

# SAFETY DATA SHEET

## 1. Identification

**Material name:** GEOGARD<sup>®</sup> LO BASE COAT  
**Material:** 491L005P

### Recommended use and restriction on use

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

### Manufacturer/Importer/Supplier/Distributor Information

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

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

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

|                        |             |
|------------------------|-------------|
| Respiratory sensitizer | Category 1  |
| Skin sensitizer        | Category 1  |
| Carcinogenicity        | Category 1A |

#### Unknown toxicity - Health

|  |         |
|--|---------|
| Acute toxicity, oral                     | 51.86 % |
| Acute toxicity, dermal                   | 54.31 % |
| Acute toxicity, inhalation, vapor        | 100 %   |
| Acute toxicity, inhalation, dust or mist | 99.62 % |

### Environmental Hazards

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

#### Unknown toxicity - Environment

|  |         |
|--|---------|
| Acute hazards to the aquatic environment   | 97.65 % |
| Chronic hazards to the aquatic environment | 100 %   |

### Label Elements

**Hazard Symbol:**



**Signal Word:** Danger

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

**Precautionary Statements**

**Prevention:** 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. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

**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.

**Storage:** Store locked up.

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

**Hazard(s) not otherwise classified (HNOC):** None.

|  |
|--|
| <b>3. Composition/information on ingredients</b> |
|--|

**Mixtures**

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

|  |            |          |
|--|------------|----------|
| Calcium Carbonate (Limestone)            | 1317-65-3  | 30 - 60% |
| Calcium oxide                            | 1305-78-8  | 1 - 5%   |
| Titanium dioxide                         | 13463-67-7 | 1 - 5%   |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - 1% |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - 1% |
| Dibutyl tin dilaurate                    | 77-58-7    | 0.1 - 1% |
| Tosyl isocyanate                         | 4083-64-1  | 0.1 - 1% |
| 4,4'-Methylene bis(phenylisocyanate)     | 101-68-8   | 0.1 - 1% |
| 2,4-Toluene diisocyanate                 | 584-84-9   | 0.1 - 1% |
| Amorphous silica                         | 7631-86-9  | 0.1 - 1% |
| Polymethylene polyphenyl isocyanate      | 9016-87-9  | 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:** Rinse mouth thoroughly.
- 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:** 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:** Rinse immediately with plenty of water.

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

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

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

**Treatment:** Symptoms may be delayed.

#### 5. Fire-fighting measures

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

#### Suitable (and unsuitable) extinguishing media

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

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

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

**Special protective equipment and precautions for firefighters**

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

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

**6. Accidental release measures**

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

**Methods and material for containment and cleaning up:** 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:** Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

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

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

| Chemical Identity                                    | Type | Exposure Limit Values | Source  |
|--|------|-----------------------|---|
| Calcium Carbonate (Limestone) - Total dust.          | PEL  | 15 mg/m <sup>3</sup>  | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate (Limestone) - Respirable fraction. | PEL  | 5 mg/m <sup>3</sup>   | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium oxide  | TWA  | 2 mg/m <sup>3</sup>   | 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)                              |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| 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)  |
| Polymethylene polyphenyl isocyanate  | TWA     | 0.005 ppm             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                      | CEILING | 0.01 ppm              | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |

### 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. 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:** > 100 °C > 212 °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:** 1.37

### 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.



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

**11. Toxicological information****Information on likely routes of exposure**

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

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

|                      |                    |
|----------------------|--------------------|
| <b>Inhalation:</b>   | No data available. |
| <b>Skin Contact:</b> | No data available. |
| <b>Eye contact:</b>  | No data available. |
| <b>Ingestion:</b>    | No data available. |

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

|                            |  |
|----------------------------|--|
| <b>Oral Product:</b>       | ATEmix: 64,966.26 mg/kg                                    |
| <b>Dermal Product:</b>     | ATEmix: 61,654.52 mg/kg                                    |
| <b>Inhalation Product:</b> | Not classified for acute toxicity based on available data. |

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|   |                                   |
|---|-----------------------------------|
| <b>Specified substance(s):</b><br>Calcium oxide | LC 50 (Rat): 40 mg/m <sup>3</sup> |
| Titanium dioxide                                | LC 50 (Rat): 3.43 mg/l            |
| Hydrotreated heavy<br>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.

|   |  |
|---|--|
| <b>Specified substance(s):</b><br>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<br>naphthenic distillate     | in vivo (Rabbit): Not irritant Experimental result, Key study  |
| Dibutyl tin dilaurate                           | In vitro (Human, in vitro reconstituted epidermis model): Not irritant<br>Experimental result, Supporting study  |
| 4,4'-Methylene<br>bis(phenylisocyanate)         | in vivo (Rabbit): Irritating Read-across based on grouping of substances<br>(category approach), Key study       |
| 2,4-Toluene<br>diisocyanate                     | in vivo (Rabbit): Moderately irritating Experimental result, Supporting study                                    |
| Amorphous silica                                | in vivo (Rabbit): Not irritant Experimental result, Key study  |

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

|                  |                                |
|------------------|--------------------------------|
| Titanium dioxide | Rabbit, 24 hrs: Not irritating |
|------------------|--------------------------------|

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|  |                                   |
|--|-----------------------------------|
| Hydrotreated heavy naphthenic distillate | Rabbit, 24 hrs: Not irritating    |
| Dibutyl tin dilaurate                    | Rabbit, 24 hrs: Highly 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):

Dibutyl tin dilaurate LC 50 (Ide, silver or golden orfe (Leuciscus idus), 48 h): 2 mg/l Mortality

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

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):

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.

### Specified substance(s):

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:

Not Regulated

### CFR / DOT:

Not Regulated

### IMDG:

Not Regulated

|                                   |
|-----------------------------------|
| <b>15. Regulatory information</b> |
|-----------------------------------|

**US Federal Regulations**

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u>   |
|--------------------------|--|
| 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):**

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

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

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

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

**SARA 304 Emergency Release Notification**

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

### SARA 311/312 Hazardous Chemical

| <u>Chemical Identity</u>                    | <u>Threshold Planning Quantity</u> |
|---|------------------------------------|
| 2,4-Toluene diisocyanate                    | 500lbs                             |
| Toluene-2,6-Diisocyanate                    | 100lbs                             |
| Calcium Carbonate<br>(Limestone)            | 10000 lbs                          |
| Calcium oxide                               | 10000 lbs                          |
| Titanium dioxide                            | 10000 lbs                          |
| Crystalline Silica (Quartz)/<br>Silica Sand | 10000 lbs                          |
| Hydrotreated heavy<br>naphthenic distillate | 10000 lbs                          |
| Dibutyl tin dilaurate                       | 10000 lbs                          |
| Tosyl isocyanate                            | 10000 lbs                          |
| 4,4'-Methylene<br>bis(phenylisocyanate)     | 10000 lbs                          |
| Amorphous silica                            | 10000 lbs                          |
| Polymethylene polyphenyl<br>isocyanate      | 10000 lbs                          |

### SARA 313 (TRI Reporting)

| <u>Chemical Identity</u> |
|--------------------------|
| 2,4-Toluene diisocyanate |

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| 2,4-Toluene diisocyanate | lbs                        |
| Toluene-2,6-Diisocyanate | 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](http://www.P65Warnings.ca.gov)

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

| <u>Chemical Identity</u>                 |
|--|
| 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  
Crystalline Silica (Quartz)/ Silica Sand  
2,4-Toluene diisocyanate  
Toluene-2,6-Diisocyanate

## US. Pennsylvania RTK - Hazardous Substances

### Chemical Identity

Calcium Carbonate (Limestone)  
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) : 11 g/l  
VOC Method 310 : 0.71 %



**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**

|                             |                    |
|-----------------------------|--------------------|
| <b>Revision Date:</b>       | 07/21/2018         |
| <b>Version #:</b>           | 1.1                |
| <b>Further Information:</b> | 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.