SAFETY DATA SHEET

1. Identification

Material name: ICE Coating
Material: 34427000 853

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
Acute toxicity (Inhalation - dust and mist) Category 4
Carcinogenicity Category 2

Unknown toxicity - Health
Acute toxicity, oral 37 %
Acute toxicity, dermal 52.71 %
Acute toxicity, inhalation, vapor 100 %
Acute toxicity, inhalation, dust or mist 88.53 %

Label Elements

Hazard Symbol:

Signal Word: Warning
Hazard Statement: Harmful if inhaled. Suspected of causing cancer.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. 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: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide</td>
<td>21645-51-2</td>
<td>7 - 13%</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>5 - 10%</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Ammonium zirconium carbonate</td>
<td>68309-95-5</td>
<td>0.5 - 1.5%</td>
</tr>
<tr>
<td>Cellulose</td>
<td>9004-34-6</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>Clay</td>
<td>1332-58-7</td>
<td>0.1 - 1%</td>
</tr>
</tbody>
</table>

* 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: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

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:** No data available.

**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. Environmental manager must be informed of all major spillages.
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. 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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Total dust.</td>
<td>TWA</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Calcium carbonate - Respirable fraction.</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Zinc oxide - Respirable fraction.</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Zinc oxide - Fume.</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Zinc oxide - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Zinc oxide - Respirable fraction.</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Ammonium zirconium carbonate - as Zr</td>
<td>STEL</td>
<td>5 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>Cellulose</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
<td></td>
</tr>
<tr>
<td>Cellulose - Total dust.</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
<td></td>
</tr>
<tr>
<td>Cellulose - Respirable fraction.</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide - Respirable fraction.</td>
<td>5 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide - Total dust.</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide - Respirable fraction.</td>
<td>TWA 50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide - Total dust.</td>
<td>TWA 5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide - Respirable fraction.</td>
<td>TWA 15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Clay - Respirable fraction.</td>
<td>TWA 5 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
<td></td>
</tr>
<tr>
<td>Clay - Total dust.</td>
<td>PEL 15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
<td></td>
</tr>
<tr>
<td>Clay - Respirable fraction.</td>
<td>TWA 50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Clay - Total dust.</td>
<td>TWA 15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Clay - Total dust.</td>
<td>TWA 5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
<td></td>
</tr>
<tr>
<td>Chemical name</td>
<td>Type</td>
<td>Exposure Limit Values</td>
<td>Source</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------</td>
<td>-----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Aluminum hydroxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>STEL</td>
<td>20 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td>Propylene glycol - Aerosol.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Propylene glycol - Vapor and aerosol.</td>
<td>TWA</td>
<td>50 ppm 155 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Zinc oxide - Respirable.</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Zinc oxide - Respirable.</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
</tbody>
</table>
Zinc oxide - Respirable fraction.

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>2 mg/m³</th>
<th>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>10 mg/m³</td>
<td></td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
</tbody>
</table>

Zinc oxide - Fume.

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>5 mg/m³</th>
<th>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>10 mg/m³</td>
<td></td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
</tbody>
</table>

Zinc oxide - Total dust.

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>10 mg/m³</th>
<th>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</th>
</tr>
</thead>
</table>

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: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: liquid
Color: White
Odor: Mild
Odor threshold: No data available.

pH: 7.5 - 8.9

Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash Point: > 93 °C > 199 °F
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: 1.005

Solubility(ies)
- Solubility in water: Soluble
- 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: Avoid heat or contamination.


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: Moderately irritating to skin with prolonged exposure.
- 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:** Not classified for acute toxicity based on available data.

**Specified substance(s):**
- Aluminum hydroxide  
  LD 50 (Rat): > 2,000 mg/kg
- Titanium dioxide  
  LD 50 (Rat): > 5,000 mg/kg
- Calcium carbonate  
  LD 50 (Rat): > 2,000 mg/kg
- Propylene glycol  
  LD 50 (Rat): 22,000 mg/kg
- Zinc oxide  
  LD 50 (Rat): > 5,000 mg/kg
- Ammonium zirconium carbonate  
  LD 50 (Rat): 2,900 mg/kg
- Cellulose  
  LD 50 (Rat): 5,001 mg/kg
- Aluminum oxide  
  LD 50 (Rat): > 10,000 mg/kg
- Clay  
  LD 50 (Rat): > 5,000 mg/kg

**Dermal**

**Product:**

**Inhalation**

**Product:**

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** No data available.

**Specified substance(s):**
Aluminum hydroxide in vivo (Rabbit): Not classified as an Irritant Experimental result, Key study

Titanium dioxide in vivo (Rabbit): Not irritant Experimental result, Supporting study

Calcium carbonate in vivo (Rabbit): Not irritant Experimental result, Key study

Propylene glycol in vivo (Rabbit): Not irritant Experimental result, Key study

Zinc oxide in vivo (Rabbit): Not irritant Experimental result, Key study

Ammonium zirconium carbonate in vivo (Rabbit): Not irritant Experimental result, Key study

Aluminum oxide in vivo (Rabbit): Not irritant Experimental result, Key study

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Specified substance(s):**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide</td>
<td>Rabbit, 24 hrs</td>
<td>Not irritating</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Rabbit, 24 hrs</td>
<td>Not irritating</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>Rabbit, 24 - 72 hrs</td>
<td>Not irritating</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>Rabbit, 24 - 72 hrs</td>
<td>Not irritating</td>
</tr>
<tr>
<td>Ammonium zirconium carbonate</td>
<td>Rabbit, 24 hrs</td>
<td>Not irritating</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Rabbit, 24 hrs</td>
<td>Not irritating</td>
</tr>
</tbody>
</table>

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Carcinogenicity**

**Product:** Suspected of causing cancer.

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>Overall evaluation: Possibly carcinogenic to humans.</td>
</tr>
</tbody>
</table>

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

### 12. Ecological information

Ecotoxicity:

**Acute hazards to the aquatic environment:**

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

**Specified substance(s):**
- **Propylene glycol**
  - LC 50 (Fathead minnow (Pimephales promelas), 96 h): 29,485 - 39,339 mg/l Mortality
- **Zinc oxide**
  - LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2,246 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
- **Propylene glycol**
  - EC 50 (Water flea (Daphnia magna), 48 h): > 10,000 mg/l Intoxication
Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):
Propylene glycol NOAEL (Pimephales promelas, 7 d): 11,530 mg/l Experimental result, Not specified

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):
Propylene glycol Log Kow: -0.92

Mobility in soil: No data available.

Other adverse effects: No data available.

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: 000000012950
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)
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):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutane</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>n-(3,4-dichlorophenyl)-n,n-dimethylurea</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Methyl benzimidazole-2-yl carbamate</td>
<td>10 lbs.</td>
</tr>
<tr>
<td>Ammonia</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>5000 lbs.</td>
</tr>
<tr>
<td>Methyl methacrylate</td>
<td>1000 lbs.</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely Hazardous Substance

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>100 lbs.</td>
<td>500 lbs.</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>5000 lbs.</td>
<td>- -- -</td>
</tr>
</tbody>
</table>
SARA 304 Emergency Release Notification

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Isobutane</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>n-(3,4-dichlorophenyl)-n,n-dimethylurea</td>
<td>10 lbs.</td>
</tr>
<tr>
<td>Methyl benzimidazole-2-yl carbamate</td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>5000 lbs.</td>
</tr>
<tr>
<td>Methyl methacrylate</td>
<td>1000 lbs.</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>5000lbs</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>5000lbs</td>
</tr>
<tr>
<td>Aluminum hydroxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ammonium zirconium carbonate</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Cellulose</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Clay</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

SARA 313 (TRI Reporting)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutane</td>
<td>lbs</td>
</tr>
<tr>
<td>Ammonia</td>
<td>lbs</td>
</tr>
<tr>
<td>Ammonia</td>
<td>lbs</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
</tr>
<tr>
<td>Calcium carbonate</td>
</tr>
<tr>
<td>Propylene glycol</td>
</tr>
<tr>
<td>Zinc oxide</td>
</tr>
</tbody>
</table>
US. Massachusetts RTK - Substance List

**Chemical Identity**
- Titanium dioxide
- Calcium carbonate
- Zinc oxide
- Crystalline Silica (Quartz)/ Silica Sand
- Ammonia
- Acrylamide

US. Pennsylvania RTK - Hazardous Substances

**Chemical Identity**
- Titanium dioxide
- Calcium carbonate
- Propylene glycol
- Zinc oxide

US. Rhode Island RTK

**Chemical Identity**
- Aluminum hydroxide
- Titanium dioxide
- Calcium carbonate
- Propylene glycol
- Zinc oxide

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) : 14 g/l
- VOC Method 310 : 0.86 %
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: 07/21/2018
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.