxide | 13463-67-7 | 7 - 13% |
| Ethylbenzene | 100-41-4 | 5 - 10% |
| Amorphous silica | 7631-86-9 | 0.5 - 1.5% |
| Iron oxide | 1309-37-1 | 0.1 - 1% |
| Dibutyl tin dilaurate | 77-58-7 | 0.1 - 1% |
| Aluminum hydroxide | 21645-51-2 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |
| Magnesite | 546-93-0 | 0.1 - 1% |
| Isophorone Diisocyanate | 4098-71-9 | 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:** Take off immediately all contaminated clothing. 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

**Special protective equipment and precautions for firefighters**

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

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. 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:** Dam and absorb spillages with sand, earth or other non-combustible material. 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. Do not contaminate water sources or sewer.

## 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. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity | type | Exposure Limit Values | Source |
|---|---|---|---|
| Xylene | TWA | 100 ppm | US. ACGIH Threshold Limit Values |

| | | | |
|---|---|---|---|
| | | | (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Talc - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Talc | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Talc - 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) |
| Talc - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |
| Ethylbenzene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Iron oxide - Respirable fraction. | TWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Iron oxide - Fume. | PEL | 10 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Dibutyl tin dilaurate - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 0.1 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum hydroxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| 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) |
| Magnesite - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Magnesite - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |

| **Chemical name** | **type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| Xylene | TWA | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Xylene | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 150 ppm 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | | |
|---|---|---|---|---|
| Talc - Respirable. | TWA | 2 mg/m3 | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Talc - Respirable particles. | TWAEV | 2 mg/m3 | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc | TWAEV | 2 fibers/mL | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc - Respirable dust. | TWA | 3 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) |
| Ethylbenzene | TWA | 20 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | STEL | 125 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWAEV | 100 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Ethylbenzene | TWA | 100 ppm | 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 125 ppm | 543 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL (02 2014) |

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

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

**General information:**

Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. |

## 9. Physical and chemical properties

**Appearance**

| | |
|---|---|
| **Physical state:** | liquid |
| **Form:** | liquid |
| **Color:** | Beige |
| **Odor:** | Mild petroleum/solvent |
| **Odor threshold:** | No data available. |
| **pH:** | No data available. |
| **Melting point/freezing point:** | No data available. |
| **Initial boiling point and boiling range:** | > 121 °C > 250 °F |
| **Flash Point:** | 27 °C 80 °F(Setaflash Closed Cup) |
| **Evaporation rate:** | Slower than Ether |
| **Flammability (solid, gas):** | No |
| **Upper/lower limit on flammability or explosive limits** | |
| **Flammability limit - upper (%):** | 7.0 %(V) |
| **Flammability limit - lower (%):** | 1.0 %(V) |
| **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:** | 1.2845 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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.

| | |
|---|---|
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of Hazardous Reactions:** | No data available. |
| **Conditions to Avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion:** | May be ingested by accident. Ingestion may cause irritation and malaise. |
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Causes eye irritation. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 12,791.2 mg/kg

**Dermal**
**Product:** No data available.

**Inhalation**
**Product:** No data available.

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | in vivo (Rabbit, 24 hrs): Moderately irritating |
| Titanium dioxide | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Ethylbenzene | Irritating |
| Amorphous silica | in vivo (Rabbit, 24 hrs): Not irritating |
| Iron oxide | in vivo (Rabbit, 1 - 72 hrs): Not irritating |
| Dibutyl tin dilaurate | in vivo (Rabbit, 24 hrs): Highly irritating |
| Aluminum hydroxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Aluminum oxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Magnesite | In vitro (Reconstituted Corneal Epithelium model, 10 min): Not irritating |
| Isophorone Diisocyanate | in vivo (Rabbit, 24 - 72 hrs): Category 1 |

**Respiratory or Skin Sensitization**

**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.

**Carcinogenicity**

**Product:** Suspected of causing cancer.

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

| | |
|---|---|
| Talc | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Possibly carcinogenic to humans. |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. |
| Ethylbenzene | Overall evaluation: Possibly carcinogenic to humans. |

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

No carcinogenic components identified

**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):**

| | |
|---|---|
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Titanium dioxide | LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality |
| Ethylbenzene | LC 50 (Bluegill (Lepomis macrochirus), 24 h): 70 - 149 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 112 - 170 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 113 - 162 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 66 - 276 mg/l Mortality<br>LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 11 - 18 mg/l Mortality |
| Dibutyl tin dilaurate | LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality |

**Aquatic Invertebrates**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | LC 50 (Water flea (Daphnia magna), 24 h): > 100 - 1,000 mg/l Mortality |
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |
| Ethylbenzene | EC 50 (Water flea (Daphnia magna), 24 h): 1.47 - 2.18 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.51 - 2.14 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.63 - 2.28 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 2.2 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.53 - 3.17 mg/l Intoxication |
| Dibutyl tin dilaurate | EC 50 (Water flea (Daphnia magna), 24 h): 0.66 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

| | |
|---|---|
| **Product:** | No data available. |
| **Specified substance(s):** | |
| Xylene | NOAEL (Oncorhynchus mykiss, 56 d): > 1.3 mg/l experimental result |
| Titanium dioxide | LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result |
| Iron oxide | LOAEL (Pimephales promelas, 33 d): 1.6 mg/l experimental result |
| Aluminum hydroxide | LOAEL (Pimephales promelas, 28 d): 53.8 mg/l experimental result |
| Aluminum oxide | NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result |

**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 Kow)**

| | |
|---|---|
| **Product:** | No data available. |
| **Specified substance(s):** | |
| Xylene | Log Kow: 3.12 - 3.20 |
| Ethylbenzene | Log Kow: 3.15 |
| Dibutyl tin dilaurate | Log Kow: 3.12 |

| | |
|---|---|
| **Mobility in Soil:** | No data available. |
| **Other Adverse Effects:** | Harmful 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:**

UN1263, PAINT, 3, PG III

**CFR / DOT:**

UN1263, Paint, 3, PG III

**IMDG:**

UN1263, PAINT, 3, PG III

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

## 15. Regulatory information

**US Federal Regulations**

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

None present or none present in regulated quantities.

**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):**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Toluene | 1000 lbs. |
| Barium sulfate | 1000 lbs. |
| Chromium | 5000 lbs. |

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

**Hazard categories**
Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Isophorone Diisocyanate | |
| Toluene | 1000 lbs. |
| Barium sulfate | 1000 lbs. |
| Chromium | 5000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| Xylene | 500 lbs |
| Talc | 500 lbs |
| Titanium dioxide | 500 lbs |
| Ethylbenzene | 500 lbs |
| Amorphous silica | 500 lbs |
| Iron oxide | 500 lbs |
| Dibutyl tin dilaurate | 500 lbs |
| Aluminum hydroxide | 500 lbs |
| Aluminum oxide | 500 lbs |
| Magnesite | 500 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| Xylene |
| Ethylbenzene |

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**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**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |

**US. Massachusetts RTK - Substance List**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |
| Isophorone Diisocyanate |
| Crystalline Silica (Quartz)/ Silica Sand |
| Chromium |

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene

**US. Rhode Island RTK**

**Chemical Identity**
Xylene
Ethylbenzene

**Other Regulations:**

| | |
|---|---|
| **Regulatory VOC (less water and exempt solvent):** | 353 g/l |
| **VOC Method 310:** | 27.41 % |

**Inventory Status:**

| | |
|---|---|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not 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. |
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/28/2015 |
| **Version #:** | 1.0 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 346 GRAY
**Material:** 874712 805

**Recommended use and restriction on use**

**Recommended use:** Coatings
**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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 3 |

**Health Hazards**

| | |
|---|---|
| Serious Eye Damage/Eye Irritation | Category 2B |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 15.97 % |
| Acute toxicity, dermal | 31.39 % |
| Acute toxicity, inhalation, vapor | 99.9 % |
| Acute toxicity, inhalation, dust or mist | 99.49 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 61.81 % |
| Chronic hazards to the aquatic environment | 100 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
Harmful to aquatic life.

**Precautionary Statement:**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. In case of fire: Use … to extinguish.

**Storage:** Store in well-ventilated place. Keep cool. 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:** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|

| | | |
|---|---|---|
| Xylene | 1330-20-7 | 15 - 40% |
| Talc | 14807-96-6 | 10 - 30% |
| Titanium dioxide | 13463-67-7 | 10 - 30% |
| Ethylbenzene | 100-41-4 | 5 - 10% |
| Amorphous silica | 7631-86-9 | 1 - 5% |
| Aluminum hydroxide | 21645-51-2 | 0.1 - 1% |
| Dibutyl tin dilaurate | 77-58-7 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |
| Magnesite | 546-93-0 | 0.1 - 1% |
| Isophorone Diisocyanate | 4098-71-9 | 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:** Take off immediately all contaminated clothing. 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

**Special protective equipment and precautions for firefighters**

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

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. 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:** Dam and absorb spillages with sand, earth or other non-combustible material. 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. Do not contaminate water sources or sewer.

## 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. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity | type | Exposure Limit Values | Source |
|---|---|---|---|
| Xylene | TWA | 100 ppm | US. ACGIH Threshold Limit Values |

| | | | |
|---|---|---|---|
| | | | (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Talc - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Talc | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Talc - 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) |
| Talc - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |
| Ethylbenzene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Aluminum hydroxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Dibutyl tin dilaurate - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 0.1 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) |
| Magnesite - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |

| | | | |
|---|---|---|---|
| Magnesite - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |

| **Chemical name** | **type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| Xylene | TWA | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Xylene | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 150 ppm 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Talc - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Talc - Respirable particles. | TWAEV | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc | TWAEV | 2 fibers/mL | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc - Respirable dust. | TWA | 3 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) |
| Ethylbenzene | TWA | 20 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | STEL | 125 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Ethylbenzene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 125 ppm 543 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Amorphous silica - Total | TWA | 4 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica - Respirable. | TWA | 1.5 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica | TWAEV | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Amorphous silica - Respirable dust. | TWA | 6 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL (02 2014) |

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

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

| | |
|---|---|
| **General information:** | Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |
| **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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. |

## 9. Physical and chemical properties

**Appearance**

| | |
|---|---|
| **Physical state:** | liquid |
| **Form:** | liquid |
| **Color:** | Gray |
| **Odor:** | Mild petroleum/solvent |
| **Odor threshold:** | No data available. |
| **pH:** | No data available. |
| **Melting point/freezing point:** | No data available. |
| **Initial boiling point and boiling range:** | 121 °C 250 °F |
| **Flash Point:** | 27 °C 80 °F(Setaflash Closed Cup) |
| **Evaporation rate:** | Slower than Ether |
| **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:** | 1.17 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of Hazardous Reactions:** | No data available. |
| **Conditions to Avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion:** | May be ingested by accident. Ingestion may cause irritation and malaise. |
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Causes eye irritation. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 12,994.31 mg/kg

**Dermal**
**Product:** No data available.

**Inhalation**
**Product:** No data available.

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | in vivo (Rabbit, 24 hrs): Moderately irritating |
| Titanium dioxide | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Ethylbenzene | Irritating |
| Amorphous silica | in vivo (Rabbit, 24 hrs): Not irritating |
| Aluminum hydroxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Dibutyl tin dilaurate | in vivo (Rabbit, 24 hrs): Highly irritating |
| Aluminum oxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Magnesite | In vitro (Reconstituted Corneal Epithelium model, 10 min): Not irritating |
| Isophorone Diisocyanate | in vivo (Rabbit, 24 - 72 hrs): Category 1 |

**Respiratory or Skin Sensitization**
**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.

**Carcinogenicity**
**Product:** Suspected of causing cancer.

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

| | |
|---|---|
| Talc | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Possibly carcinogenic to humans. |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. |
| Ethylbenzene | Overall evaluation: Possibly carcinogenic to humans. |

**US. National Toxicology Program (NTP) Report on Carcinogens:**
No carcinogenic components identified

**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):**

| | |
|---|---|
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Titanium dioxide | LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality |
| Ethylbenzene | LC 50 (Bluegill (Lepomis macrochirus), 24 h): 70 - 149 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 112 - 170 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 113 - 162 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 66 - 276 mg/l Mortality<br>LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 11 - 18 mg/l Mortality |
| Dibutyl tin dilaurate | LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality |

**Aquatic Invertebrates**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | LC 50 (Water flea (Daphnia magna), 24 h): > 100 - 1,000 mg/l Mortality |

| | |
|---|---|
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |
| Ethylbenzene | EC 50 (Water flea (Daphnia magna), 24 h): 1.47 - 2.18 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.51 - 2.14 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.63 - 2.28 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 2.2 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.53 - 3.17 mg/l Intoxication |
| Dibutyl tin dilaurate | EC 50 (Water flea (Daphnia magna), 24 h): 0.66 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | NOAEL (Oncorhynchus mykiss, 56 d): > 1.3 mg/l experimental result |
| Titanium dioxide | LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result |
| Aluminum hydroxide | LOAEL (Pimephales promelas, 28 d): 53.8 mg/l experimental result |
| Aluminum oxide | NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result |

**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 Kow)**

**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | Log Kow: 3.12 - 3.20 |
| Ethylbenzene | Log Kow: 3.15 |
| Dibutyl tin dilaurate | Log Kow: 3.12 |

**Mobility in Soil:** No data available.

**Other Adverse Effects:** Harmful 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:**

UN1263, PAINT, 3, PG III

**CFR / DOT:**

UN1263, Paint, 3, PG III

**IMDG:**

UN1263, PAINT, 3, PG III

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

## 15. Regulatory information

**US Federal Regulations**

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

None present or none present in regulated quantities.

**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):**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Toluene | 1000 lbs. |

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

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Isophorone Diisocyanate | |
| Toluene | 1000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| Xylene | 500 lbs |
| Talc | 500 lbs |
| Titanium dioxide | 500 lbs |
| Ethylbenzene | 500 lbs |
| Amorphous silica | 500 lbs |
| Aluminum hydroxide | 500 lbs |
| Dibutyl tin dilaurate | 500 lbs |
| Aluminum oxide | 500 lbs |
| Magnesite | 500 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| Xylene |
| Ethylbenzene |

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**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**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |
| Amorphous silica |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene
Amorphous silica
Isophorone Diisocyanate

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene
Amorphous silica

**US. Rhode Island RTK**

**Chemical Identity**
Xylene
Ethylbenzene

**Other Regulations:**

| | |
|---|---|
| **Regulatory VOC (less water and exempt solvent):** | 317 g/l |
| **VOC Method 310:** | 27.02 % |

**Inventory Status:**

| | |
|---|---|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not 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. |

| | |
|---|---|
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/28/2015 |
| **Version #:** | 1.0 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 346 LIMESTONE
**Material:** 874805 805

**Recommended use and restriction on use**

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

**Manufacturer/Importer/Supplier/Distributor Information**

Tremco U.S Sealants
3735 Green Road
Cleveland 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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 3 |

**Health Hazards**

| | |
|---|---|
| Serious Eye Damage/Eye Irritation | Category 2B |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 15.29 % |
| Acute toxicity, dermal | 29.84 % |
| Acute toxicity, inhalation, vapor | 99.9 % |
| Acute toxicity, inhalation, dust or mist | 99.52 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 62.08 % |
| Chronic hazards to the aquatic environment | 100 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
Harmful to aquatic life.

**Precautionary Statement:**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. In case of fire: Use … to extinguish.

**Storage:** Store in well-ventilated place. Keep cool. 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:** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|

| | | |
|---|---|---|
| Xylene | 1330-20-7 | 15 - 40% |
| Talc | 14807-96-6 | 10 - 30% |
| Titanium dioxide | 13463-67-7 | 10 - 30% |
| Ethylbenzene | 100-41-4 | 5 - 10% |
| Amorphous silica | 7631-86-9 | 1 - 5% |
| Dibutyl tin dilaurate | 77-58-7 | 0.1 - 1% |
| Aluminum hydroxide | 21645-51-2 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |
| Magnesite | 546-93-0 | 0.1 - 1% |
| Isophorone Diisocyanate | 4098-71-9 | 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:** Take off immediately all contaminated clothing. 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

**Special protective equipment and precautions for firefighters**

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

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. 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:** Dam and absorb spillages with sand, earth or other non-combustible material. 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. Do not contaminate water sources or sewer.

## 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. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity | type | Exposure Limit Values | Source |
|---|---|---|---|
| Xylene | TWA | 100 ppm | US. ACGIH Threshold Limit Values |

| | | | |
|---|---|---|---|
| | | | (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Talc - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Talc | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Talc - 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) |
| Talc - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |
| Ethylbenzene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Dibutyl tin dilaurate - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 0.1 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum hydroxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| 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) |
| Magnesite - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |

| | | | |
|---|---|---|---|
| Magnesite - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |

| **Chemical name** | **type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| Xylene | TWA | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Xylene | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 150 ppm 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Talc - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Talc - Respirable particles. | TWAEV | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc | TWAEV | 2 fibers/mL | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc - Respirable dust. | TWA | 3 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) |
| Ethylbenzene | TWA | 20 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | STEL | 125 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Ethylbenzene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 125 ppm 543 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Amorphous silica - Total | TWA | 4 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica - Respirable. | TWA | 1.5 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica | TWAEV | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Amorphous silica - Respirable dust. | TWA | 6 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL (02 2014) |

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

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

**General information:** Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

**Appearance**

| | |
|---|---|
| **Physical state:** | liquid |
| **Form:** | liquid |
| **Color:** | Gray |
| **Odor:** | Mild petroleum/solvent |
| **Odor threshold:** | No data available. |
| **pH:** | No data available. |
| **Melting point/freezing point:** | No data available. |
| **Initial boiling point and boiling range:** | 121 °C 250 °F |
| **Flash Point:** | 27 °C 80 °F(Setaflash Closed Cup) |
| **Evaporation rate:** | Slower than Ether |
| **Flammability (solid, gas):** | No |
| **Upper/lower limit on flammability or explosive limits** | |
| **Flammability limit - upper (%):** | 7.0 %(V) |
| **Flammability limit - lower (%):** | 1.0 %(V) |
| **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:** | 1.17 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of Hazardous Reactions:** | No data available. |
| **Conditions to Avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion:** | May be ingested by accident. Ingestion may cause irritation and malaise. |
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Causes eye irritation. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 12,820.96 mg/kg

**Dermal**
**Product:** No data available.

**Inhalation**
**Product:** No data available.

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | in vivo (Rabbit, 24 hrs): Moderately irritating |
| Titanium dioxide | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Ethylbenzene | Irritating |
| Amorphous silica | in vivo (Rabbit, 24 hrs): Not irritating |
| Dibutyl tin dilaurate | in vivo (Rabbit, 24 hrs): Highly irritating |
| Aluminum hydroxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Aluminum oxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Magnesite | In vitro (Reconstituted Corneal Epithelium model, 10 min): Not irritating |
| Isophorone Diisocyanate | in vivo (Rabbit, 24 - 72 hrs): Category 1 |

**Respiratory or Skin Sensitization**
**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.

**Carcinogenicity**
**Product:** Suspected of causing cancer.

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

| | |
|---|---|
| Talc | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Possibly carcinogenic to humans. |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. |
| Ethylbenzene | Overall evaluation: Possibly carcinogenic to humans. |

**US. National Toxicology Program (NTP) Report on Carcinogens:**
No carcinogenic components identified

**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):**

| | |
|---|---|
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Titanium dioxide | LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality |
| Ethylbenzene | LC 50 (Bluegill (Lepomis macrochirus), 24 h): 70 - 149 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 112 - 170 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 113 - 162 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 66 - 276 mg/l Mortality<br>LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 11 - 18 mg/l Mortality |
| Dibutyl tin dilaurate | LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality |

**Aquatic Invertebrates**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | LC 50 (Water flea (Daphnia magna), 24 h): > 100 - 1,000 mg/l Mortality |

| | |
|---|---|
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |
| Ethylbenzene | EC 50 (Water flea (Daphnia magna), 24 h): 1.47 - 2.18 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.51 - 2.14 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.63 - 2.28 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 2.2 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.53 - 3.17 mg/l Intoxication |
| Dibutyl tin dilaurate | EC 50 (Water flea (Daphnia magna), 24 h): 0.66 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | NOAEL (Oncorhynchus mykiss, 56 d): > 1.3 mg/l experimental result |
| Titanium dioxide | LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result |
| Aluminum hydroxide | LOAEL (Pimephales promelas, 28 d): 53.8 mg/l experimental result |
| Aluminum oxide | NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result |

**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 Kow)**

**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | Log Kow: 3.12 - 3.20 |
| Ethylbenzene | Log Kow: 3.15 |
| Dibutyl tin dilaurate | Log Kow: 3.12 |

**Mobility in Soil:** No data available.

**Other Adverse Effects:** Harmful 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:**

UN1263, PAINT, 3, PG III

**CFR / DOT:**

UN1263, Paint, 3, PG III

**IMDG:**

UN1263, PAINT, 3, PG III

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

## 15. Regulatory information

**US Federal Regulations**

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

None present or none present in regulated quantities.

**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):**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Toluene | 1000 lbs. |

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

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Isophorone Diisocyanate | |
| Toluene | 1000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| Xylene | 500 lbs |
| Talc | 500 lbs |
| Titanium dioxide | 500 lbs |
| Ethylbenzene | 500 lbs |
| Amorphous silica | 500 lbs |
| Dibutyl tin dilaurate | 500 lbs |
| Aluminum hydroxide | 500 lbs |
| Aluminum oxide | 500 lbs |
| Magnesite | 500 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| Xylene |
| Ethylbenzene |

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**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**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |
| Amorphous silica |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene
Amorphous silica
Isophorone Diisocyanate

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene
Amorphous silica

**US. Rhode Island RTK**

**Chemical Identity**
Xylene
Ethylbenzene

**Other Regulations:**

| | |
|---|---|
| **Regulatory VOC (less water and exempt solvent):** | 324 g/l |
| **VOC Method 310:** | 27.61 % |

**Inventory Status:**

| | |
|---|---|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not 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. |

| | |
|---|---|
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/28/2015 |
| **Version #:** | 1.0 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 346 MAPLE
**Material:** 874717 805

**Recommended use and restriction on use**

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

**Manufacturer/Importer/Supplier/Distributor Information**

Tremco U.S Sealants
3735 Green Road
Cleveland 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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 3 |

**Health Hazards**

| | |
|---|---|
| Serious Eye Damage/Eye Irritation | Category 2B |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 15.86 % |
| Acute toxicity, dermal | 30.25 % |
| Acute toxicity, inhalation, vapor | 99.9 % |
| Acute toxicity, inhalation, dust or mist | 99.55 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 62.8 % |
| Chronic hazards to the aquatic environment | 100 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
Harmful to aquatic life.

**Precautionary Statement:**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. In case of fire: Use … to extinguish.

**Storage:** Store in well-ventilated place. Keep cool. 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:** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|

| | | |
|---|---|---|
| Xylene | 1330-20-7 | 15 - 40% |
| Talc | 14807-96-6 | 10 - 30% |
| Titanium dioxide | 13463-67-7 | 7 - 13% |
| Ethylbenzene | 100-41-4 | 5 - 10% |
| Amorphous silica | 7631-86-9 | 0.5 - 1.5% |
| Iron oxide | 1309-37-1 | 0.1 - 1% |
| Dibutyl tin dilaurate | 77-58-7 | 0.1 - 1% |
| Aluminum hydroxide | 21645-51-2 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |
| Magnesite | 546-93-0 | 0.1 - 1% |
| Isophorone Diisocyanate | 4098-71-9 | 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:** Take off immediately all contaminated clothing. 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

**Special protective equipment and precautions for firefighters**

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

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. 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:** Dam and absorb spillages with sand, earth or other non-combustible material. 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. Do not contaminate water sources or sewer.

## 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. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity | type | Exposure Limit Values | Source |
|---|---|---|---|
| Xylene | TWA | 100 ppm | US. ACGIH Threshold Limit Values |

| | | | |
|---|---|---|---|
| | | | (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Talc - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Talc | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Talc - 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) |
| Talc - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |
| Ethylbenzene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Iron oxide - Respirable fraction. | TWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Iron oxide - Fume. | PEL | 10 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Dibutyl tin dilaurate - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 0.1 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum hydroxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| 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) |
| Magnesite - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Magnesite - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |

| **Chemical name** | **type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| Xylene | TWA | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Xylene | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 150 ppm 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | | |
|---|---|---|---|---|
| Talc - Respirable. | TWA | 2 mg/m3 | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Talc - Respirable particles. | TWAEV | 2 mg/m3 | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc | TWAEV | 2 fibers/mL | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc - Respirable dust. | TWA | 3 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) |
| Ethylbenzene | TWA | 20 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | STEL | 125 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWAEV | 100 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Ethylbenzene | TWA | 100 ppm | 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 125 ppm | 543 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

| | | | |
|---|---|---|---|
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL (02 2014) |

**Appropriate Engineering Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

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

**General information:**

Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. |

## 9. Physical and chemical properties

**Appearance**

| | |
|---|---|
| **Physical state:** | liquid |
| **Form:** | liquid |
| **Color:** | Brown |
| **Odor:** | Mild petroleum/solvent |
| **Odor threshold:** | No data available. |
| **pH:** | No data available. |
| **Melting point/freezing point:** | No data available. |
| **Initial boiling point and boiling range:** | 121 °C 250 °F |
| **Flash Point:** | 27 °C 80 °F(Setaflash Closed Cup) |
| **Evaporation rate:** | Slower than Ether |
| **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:** | 1.17 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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.

| | |
|---|---|
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of Hazardous Reactions:** | No data available. |
| **Conditions to Avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion:** | May be ingested by accident. Ingestion may cause irritation and malaise. |
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Causes eye irritation. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 12,804.83 mg/kg

**Dermal**
**Product:** No data available.

**Inhalation**
**Product:** No data available.

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | in vivo (Rabbit, 24 hrs): Moderately irritating |
| Titanium dioxide | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Ethylbenzene | Irritating |
| Amorphous silica | in vivo (Rabbit, 24 hrs): Not irritating |
| Iron oxide | in vivo (Rabbit, 1 - 72 hrs): Not irritating |
| Dibutyl tin dilaurate | in vivo (Rabbit, 24 hrs): Highly irritating |
| Aluminum hydroxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Aluminum oxide | in vivo (Rabbit, 24 hrs): Not irritating |
| Magnesite | In vitro (Reconstituted Corneal Epithelium model, 10 min): Not irritating |
| Isophorone Diisocyanate | in vivo (Rabbit, 24 - 72 hrs): Category 1 |

**Respiratory or Skin Sensitization**

**Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.

**Carcinogenicity**

**Product:** Suspected of causing cancer.

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

| | |
|---|---|
| Talc | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Possibly carcinogenic to humans. |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. |
| Ethylbenzene | Overall evaluation: Possibly carcinogenic to humans. |

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

No carcinogenic components identified

**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):**

| | |
|---|---|
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Titanium dioxide | LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality |
| Ethylbenzene | LC 50 (Bluegill (Lepomis macrochirus), 24 h): 70 - 149 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 112 - 170 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 113 - 162 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 66 - 276 mg/l Mortality<br>LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 11 - 18 mg/l Mortality |
| Dibutyl tin dilaurate | LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality |

**Aquatic Invertebrates**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | LC 50 (Water flea (Daphnia magna), 24 h): > 100 - 1,000 mg/l Mortality |
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |
| Ethylbenzene | EC 50 (Water flea (Daphnia magna), 24 h): 1.47 - 2.18 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.51 - 2.14 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.63 - 2.28 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 2.2 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.53 - 3.17 mg/l Intoxication |
| Dibutyl tin dilaurate | EC 50 (Water flea (Daphnia magna), 24 h): 0.66 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Xylene | NOAEL (Oncorhynchus mykiss, 56 d): > 1.3 mg/l experimental result |
| Titanium dioxide | LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result |
| Iron oxide | LOAEL (Pimephales promelas, 33 d): 1.6 mg/l experimental result |
| Aluminum hydroxide | LOAEL (Pimephales promelas, 28 d): 53.8 mg/l experimental result |
| Aluminum oxide | NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result |

**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 Kow)**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Xylene | Log Kow: 3.12 - 3.20 |
| Ethylbenzene | Log Kow: 3.15 |
| Dibutyl tin dilaurate | Log Kow: 3.12 |

| | |
|---|---|
| **Mobility in Soil:** | No data available. |
| **Other Adverse Effects:** | Harmful 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:**

UN1263, PAINT, 3, PG III

**CFR / DOT:**

UN1263, Paint, 3, PG III

**IMDG:**

UN1263, PAINT, 3, PG III

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

## 15. Regulatory information

**US Federal Regulations**

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

None present or none present in regulated quantities.

**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):**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Toluene | 1000 lbs. |
| Barium sulfate | 1000 lbs. |
| Chromium | 5000 lbs. |

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

**Hazard categories**
Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Isophorone Diisocyanate | |
| Toluene | 1000 lbs. |
| Barium sulfate | 1000 lbs. |
| Chromium | 5000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| Xylene | 500 lbs |
| Talc | 500 lbs |
| Titanium dioxide | 500 lbs |
| Ethylbenzene | 500 lbs |
| Amorphous silica | 500 lbs |
| Iron oxide | 500 lbs |
| Dibutyl tin dilaurate | 500 lbs |
| Aluminum hydroxide | 500 lbs |
| Aluminum oxide | 500 lbs |
| Magnesite | 500 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| Xylene |
| Ethylbenzene |

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**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**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |

**US. Massachusetts RTK - Substance List**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Titanium dioxide |
| Ethylbenzene |
| Isophorone Diisocyanate |
| Crystalline Silica (Quartz)/ Silica Sand |
| Chromium |

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Xylene
Talc
Titanium dioxide
Ethylbenzene

**US. Rhode Island RTK**

**Chemical Identity**
Xylene
Ethylbenzene

**Other Regulations:**

| | |
|---|---|
| **Regulatory VOC (less water and exempt solvent):** | 322 g/l |
| **VOC Method 310:** | 27.46 % |

**Inventory Status:**

| | |
|---|---|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not 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. |
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/29/2015 |
| **Version #:** | 1.0 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** VULKEM 346 SLATE GRAY
**Material:** 874713 805

**Recommended use and restriction on use**

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

**Manufacturer/Importer/Supplier/Distributor Information**

Tremco U.S Sealants
3735 Green Road
Cleveland 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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 3 |

**Health Hazards**

| | |
|---|---|
| Serious Eye Damage/Eye Irritation | Category 2B |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |
| Toxic to reproduction | Category 2 |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 17.81 % |
| Acute toxicity, dermal | 24.62 % |
| Acute toxicity, inhalation, vapor | 99.89 % |
| Acute toxicity, inhalation, dust or mist | 99.82 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 67.48 % |
| Chronic hazards to the aquatic environment | 100 % |

**Label Elements**

**Hazard Symbol:**



| | |
|---|---|
| **Signal Word:** | Danger |
| **Hazard Statement:** | Flammable liquid and vapor.<br>Causes eye irritation.<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>May cause an allergic skin reaction.<br>Suspected of causing cancer.<br>Suspected of damaging fertility or the unborn child.<br>Harmful to aquatic life. |
| **Precautionary Statement:**<br>**Prevention:** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. |
| **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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. In case of fire: Use … to extinguish. |
| **Storage:** | Store in well-ventilated place. Keep cool. 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:** | Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|
| Xylene | 1330-20-7 | 15 - 40% |
| Talc | 14807-96-6 | 15 - 40% |
| Ethylbenzene | 100-41-4 | 5 - 10% |
| Titanium dioxide | 13463-67-7 | 1 - 5% |
| Amorphous silica | 7631-86-9 | 0.5 - 1.5% |
| Dibutyl tin dilaurate | 77-58-7 | 0.1 - 1% |
| Magnesite | 546-93-0 | 0.1 - 1% |
| Isophorone Diisocyanate | 4098-71-9 | 0.1 - 1% |
| Toluene | 108-88-3 | 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:** Take off immediately all contaminated clothing. 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

### Suitable (and unsuitable) extinguishing media

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

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

**Special protective equipment and precautions for firefighters**

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

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. 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:** Dam and absorb spillages with sand, earth or other non-combustible material. 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. Do not contaminate water sources or sewer.

## 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. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity | type | Exposure Limit Values | Source |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Xylene | TWA | 100 ppm | US. ACGIH Threshold Limit Values (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Talc - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Talc | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Talc - 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) |
| Talc - Total dust. | TWA | 0.3 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Ethylbenzene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 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) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Dibutyl tin dilaurate - as Sn | STEL | 0.2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 0.1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 0.1 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Magnesite - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Magnesite - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| Toluene | TWA | 20 ppm | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 200 ppm | US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006) |

| | | | |
|---|---|---|---|
| | Ceiling | 300 ppm | US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006) |
| | MAX. CONC | 500 ppm | US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006) |

| Chemical name | type | Exposure Limit Values | Source |
|---|---|---|---|
| Xylene | TWA | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Xylene | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 150 ppm 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Talc - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Talc - Respirable particles. | TWAEV | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc | TWAEV | 2 fibers/mL | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Talc - Respirable dust. | TWA | 3 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Ethylbenzene | TWA | 20 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | STEL | 125 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWAEV | 100 ppm | Canada. Ontario OELs. (Control of |

| | | | | |
|---|---|---|---|---|
| | | | | Exposure to Biological or Chemical Agents) (11 2010) |
| Ethylbenzene | TWA | 100 ppm | 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| | STEL | 125 ppm | 543 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) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | 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) |

| | | | | |
|---|---|---|---|---|
| Isophorone Diisocyanate | TWA | 0.005 ppm | 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Toluene | TWA | 20 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Toluene | TWAEV | 20 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Toluene | TWA | 50 ppm | 188 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL (02 2014) |
| Toluene (o-Cresol, with hydrolysis: Sampling time: End of shift.) | 0.3 mg/g (Creatinine in urine) | ACGIH BEL (03 2013) |
| Toluene (toluene: Sampling time: Prior to last shift of work week.) | 0.02 mg/l (Blood) | ACGIH BEL (03 2013) |
| Toluene (toluene: Sampling time: End of shift.) | 0.03 mg/l (Urine) | ACGIH BEL (03 2013) |

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

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

**General information:** Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**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. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. |

## 9. Physical and chemical properties

**Appearance**

| | |
|---|---|
| **Physical state:** | liquid |
| **Form:** | liquid |
| **Color:** | Gray |
| **Odor:** | Mild petroleum/solvent |
| **Odor threshold:** | No data available. |
| **pH:** | No data available. |
| **Melting point/freezing point:** | No data available. |
| **Initial boiling point and boiling range:** | > 121 °C > 250 °F |
| **Flash Point:** | 27 °C 80 °F(Setaflash Closed Cup) |
| **Evaporation rate:** | Slower than Ether |
| **Flammability (solid, gas):** | No |
| **Upper/lower limit on flammability or explosive limits** | |
| **Flammability limit - upper (%):** | 7.0 %(V) |
| **Flammability limit - lower (%):** | 1.0 %(V) |
| **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:** | 1.17 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of Hazardous Reactions:** | No data available. |
| **Conditions to Avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion:** | May be ingested by accident. Ingestion may cause irritation and malaise. |
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Causes eye irritation. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 11,503.76 mg/kg

**Dermal**
**Product:** No data available.

**Inhalation**
**Product:** No data available.

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | in vivo (Rabbit, 24 hrs): Moderately irritating |
| Ethylbenzene | Irritating |
| Titanium dioxide | in vivo (Rabbit, 24 - 72 hrs): Not irritating |
| Amorphous silica | in vivo (Rabbit, 24 hrs): Not irritating |
| Dibutyl tin dilaurate | in vivo (Rabbit, 24 hrs): Highly irritating |
| Magnesite | In vitro (Reconstituted Corneal Epithelium model, 10 min): Not irritating |
| Isophorone Diisocyanate | in vivo (Rabbit, 24 - 72 hrs): Category 1 |
| Toluene | in vivo (Rabbit, 24 - 72 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:** Suspected of causing cancer.

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

| | |
|---|---|
| Talc | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Possibly carcinogenic to humans. |
| Ethylbenzene | Overall evaluation: Possibly carcinogenic to humans. |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. |

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

No carcinogenic components identified

**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:** Suspected of damaging fertility or the unborn child.

**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):**

| | |
|---|---|
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Ethylbenzene | LC 50 (Bluegill (Lepomis macrochirus), 24 h): 70 - 149 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 112 - 170 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 113 - 162 mg/l Mortality<br>LC 50 (Bluegill (Lepomis macrochirus), 24 h): 66 - 276 mg/l Mortality<br>LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 24 h): 11 - 18 mg/l Mortality |
| Titanium dioxide | LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality |
| Dibutyl tin dilaurate | LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality |
| Toluene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 71.7 - 82.8 mg/l Mortality |

**Aquatic Invertebrates**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Xylene | LC 50 (Water flea (Daphnia magna), 24 h): > 100 - 1,000 mg/l Mortality |
| Ethylbenzene | EC 50 (Water flea (Daphnia magna), 24 h): 1.47 - 2.18 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.51 - 2.14 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.63 - 2.28 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 2.2 mg/l Intoxication<br>EC 50 (Water flea (Daphnia magna), 24 h): 1.53 - 3.17 mg/l Intoxication |
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |
| Dibutyl tin dilaurate | EC 50 (Water flea (Daphnia magna), 24 h): 0.66 mg/l Intoxication |
| Toluene | LC 50 (Water flea (Daphnia magna), 24 h): 240 - 420 mg/l Mortality<br>EC 50 (Water flea (Daphnia magna), 48 h): < 9.83 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Xylene | NOAEL (Oncorhynchus mykiss, 56 d): > 1.3 mg/l experimental result |
| Titanium dioxide | LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result |
| Toluene | NOAEL (Pimephales promelas, 32 d): 4 mg/l experimental result |

**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. |

**Specified substance(s):**

| | |
|---|---|
| Toluene | Green algae (Selenastrum capricornutum), Bioconcentration Factor (BCF): 3,016 (Static) |

**Partition Coefficient n-octanol / water (log Kow)**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Xylene | Log Kow: 3.12 - 3.20 |
| Ethylbenzene | Log Kow: 3.15 |
| Dibutyl tin dilaurate | Log Kow: 3.12 |
| Toluene | Log Kow: 2.73 |

| | |
|---|---|
| **Mobility in Soil:** | No data available. |
| **Other Adverse Effects:** | Harmful 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:**

UN1263, PAINT, 3, PG III

**CFR / DOT:**

UN1263, Paint, 3, PG III

**IMDG:**

UN1263, PAINT, 3, PG III

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

## 15. Regulatory information

**US Federal Regulations**

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

None present or none present in regulated quantities.

**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):**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Toluene | 1000 lbs. |

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

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Xylene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Isophorone Diisocyanate | |
| Toluene | 1000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| Xylene | 500 lbs |
| Talc | 500 lbs |
| Ethylbenzene | 500 lbs |
| Titanium dioxide | 500 lbs |
| Amorphous silica | 500 lbs |
| Dibutyl tin dilaurate | 500 lbs |
| Magnesite | 500 lbs |
| Toluene | 500 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| Xylene |
| Ethylbenzene |

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

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**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**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Ethylbenzene |
| Titanium dioxide |

**US. Massachusetts RTK - Substance List**

| Chemical Identity |
|---|
| Xylene |
| Talc |
| Ethylbenzene |
| Titanium dioxide |
| Isophorone Diisocyanate |

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Xylene
Talc
Ethylbenzene
Titanium dioxide

**US. Rhode Island RTK**

**Chemical Identity**
Xylene
Ethylbenzene

**Other Regulations:**

| | |
|---|---|
| **Regulatory VOC (less water and exempt solvent):** | 350 g/l |
| **VOC Method 310:** | 29.86 % |

**Inventory Status:**

| | |
|---|---|
| Australia AICS: | One or more components in this product are not listed on or exempt from the Inventory. |
| Canada DSL Inventory List: | One or more components in this product are not 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. |
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/28/2015 |
| **Version #:** | 1.0 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** Vulkem® 350NF R
**Material:** 450712R802

**Recommended use and restriction on use**

**Recommended use:** Coatings
**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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 4 |

**Health Hazards**

| | |
|---|---|
| Acute toxicity (Inhalation - vapor) | Category 4 |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Germ Cell Mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 25.73 % |
| Acute toxicity, dermal | 27.95 % |
| Acute toxicity, inhalation, vapor | 93.77 % |
| Acute toxicity, inhalation, dust or mist | 96.92 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 95.53 % |

| | |
|---|---|
| Chronic hazards to the aquatic environment | 97.61 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

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

**Precautionary Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. 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: 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. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see on this label). Wash contaminated clothing before reuse. In case of fire: Use… to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool. 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.

**Hazard(s) not otherwise classified (HNOC):** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|
| Calcium Carbonate (Limestone) | 1317-65-3 | 20 - <50% |
| Calcium carbonate | 471-34-1 | 10 - <20% |
| Hydrotreated heavy naphtha | 64742-48-9 | 1 - <5% |
| Calcium oxide | 1305-78-8 | 1 - <5% |
| Titanium dioxide | 13463-67-7 | 1 - <5% |
| Isophorone Diisocyanate | 4098-71-9 | 0.1 - <1% |
| Stearic acid | 57-11-4 | 0.1 - <1% |
| Tosyl isocyanate | 4083-64-1 | 0.1 - <1% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - <1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - <1% |
| Diisodecyl phthalate | 26761-40-0 | 0.01 - <1% |
| 2,4-Toluene diisocyanate | 584-84-9 | 0.1 - <1% |
| Amorphous silica | 7631-86-9 | 0.1 - <1% |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8 | 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

| | |
|---|---|
| **General Fire Hazards:** | Move containers from fire area if you can do so without risk. |

**Suitable (and unsuitable) extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media:** | Use fire-extinguishing media appropriate for surrounding materials. |
| **Unsuitable extinguishing media:** | Avoid water in straight hose stream; will scatter and spread 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:** | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures:** | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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:** | Dam and absorb spillages with sand, earth or other non-combustible material. 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:** | Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. |

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 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) |
| Calcium carbonate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium oxide | TWA | 2 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) |
| 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) |
| Titanium dioxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| Stearic acid - Respirable fraction. | TWA | 3 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Stearic acid - Inhalable fraction. | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (03 2014) |
| Hydrotreated heavy naphthenic distillate | PEL | 500 ppm 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Hydrotreated heavy naphthenic distillate - Mist. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.05 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| | OSHA_ACT | 0.025 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | 0.05 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) |
| 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) |
| 2,4-Toluene diisocyanate - | STEL | 0.005 ppm | US. ACGIH Threshold Limit Values (03 2016) |

| | | | | |
|---|---|---|---|---|
| Inhalable fraction and vapor. | | | | |
| | TWA | 0.001 ppm | | US. ACGIH Threshold Limit Values (03 2016) |
| 2,4-Toluene diisocyanate | Ceiling | 0.02 ppm | 0.14 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |

| **Chemical name** | **Type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| 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) (09 2017) |
| Calcium carbonate - 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) |
| Calcium carbonate - 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 - 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) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphtha | TWA | 525 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 | TWA | 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) (09 2017) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphthenic distillate - Mist. | TWA | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational |

| | | | |
|---|---|---|---|
| | | | Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Hydrotreated heavy naphthenic distillate - Mist. | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 fraction. | TWA | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |
| 2,4-Toluene diisocyanate | 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) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm 0.036 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 0.02 ppm 0.14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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) | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| 2,4-Toluene diisocyanate (Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis: Sampling time: | 5 µg/g (Creatinine in urine) | ACGIH BEI (03 2016) |

| | | |
|---|---|---|
| End of shift.) | | |

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

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

**Appearance**

**Physical state:** liquid
**Form:** liquid
**Color:** Gray
**Odor:** Mild petroleum/solvent
**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:** 75 °C 167 °F(San Francisco Closed Cup)
**Evaporation rate:** Slower than Ether
**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:** | 1.37 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions:** | No data available. |
| **Conditions to avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

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

**Symptoms related to the physical, chemical and toxicological characteristics**

| | |
|---|---|
| **Inhalation:** | No data available. |
| **Skin Contact:** | No data available. |
| **Eye contact:** | No data available. |
| **Ingestion:** | No data available. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 13,882.68 mg/kg

**Dermal**
**Product:** ATEmix: 9,911.7 mg/kg

**Inhalation**
**Product:** ATEmix: 13.85 mg/l

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**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. |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. |
| Crystalline Silica (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. |
| 2,4-Toluene diisocyanate | Overall evaluation: Possibly carcinogenic to humans. |

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

| | |
|---|---|
| Hydrotreated heavy naphthenic distillate | Known To Be Human Carcinogen. |
| Crystalline Silica (Quartz)/ Silica Sand | Known To Be Human Carcinogen. |
| 2,4-Toluene diisocyanate | Reasonably Anticipated to be a Human Carcinogen. |

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

| | |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | Cancer |

**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.

**Aquatic Invertebrates**
**Product:** No data available.

**Chronic hazards to the aquatic environment:**

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

**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 Kow)**
**Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** Harmful 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)**

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only. |

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

| Chemical Identity | OSHA hazard(s) |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | kidney effects<br>lung effects<br>immune system effects<br>Cancer |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

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

**Hazard categories**

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable liquids
Acute toxicity

Respiratory sensitizer
Skin sensitizer
Germ Cell Mutagenicity
Carcinogenicity
Static-accumulating flammable liquid

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. | 500 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. | 100 lbs. |
| Propylene oxide | 100 lbs. | 10000 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Isophorone Diisocyanate | |
| Diisodecyl phthalate | |
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Diisodecyl phthalate (mixed Is) | |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| 2,4-Toluene diisocyanate | 500lbs |
| Toluene-2,6-Diisocyanate | 100lbs |
| Propylene oxide | 500lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Calcium carbonate | 10000 lbs |
| Hydrotreated heavy naphtha | 10000 lbs |
| Calcium oxide | 10000 lbs |
| Titanium dioxide | 10000 lbs |
| Stearic acid | 10000 lbs |
| Tosyl isocyanate | 10000 lbs |
| Hydrotreated heavy naphthenic distillate | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |
| Diisodecyl phthalate | 10000 lbs |
| Amorphous silica | 10000 lbs |
| 4,4'-Methylene bis(phenylisocyanate) | 10000 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| 2,4-Toluene diisocyanate |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | lbs |
| Toluene-2,6-Diisocyanate | lbs |
| Propylene oxide | lbs |

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

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**



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

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

| Chemical Identity |
|---|
| Calcium Carbonate (Limestone) |
| Calcium carbonate |
| Calcium oxide |
| Titanium dioxide |
| Hydrotreated heavy naphthenic distillate |
| Crystalline Silica (Quartz)/ Silica Sand |
| 2,4-Toluene diisocyanate |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide
Isophorone Diisocyanate
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate
Toluene-2,6-Diisocyanate
Propylene oxide

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Hydrotreated heavy naphtha
Calcium oxide
Titanium dioxide
2,4-Toluene diisocyanate

**US. Rhode Island RTK**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide

**International regulations**

**Montreal protocol**
Not applicable

**Stockholm convention**
Not applicable

**Rotterdam convention**
Not applicable

**Kyoto protocol**
Not applicable

**VOC:**

| | | |
|---|---|---|
| Regulatory VOC (less water and exempt solvent) | : | 86 g/l |
| VOC Method 310 | : | 6.24 % |

**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. |
| 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. |
| Mexico INSQ: | One or more components in this product are not listed on or exempt from the Inventory. |
| Ontario Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Taiwan Chemical Substance Inventory: | 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

| | |
|---|---|
| **Revision Date:** | 07/21/2018 |
| **Version #:** | 1.2 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** Vulkem® 350NF R
**Material:** 450712R805

**Recommended use and restriction on use**

**Recommended use:** Coatings
**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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 4 |

**Health Hazards**

| | |
|---|---|
| Acute toxicity (Inhalation - vapor) | Category 4 |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Germ Cell Mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 25.73 % |
| Acute toxicity, dermal | 27.95 % |
| Acute toxicity, inhalation, vapor | 93.77 % |
| Acute toxicity, inhalation, dust or mist | 96.92 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 95.53 % |

| | |
|---|---|
| Chronic hazards to the aquatic environment | 97.61 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

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

**Precautionary Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. 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: 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. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see on this label). Wash contaminated clothing before reuse. In case of fire: Use… to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool. 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.

**Hazard(s) not otherwise classified (HNOC):** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|
| Calcium Carbonate (Limestone) | 1317-65-3 | 20 - <50% |
| Calcium carbonate | 471-34-1 | 10 - <20% |
| Hydrotreated heavy naphtha | 64742-48-9 | 1 - <5% |
| Calcium oxide | 1305-78-8 | 1 - <5% |
| Titanium dioxide | 13463-67-7 | 1 - <5% |
| Isophorone Diisocyanate | 4098-71-9 | 0.1 - <1% |
| Stearic acid | 57-11-4 | 0.1 - <1% |
| Tosyl isocyanate | 4083-64-1 | 0.1 - <1% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - <1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - <1% |
| Diisodecyl phthalate | 26761-40-0 | 0.01 - <1% |
| 2,4-Toluene diisocyanate | 584-84-9 | 0.1 - <1% |
| Amorphous silica | 7631-86-9 | 0.1 - <1% |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8 | 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

| | |
|---|---|
| **General Fire Hazards:** | Move containers from fire area if you can do so without risk. |

**Suitable (and unsuitable) extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media:** | Use fire-extinguishing media appropriate for surrounding materials. |
| **Unsuitable extinguishing media:** | Avoid water in straight hose stream; will scatter and spread 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:** | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures:** | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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:** | Dam and absorb spillages with sand, earth or other non-combustible material. 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:** | Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. |

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 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) |
| Calcium carbonate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium oxide | TWA | 2 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) |
| 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) |
| Titanium dioxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| Stearic acid - Respirable fraction. | TWA | 3 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Stearic acid - Inhalable fraction. | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (03 2014) |
| Hydrotreated heavy naphthenic distillate | PEL | 500 ppm 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Hydrotreated heavy naphthenic distillate - Mist. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.05 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| | OSHA_ACT | 0.025 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | 0.05 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) |
| 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) |
| 2,4-Toluene diisocyanate - | STEL | 0.005 ppm | US. ACGIH Threshold Limit Values (03 2016) |

| | | | | |
|---|---|---|---|---|
| Inhalable fraction and vapor. | | | | |
| | TWA | 0.001 ppm | | US. ACGIH Threshold Limit Values (03 2016) |
| 2,4-Toluene diisocyanate | Ceiling | 0.02 ppm | 0.14 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |

| **Chemical name** | **Type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| 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) (09 2017) |
| Calcium carbonate - 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) |
| Calcium carbonate - 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 - 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) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphtha | TWA | 525 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 | TWA | 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) (09 2017) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphthenic distillate - Mist. | TWA | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational |

| | | | |
|---|---|---|---|
| | | | Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Hydrotreated heavy naphthenic distillate - Mist. | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 fraction. | TWA | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |
| 2,4-Toluene diisocyanate | 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) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm 0.036 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 0.02 ppm 0.14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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) | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| 2,4-Toluene diisocyanate (Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis: Sampling time: | 5 µg/g (Creatinine in urine) | ACGIH BEI (03 2016) |

| | | |
|---|---|---|
| End of shift.) | | |

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

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

**Appearance**

**Physical state:** liquid
**Form:** liquid
**Color:** Gray
**Odor:** Mild petroleum/solvent
**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:** 75 °C 167 °F(San Francisco Closed Cup)
**Evaporation rate:** Slower than Ether
**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:** | 1.37 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions:** | No data available. |
| **Conditions to avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

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

**Symptoms related to the physical, chemical and toxicological characteristics**

| | |
|---|---|
| **Inhalation:** | No data available. |
| **Skin Contact:** | No data available. |
| **Eye contact:** | No data available. |
| **Ingestion:** | No data available. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 13,882.68 mg/kg

**Dermal**
**Product:** ATEmix: 9,911.7 mg/kg

**Inhalation**
**Product:** ATEmix: 13.85 mg/l

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**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. |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. |
| Crystalline Silica (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. |
| 2,4-Toluene diisocyanate | Overall evaluation: Possibly carcinogenic to humans. |

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

| | |
|---|---|
| Hydrotreated heavy naphthenic distillate | Known To Be Human Carcinogen. |
| Crystalline Silica (Quartz)/ Silica Sand | Known To Be Human Carcinogen. |
| 2,4-Toluene diisocyanate | Reasonably Anticipated to be a Human Carcinogen. |

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

| | |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | Cancer |

**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.

**Aquatic Invertebrates**
**Product:** No data available.

**Chronic hazards to the aquatic environment:**

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

**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 Kow)**
**Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** Harmful 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)**

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only. |

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

| Chemical Identity | OSHA hazard(s) |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | kidney effects<br>lung effects<br>immune system effects<br>Cancer |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

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

**Hazard categories**

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable liquids
Acute toxicity

Respiratory sensitizer
Skin sensitizer
Germ Cell Mutagenicity
Carcinogenicity
Static-accumulating flammable liquid

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. | 500 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. | 100 lbs. |
| Propylene oxide | 100 lbs. | 10000 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Isophorone Diisocyanate | |
| Diisodecyl phthalate | |
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Diisodecyl phthalate (mixed Is) | |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| 2,4-Toluene diisocyanate | 500lbs |
| Toluene-2,6-Diisocyanate | 100lbs |
| Propylene oxide | 500lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Calcium carbonate | 10000 lbs |
| Hydrotreated heavy naphtha | 10000 lbs |
| Calcium oxide | 10000 lbs |
| Titanium dioxide | 10000 lbs |
| Stearic acid | 10000 lbs |
| Tosyl isocyanate | 10000 lbs |
| Hydrotreated heavy naphthenic distillate | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |
| Diisodecyl phthalate | 10000 lbs |
| Amorphous silica | 10000 lbs |
| 4,4'-Methylene bis(phenylisocyanate) | 10000 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| 2,4-Toluene diisocyanate |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | lbs |
| Toluene-2,6-Diisocyanate | lbs |
| Propylene oxide | lbs |

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

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**



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

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

| Chemical Identity |
|---|
| Calcium Carbonate (Limestone) |
| Calcium carbonate |
| Calcium oxide |
| Titanium dioxide |
| Hydrotreated heavy naphthenic distillate |
| Crystalline Silica (Quartz)/ Silica Sand |
| 2,4-Toluene diisocyanate |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide
Isophorone Diisocyanate
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate
Toluene-2,6-Diisocyanate
Propylene oxide

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Hydrotreated heavy naphtha
Calcium oxide
Titanium dioxide
2,4-Toluene diisocyanate

**US. Rhode Island RTK**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide

**International regulations**

**Montreal protocol**
Not applicable

**Stockholm convention**
Not applicable

**Rotterdam convention**
Not applicable

**Kyoto protocol**
Not applicable

**VOC:**

| | | |
|---|---|---|
| Regulatory VOC (less water and exempt solvent) | : | 86 g/l |
| VOC Method 310 | : | 6.24 % |

**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. |
| 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. |
| Mexico INSQ: | One or more components in this product are not listed on or exempt from the Inventory. |
| Ontario Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Taiwan Chemical Substance Inventory: | 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

| | |
|---|---|
| **Revision Date:** | 07/21/2018 |
| **Version #:** | 1.2 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** Vulkem® 350NF R
**Material:** 450712R855

**Recommended use and restriction on use**

**Recommended use:** Coatings
**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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 4 |

**Health Hazards**

| | |
|---|---|
| Acute toxicity (Inhalation - vapor) | Category 4 |
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Germ Cell Mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 25.73 % |
| Acute toxicity, dermal | 27.95 % |
| Acute toxicity, inhalation, vapor | 93.77 % |
| Acute toxicity, inhalation, dust or mist | 96.92 % |

**Environmental Hazards**

| | |
|---|---|
| Acute hazards to the aquatic environment | Category 3 |

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 95.53 % |

| | |
|---|---|
| Chronic hazards to the aquatic environment | 97.61 % |

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

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

**Precautionary Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. 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: 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. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see on this label). Wash contaminated clothing before reuse. In case of fire: Use… to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool. 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.

**Hazard(s) not otherwise classified (HNOC):** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|
| Calcium Carbonate (Limestone) | 1317-65-3 | 20 - <50% |
| Calcium carbonate | 471-34-1 | 10 - <20% |
| Hydrotreated heavy naphtha | 64742-48-9 | 1 - <5% |
| Calcium oxide | 1305-78-8 | 1 - <5% |
| Titanium dioxide | 13463-67-7 | 1 - <5% |
| Isophorone Diisocyanate | 4098-71-9 | 0.1 - <1% |
| Stearic acid | 57-11-4 | 0.1 - <1% |
| Tosyl isocyanate | 4083-64-1 | 0.1 - <1% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - <1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - <1% |
| Diisodecyl phthalate | 26761-40-0 | 0.01 - <1% |
| 2,4-Toluene diisocyanate | 584-84-9 | 0.1 - <1% |
| Amorphous silica | 7631-86-9 | 0.1 - <1% |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8 | 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

| | |
|---|---|
| **General Fire Hazards:** | Move containers from fire area if you can do so without risk. |

**Suitable (and unsuitable) extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media:** | Use fire-extinguishing media appropriate for surrounding materials. |
| **Unsuitable extinguishing media:** | Avoid water in straight hose stream; will scatter and spread 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:** | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures:** | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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:** | Dam and absorb spillages with sand, earth or other non-combustible material. 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:** | Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. |

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 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) |
| Calcium carbonate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium oxide | TWA | 2 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) |
| 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) |
| Titanium dioxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| Stearic acid - Respirable fraction. | TWA | 3 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Stearic acid - Inhalable fraction. | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (03 2017) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | US. ACGIH Threshold Limit Values (03 2014) |
| Hydrotreated heavy naphthenic distillate | PEL | 500 ppm 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Hydrotreated heavy naphthenic distillate - Mist. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.05 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| | OSHA_ACT | 0.025 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | 0.05 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) |
| 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) |
| 2,4-Toluene diisocyanate - | STEL | 0.005 ppm | US. ACGIH Threshold Limit Values (03 2016) |

| | | | | |
|---|---|---|---|---|
| Inhalable fraction and vapor. | | | | |
| | TWA | 0.001 ppm | | US. ACGIH Threshold Limit Values (03 2016) |
| 2,4-Toluene diisocyanate | Ceiling | 0.02 ppm | 0.14 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |

| **Chemical name** | **Type** | **Exposure Limit Values** | **Source** |
|---|---|---|---|
| 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) (09 2017) |
| Calcium carbonate - 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) |
| Calcium carbonate - 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 - 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) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphtha | TWA | 525 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 | TWA | 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) (09 2017) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Hydrotreated heavy naphthenic distillate - Mist. | TWA | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational |

| | | | |
|---|---|---|---|
| | | | Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Hydrotreated heavy naphthenic distillate - Mist. | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 fraction. | TWA | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |
| 2,4-Toluene diisocyanate | 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) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm 0.036 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 0.02 ppm 0.14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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) | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| 2,4-Toluene diisocyanate (Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis: Sampling time: | 5 µg/g (Creatinine in urine) | ACGIH BEI (03 2016) |

| | | |
|---|---|---|
| End of shift.) | | |

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

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

**Appearance**

**Physical state:** liquid
**Form:** liquid
**Color:** Gray
**Odor:** Mild petroleum/solvent
**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:** 75 °C 167 °F(San Francisco Closed Cup)
**Evaporation rate:** Slower than Ether
**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:** | 1.37 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions:** | No data available. |
| **Conditions to avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

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

**Symptoms related to the physical, chemical and toxicological characteristics**

| | |
|---|---|
| **Inhalation:** | No data available. |
| **Skin Contact:** | No data available. |
| **Eye contact:** | No data available. |
| **Ingestion:** | No data available. |

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 13,882.68 mg/kg

**Dermal**
**Product:** ATEmix: 9,911.7 mg/kg

**Inhalation**
**Product:** ATEmix: 13.85 mg/l

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Serious Eye Damage/Eye Irritation**
**Product:** No data available.

**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. |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. |
| Crystalline Silica (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. |
| 2,4-Toluene diisocyanate | Overall evaluation: Possibly carcinogenic to humans. |

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

| | |
|---|---|
| Hydrotreated heavy naphthenic distillate | Known To Be Human Carcinogen. |
| Crystalline Silica (Quartz)/ Silica Sand | Known To Be Human Carcinogen. |
| 2,4-Toluene diisocyanate | Reasonably Anticipated to be a Human Carcinogen. |

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

| | |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | Cancer |

**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.

**Aquatic Invertebrates**
**Product:** No data available.

**Chronic hazards to the aquatic environment:**

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

**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 Kow)**
**Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** Harmful 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)**

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only. |

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

| Chemical Identity | OSHA hazard(s) |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | kidney effects<br>lung effects<br>immune system effects<br>Cancer |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

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

**Hazard categories**

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable liquids
Acute toxicity

Respiratory sensitizer
Skin sensitizer
Germ Cell Mutagenicity
Carcinogenicity
Static-accumulating flammable liquid

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. | 500 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. | 100 lbs. |
| Propylene oxide | 100 lbs. | 10000 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Isophorone Diisocyanate | |
| Diisodecyl phthalate | |
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Methanol | 5000 lbs. |
| Propylene oxide | 100 lbs. |
| Diisodecyl phthalate (mixed Is) | |
| Chlorobenzene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Naphthalene | 100 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| 2,4-Toluene diisocyanate | 500lbs |
| Toluene-2,6-Diisocyanate | 100lbs |
| Propylene oxide | 500lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Calcium carbonate | 10000 lbs |
| Hydrotreated heavy naphtha | 10000 lbs |
| Calcium oxide | 10000 lbs |
| Titanium dioxide | 10000 lbs |
| Stearic acid | 10000 lbs |
| Tosyl isocyanate | 10000 lbs |
| Hydrotreated heavy naphthenic distillate | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |
| Diisodecyl phthalate | 10000 lbs |
| Amorphous silica | 10000 lbs |
| 4,4'-Methylene bis(phenylisocyanate) | 10000 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| 2,4-Toluene diisocyanate |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | lbs |
| Toluene-2,6-Diisocyanate | lbs |
| Propylene oxide | lbs |

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

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**



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

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

| Chemical Identity |
|---|
| Calcium Carbonate (Limestone) |
| Calcium carbonate |
| Calcium oxide |
| Titanium dioxide |
| Hydrotreated heavy naphthenic distillate |
| Crystalline Silica (Quartz)/ Silica Sand |
| 2,4-Toluene diisocyanate |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide
Isophorone Diisocyanate
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate
Toluene-2,6-Diisocyanate
Propylene oxide

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Hydrotreated heavy naphtha
Calcium oxide
Titanium dioxide
2,4-Toluene diisocyanate

**US. Rhode Island RTK**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium carbonate
Titanium dioxide

**International regulations**

**Montreal protocol**
Not applicable

**Stockholm convention**
Not applicable

**Rotterdam convention**
Not applicable

**Kyoto protocol**
Not applicable

**VOC:**

| | | |
|---|---|---|
| Regulatory VOC (less water and exempt solvent) | : | 86 g/l |
| VOC Method 310 | : | 6.24 % |

**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. |
| 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. |
| Mexico INSQ: | One or more components in this product are not listed on or exempt from the Inventory. |
| Ontario Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Taiwan Chemical Substance Inventory: | 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

| | |
|---|---|
| **Revision Date:** | 07/21/2018 |
| **Version #:** | 1.2 |
| **Further Information:** | No data available. |
| **Disclaimer:** | 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. |

# SAFETY DATA SHEET

## 1. Identification

**Material name:** Vulkem® 350NF-SL
**Material:** 850712LV805

**Recommended use and restriction on use**

**Recommended use:** Coatings
**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**

**Physical Hazards**

| | |
|---|---|
| Flammable liquids | Category 4 |

**Health Hazards**

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

**Unknown toxicity - Health**

| | |
|---|---|
| Acute toxicity, oral | 36.43 % |
| Acute toxicity, dermal | 38.6 % |
| Acute toxicity, inhalation, vapor | 100 % |
| Acute toxicity, inhalation, dust or mist | 99.65 % |

**Environmental Hazards**

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

**Unknown toxicity - Environment**

| | |
|---|---|
| Acute hazards to the aquatic environment | 97.21 % |

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

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:**
Combustible liquid.
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 Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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 on this label). Wash contaminated clothing before reuse. In case of fire: Use… to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool. 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.

**Hazard(s) not otherwise classified (HNOC):** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|---|---|---|
| Calcium Carbonate (Limestone) | 1317-65-3 | 30 - 60% |
| Hydrotreated heavy naphtha | 64742-48-9 | 3 - 7% |
| Calcium oxide | 1305-78-8 | 1 - 5% |
| Titanium dioxide | 13463-67-7 | 1 - 5% |
| Isophorone Diisocyanate | 4098-71-9 | 0.5 - 1.5% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - 1% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - 1% |
| Tosyl isocyanate | 4083-64-1 | 0.1 - 1% |
| 2,4-Toluene diisocyanate | 584-84-9 | 0.1 - 1% |
| 4,4'-Methylene bis(phenylisocyanate) | 101-68-8 | 0.1 - 1% |
| Amorphous silica | 7631-86-9 | 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:** Respiratory tract irritation.

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

**Treatment:** Symptoms may be delayed.

## 5. Fire-fighting measures

**General Fire Hazards:** Move containers from fire area if you can do so without risk.

**Suitable (and unsuitable) extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media:** | Use fire-extinguishing media appropriate for surrounding materials. |
| **Unsuitable extinguishing media:** | Avoid water in straight hose stream; will scatter and spread 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:** | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures:** | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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:** | Dam and absorb spillages with sand, earth or other non-combustible material. 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:** | Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment. |

## 7. Handling and storage

| | |
|---|---|
| **Precautions for safe handling:** | Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. |

**Conditions for safe storage, including any incompatibilities:** Store locked up. Store in a well-ventilated place. Store in a cool place.

## 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) |
| Calcium oxide | TWA | 2 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) |
| 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) |
| Titanium dioxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m3 | | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of particles per cubic foot of air | | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Isophorone Diisocyanate | TWA | 0.005 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 dust. | TWA | 0.05 mg/m3 | | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| | OSHA_ACT | 0.025 mg/m3 | | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | 0.05 mg/m3 | | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) |
| 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) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3 | | US. ACGIH Threshold Limit Values (03 2014) |
| Hydrotreated heavy naphthenic distillate | PEL | 500 ppm | 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Hydrotreated heavy naphthenic distillate - Mist. | PEL | 5 mg/m3 | | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 2,4-Toluene diisocyanate - Inhalable fraction and vapor. | STEL | 0.005 ppm | | US. ACGIH Threshold Limit Values (03 2016) |
| | TWA | 0.001 ppm | | US. ACGIH Threshold Limit Values (03 2016) |
| 2,4-Toluene diisocyanate | Ceiling | 0.02 ppm | 0.14 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 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) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|---|---|---|
| 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) (09 2017) |
| Hydrotreated heavy naphtha | TWA | 525 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium oxide | TWA | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 | TWA | 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) (09 2017) |
| Isophorone Diisocyanate | 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |

| | | | | |
|---|---|---|---|---|
| Isophorone Diisocyanate | TWA | 0.005 ppm | 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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 fraction. | TWA | | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |
| Hydrotreated heavy naphthenic distillate - Mist. | TWA | | 0.2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| | TWA | | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | TWA | | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Hydrotreated heavy naphthenic distillate - Mist. | STEL | | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 2,4-Toluene diisocyanate | 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) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | 0.036 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 0.02 ppm | 0.14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 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) | TWA | 0.005 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) (09 2017) |

**Biological Limit Values**

| Chemical Identity | Exposure Limit Values | Source |
|---|---|---|
| 2,4-Toluene diisocyanate (Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis: Sampling time: End of shift.) | 5 µg/g (Creatinine in urine) | ACGIH BEI (03 2016) |

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

**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. When using do not smoke. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

## 9. Physical and chemical properties

**Appearance**

**Physical state:** liquid
**Form:** liquid
**Color:** Gray
**Odor:** Mild petroleum/solvent
**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:** 75 °C 167 °F(Setaflash Closed Cup)
**Evaporation rate:** Slower than Ether
**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:** | 1.38 |
| **Solubility(ies)** | |
| **Solubility in water:** | Practically Insoluble |
| **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. |
| **Chemical Stability:** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions:** | No data available. |
| **Conditions to avoid:** | Heat, sparks, flames. |
| **Incompatible Materials:** | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| **Hazardous Decomposition Products:** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation:** | In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. |
| **Skin Contact:** | Causes mild skin irritation. May cause an allergic skin reaction. |
| **Eye contact:** | Eye contact is possible and should be avoided. |
| **Ingestion:** | May be harmful if swallowed. |

**Symptoms related to the physical, chemical and toxicological characteristics**

| | |
|---|---|
| **Inhalation:** | No data available. |
| **Skin Contact:** | No data available. |

**Eye contact:** No data available.

**Ingestion:** No data available.

**Information on toxicological effects**

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

**Oral**
**Product:** ATEmix: 4,624.37 mg/kg

**Dermal**
**Product:** ATEmix: 61,025.51 mg/kg

**Inhalation**
**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

| | |
|---|---|
| Hydrotreated heavy naphtha | LC 50 (Rat): > 8,530 mg/m3 |
| Calcium oxide | LC 50 (Rat): 40 mg/m3 |
| Titanium dioxide | LC 50 (Rat): 3.43 mg/l |
| Isophorone Diisocyanate | LC 50 (Rat): 135 - 160 mg/m3 |
| Hydrotreated heavy naphthenic distillate | LC 50 (Rat): 9.6 mg/l |
| 2,4-Toluene diisocyanate | LC 50 (Rat): 14 mg/l |
| Amorphous silica | LC 50 (Rat): > 2.08 mg/l |

**Repeated dose toxicity**
**Product:** No data available.

**Skin Corrosion/Irritation**
**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Hydrotreated heavy naphtha | in vivo (Rabbit): Study design not appropriate to classify skin irritation. Experimental result, Supporting study |
| Calcium oxide | in vivo (Rabbit): Irritating Read-across from supporting substance (structural analogue or surrogate), Key study |
| Titanium dioxide | in vivo (Rabbit): Not irritant Experimental result, Supporting study |
| Hydrotreated heavy naphthenic distillate | in vivo (Rabbit): Not irritant Experimental result, Key study |
| 2,4-Toluene diisocyanate | in vivo (Rabbit): Moderately irritating Experimental result, Supporting study |
| 4,4'-Methylene bis(phenylisocyanate) | in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study |
| Amorphous silica | in vivo (Rabbit): Not irritant Experimental result, Key study |

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Specified substance(s):**

| | |
|---|---|
| Hydrotreated heavy naphtha | Rabbit, 24 - 72 hrs: Not irritating |
| Titanium dioxide | Rabbit, 24 hrs: Not irritating |
| Hydrotreated heavy naphthenic distillate | Rabbit, 24 hrs: Not irritating |
| 2,4-Toluene diisocyanate | Rabbit, 24 - 72 hrs: Category 2 |
| Amorphous silica | 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 (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. |
| 2,4-Toluene diisocyanate | Overall evaluation: Possibly carcinogenic to humans. |

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

| | |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | Known To Be Human Carcinogen. |
| Hydrotreated heavy naphthenic distillate | Known To Be Human Carcinogen. |
| 2,4-Toluene diisocyanate | Reasonably Anticipated to be a 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):**

| | |
|---|---|
| 2,4-Toluene diisocyanate | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 108.8 - 240.4 mg/l Mortality |

**Aquatic Invertebrates**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication |

**Chronic hazards to the aquatic environment:**

**Fish**

| | |
|---|---|
| **Product:** | No data available. |

**Specified substance(s):**

| | |
|---|---|
| Hydrotreated heavy naphtha | LL 50 (Pimephales promelas, 14 d): 5.2 mg/l Experimental result, Supporting study<br>NOAEL (Pimephales promelas, 14 d): 2.6 mg/l Experimental result, Supporting study<br>NOAEL (Daphnia magna, 21 d): 2.6 mg/l Other, Key study<br>EC 50 (Daphnia magna, 21 d): 10 mg/l Other, Key study |
| Hydrotreated heavy naphthenic distillate | NOAEL (Oncorhynchus mykiss, 14 d): >= 1,000 mg/l QSAR QSAR, Supporting 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 Kow)**
**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)**

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | De minimis concentration: TSCA 5(a)(2)% 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):**

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Chlorobenzene | 100 lbs. |
| Propylene oxide | 100 lbs. |
| Methanol | 5000 lbs. |
| Ethylbenzene | 1000 lbs. |

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

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

| Chemical Identity | Reportable quantity | Threshold Planning Quantity |
|---|---|---|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. | 500 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. | 100 lbs. |
| Propylene oxide | 100 lbs. | 10000 lbs. |

**SARA 304 Emergency Release Notification**

| Chemical Identity | Reportable quantity |
|---|---|
| Isophorone Diisocyanate | |
| Diisodecyl phthalate | |
| 2,4-Toluene diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Polymethylene polyphenyl isocyanate | |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Diisodecyl phthalate (mixed Is) | |
| Chlorobenzene | 100 lbs. |
| Propylene oxide | 100 lbs. |
| Methanol | 5000 lbs. |
| Ethylbenzene | 1000 lbs. |

**SARA 311/312 Hazardous Chemical**

| Chemical Identity | Threshold Planning Quantity |
|---|---|
| Isophorone Diisocyanate | 500lbs |
| 2,4-Toluene diisocyanate | 500lbs |
| Toluene-2,6-Diisocyanate | 100lbs |
| Propylene oxide | 500lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Hydrotreated heavy naphtha | 10000 lbs |
| Calcium oxide | 10000 lbs |
| Titanium dioxide | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |
| Hydrotreated heavy naphthenic distillate | 10000 lbs |
| Tosyl isocyanate | 10000 lbs |
| 4,4'-Methylene bis(phenylisocyanate) | 10000 lbs |
| Amorphous silica | 10000 lbs |

**SARA 313 (TRI Reporting)**

| Chemical Identity |
|---|
| 2,4-Toluene diisocyanate |

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

| Chemical Identity | Reportable quantity |
|---|---|
| 2,4-Toluene diisocyanate | lbs |
| Toluene-2,6-Diisocyanate | lbs |
| Propylene oxide | lbs |

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

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**



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

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

| Chemical Identity |
|---|
| Calcium Carbonate (Limestone) |
| Calcium oxide |
| Titanium dioxide |
| Crystalline Silica (Quartz)/ Silica Sand |
| Hydrotreated heavy naphthenic distillate |
| 2,4-Toluene diisocyanate |

**US. Massachusetts RTK - Substance List**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium oxide
Titanium dioxide
Isophorone Diisocyanate
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate
Toluene-2,6-Diisocyanate
Propylene oxide

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**
Calcium Carbonate (Limestone)
Hydrotreated heavy naphtha
Calcium oxide
Titanium dioxide
2,4-Toluene diisocyanate

**US. Rhode Island RTK**

**Chemical Identity**
Calcium Carbonate (Limestone)
Calcium oxide
Titanium dioxide

**International regulations**

**Montreal protocol**
Not applicable

**Stockholm convention**
Not applicable

**Rotterdam convention**
Not applicable

**Kyoto protocol**
Not applicable

**VOC:**

| | | |
|---|---|---|
| Regulatory VOC (less water and exempt solvent) | : | 85 g/l |
| VOC Method 310 | : | 6.15 % |

**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. |
| US TSCA Inventory: | One or more components in this product are not 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

| | |
|---|---|
| **Revision Date:** | 07/21/2018 |
| **Version #:** | 1.1 |
| **Further Information:** | No data available. |

**Disclaimer:**

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.