SAFETY DATA SHEET

1. Identification

Material name: SOLARGARD SEAM SEALER 5 GAL
Material: 151105P

Recommended use and restriction on use
   Recommended use: Sealant
   Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
Republic Powdered Metals
2628 Pearl Road
Medina OH 44256
US

Contact person: EH&S Department
Telephone: 330-273-5090
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 55.2 %
   Acute toxicity, dermal 63.75 %
   Acute toxicity, inhalation, vapor 99.89 %
   Acute toxicity, inhalation, dust or mist 94.37 %

Environmental Hazards
   Acute hazards to the aquatic environment Category 3

Unknown toxicity - Environment
   Acute hazards to the aquatic environment 88.81 %
   Chronic hazards to the aquatic environment 100 %

Label Elements

000000018080
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.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
</table>

000000018080
Calcium Carbonate (Limestone) | 1317-65-3 | 15 - 40%  
Polyvinyl chloride | 9002-86-2 | 15 - 40%  
Titanium dioxide | 13463-67-7 | 3 - 7%  
Petroleum distillates | 64742-47-8 | 3 - 7%  
Calcium oxide | 1305-78-8 | 1 - 5%  
Xylene | 1330-20-7 | 1 - 5%  
Amorphous silica | 7631-86-9 | 0.5 - 1.5%  
Isophorone Diisocyanate | 4098-71-9 | 0.1 - 1%  
Aluminum oxide | 1344-28-1 | 0.1 - 1%  
Ethylbenzene | 100-41-4 | 0.1 - 1%  
Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - 1%  
Nonane | 111-84-2 | 0.1 - 1%  

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

4. First-aid measures

**Ingestion:**  
Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

**Inhalation:**  
Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.

**Skin Contact:**  
If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

**Eye contact:**  
Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

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

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

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

**Treatment:**  
Symptoms may be delayed.

5. Fire-fighting measures

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

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:**  
Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

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

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

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

6. Accidental release measures

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

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

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

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

7. Handling and storage

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

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

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate</td>
<td>PEL</td>
<td>15 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air</td>
</tr>
<tr>
<td>Contaminants</td>
<td>PEL/TWA/StEL</td>
<td>Concentration</td>
<td>Source</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td>Calcium Carbonate (Limestone) - Respirable fraction.</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Polyvinyl chloride - Respirable fraction.</td>
<td>TWA</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>OSHA_AC</td>
<td>0.5 ppm</td>
<td></td>
<td>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)</td>
</tr>
<tr>
<td>Polyvinyl chloride - Total dust.</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>Polyvinyl chloride - Total dust.</td>
<td>TWA</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>Polyvinyl chloride - 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) (2000)</td>
</tr>
<tr>
<td>Polyvinyl chloride - Total dust.</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)</td>
</tr>
<tr>
<td>Polyvinyl chloride - Respirable fraction.</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>Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor</td>
<td>TWA</td>
<td>200 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td></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>Xylene</td>
<td>STEL</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>655 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td>Compound</td>
<td>TWA</td>
<td>PEL</td>
<td>Source</td>
</tr>
<tr>
<td>--------------------------------</td>
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<td>------------------------------------------------------------------------</td>
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<tr>
<td>Amorphous silica</td>
<td>20 ppm</td>
<td>5 mg/m3</td>
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<td></td>
<td>0.8 mg/m3</td>
<td>5 mg/m3</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
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<tr>
<td>Isophorone Diisocyanate</td>
<td>0.005 ppm</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>Aluminum oxide - Respirable</td>
<td>1 ppm</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>fraction.</td>
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</tr>
<tr>
<td>Aluminum oxide - Total dust.</td>
<td>15 ppm</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>PEL</td>
<td>15 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>20 ppm</td>
<td>435 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>Hydrotreated heavy naphthenic</td>
<td>5 ppm</td>
<td>5 mg/m3</td>
<td>US. ACGIH Threshold Limit Values (03 2014)</td>
</tr>
<tr>
<td>distillate - Inhalable fraction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>100 ppm</td>
<td></td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>150 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>350 µg/m3</td>
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</tr>
<tr>
<td></td>
<td>150 ppm</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>500 ppm</td>
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<td></td>
<td>500 ppm</td>
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</tr>
<tr>
<td></td>
<td>200 ppm</td>
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<tr>
<td></td>
<td>1,000 ppm</td>
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<tr>
<td></td>
<td>2,000 ppm</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>200 ppm</td>
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</tr>
<tr>
<td></td>
<td>5 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonane</td>
<td>200 ppm</td>
<td></td>
<td>US. ACGIH Threshold Limit Values (02 2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></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>Calcium Carbonate (Limestone) - 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></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 (Limestone) - 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 (Limestone) - 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>Polyvinyl chloride - 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>Polyvinyl chloride - 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>Polyvinyl chloride - 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>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>
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<tr>
<td>Titanium dioxide</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>Titanium dioxide - 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>Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor</td>
<td>TWA</td>
<td>200 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>Petroleum distillates</td>
<td>TWA</td>
<td>525 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor</td>
<td>TWA</td>
<td>200 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 mg/m³</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Calcium oxide</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></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td>Xylene</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2) (07 2009)</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2) (07 2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>651 mg/m³</td>
<td>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2) (07 2009)</td>
</tr>
<tr>
<td>Substance</td>
<td>Type</td>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Xylene</td>
<td>TWA</td>
<td>100 ppm</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>
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<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
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<td>TWA</td>
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<td>Xylene</td>
<td>STEL</td>
<td>150 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>TWA</td>
<td>0.005 ppm</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></td>
<td>CEILING</td>
<td>0.01 ppm</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>Isophorone Diisocyanate</td>
<td>TWA</td>
<td>0.005 ppm</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td></td>
<td>CEV</td>
<td>0.02 ppm</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>TWA</td>
<td>0.005 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td></td>
<td>CEV</td>
<td>0.02 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>TWA</td>
<td>20 ppm</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>TWA</td>
<td>20 ppm</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>STEL</td>
<td>125 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
<tr>
<td>Hydrocarbon distillate - Mist.</td>
<td>TWA</td>
<td>0.2 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>Hydrocarbon distillate - Mist.</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) (05 2013)</td>
</tr>
<tr>
<td>Hydrocarbon distillate - Mist.</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Hydrocarbon distillate - Mist.</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)</td>
</tr>
<tr>
<td>Hydrocarbon distillate - Mist.</td>
<td>STEL</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>Hydrocarbon distillate - Mist.</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)</td>
</tr>
</tbody>
</table>
Biological Limit Values

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene (Methylhippuric acids: Sampling time: End of shift.)</td>
<td>1.5 g/g (Creatinine in urine)</td>
<td>ACGIH BEI (03 2013)</td>
</tr>
<tr>
<td>Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)</td>
<td>0.15 g/g (Creatinine in urine)</td>
<td>ACGIH BEI (02 2014)</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls

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

Individual protection measures, such as personal protective equipment

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

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

**Skin Protection**

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

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

**Respiratory Protection:**

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

**Hygiene measures:**

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

9. Physical and chemical properties

**Appearance**

**Physical state:** solid

**Form:** Paste

**Color:** White

**Odor:** Mild

**Odor threshold:** No data available.

**pH:** No data available.

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

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

**Flash Point:** > 93 °C > 199 °F (Setaflash Closed Cup)
Evaporation rate: Slower than n-Butyl Acetate
Flammability (solid, gas): No

Upper/lower limit on flammability or explosive limits
   - Flammability limit - upper (%): No data available.
   - Flammability limit - lower (%): No data available.
   - Explosive limit - upper (%): No data available.
   - Explosive limit - lower (%): No data available.

Vapor pressure: No data available.
Vapor density: Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density: 1.3

Solubility(ies)
   - Solubility in water: Insoluble in water
   - Solubility (other): No data available.
   - Partition coefficient (n-octanol/water): No data available.

Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity
Reactivity: No data available.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No data available.
Conditions to avoid: Avoid heat or contamination.
Incompatible Materials: Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). 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: 168,265.62 mg/kg

Dermal
Product: ATEmix: 14,945.46 mg/kg

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

Specified substance(s):
Titanium dioxide LC 50 (Rat): 3.43 mg/l
Petroleum distillates LC 50 (Rat): > 4.3 mg/l
Calcium oxide LC 50 (Rat): 40 mg/m3
Amorphous silica LC 50 (Rat): > 2.08 mg/l
Isophorone Diisocyanate LC 50 (Rat): 135 - 160 mg/m3
Aluminum oxide LC 50 (Rat): 7.6 mg/l
Hydrotreated heavy naphthenic distillate LC 50 (Rat): 9.6 mg/l
Nonane LC 50 (Rat): 23.76 mg/l

Repeated dose toxicity
Product: No data available.
### Skin Corrosion/Irritation

**Product:** No data available.

**Specified substance(s):**
- **Titanium dioxide**
  - in vivo (Rabbit): Not irritant  Experimental result, Supporting study
- **Petroleum distillates**
  - in vivo (Rabbit): Irritating  Experimental result, Key study
- **Calcium oxide**
  - in vivo (Rabbit): Irritating  Read-across from supporting substance (structural analogue or surrogate), Key study
- **Xylene**
  - in vivo (Rabbit): Moderate irritant  Experimental result, Weight of Evidence study
- **Amorphous silica**
  - in vivo (Rabbit): Not irritant  Experimental result, Key study
- **Aluminum oxide**
  - in vivo (Rabbit): Not irritant  Experimental result, Key study
- **Hydrotreated heavy naphthenic distillate**
  - in vivo (Rabbit): Not irritant  Experimental result, Key study
- **Nonane**
  - in vivo (Rabbit): Irritating  Read-across based on grouping of substances (category approach), Key study

### Serious Eye Damage/Eye Irritation

**Product:** No data available.

**Specified substance(s):**
- **Titanium dioxide**
  - Rabbit, 24 hrs: Not irritating
- **Petroleum distillates**
  - Rabbit, 24 - 72 hrs: Not irritating
- **Xylene**
  - Rabbit, 24 hrs: Moderately irritating
- **Amorphous silica**
  - Rabbit, 24 hrs: Not irritating
- **Aluminum oxide**
  - Rabbit, 24 hrs: Not irritating
- **Ethylbenzene**
  - Rabbit, 7 d: Slightly irritating
- **Hydrotreated heavy naphthenic distillate**
  - Rabbit, 24 hrs: Not irritating
- **Nonane**
  - 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: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Titanium dioxide
Overall evaluation: Possibly carcinogenic to humans.

Ethylbenzene
Overall evaluation: Possibly carcinogenic to humans.

Hydrotreated heavy naphthenic distillate
Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans.

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

Hydrotreated heavy naphthenic distillate
Known To Be Human Carcinogen.


Polyvinyl chloride
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.
- **Specified substance(s):**
  - Petroleum distillates: LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 2.9 mg/l Mortality
  - Xylene: LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality
  - Ethylbenzene: LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 4.2 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
  - Ethylbenzene: EC 50 (Water flea (Daphnia magna), 48 h): 1.37 - 4.4 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):
- Xylene
  Log Kow: 3.12 - 3.20
- Ethylbenzene
  Log Kow: 3.15
- Nonane
  Log Kow: 5.46

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)
None present or none present in regulated quantities.
### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>OSHA hazard(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl chloride</td>
<td>Blood, Liver, Cancer, Flammability, Central nervous system</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Nonane</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Toluene</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Methanol</td>
<td>5000 lbs.</td>
</tr>
</tbody>
</table>

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

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

#### 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>Isophorone Diisocyanate</td>
<td>500 lbs.</td>
<td>500 lbs.</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>Xylene</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Nonane</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Toluene</td>
<td>1000 lbs.</td>
</tr>
<tr>
<td>Methanol</td>
<td>5000 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>Isophorone Diisocyanate</td>
<td>500lbs</td>
</tr>
<tr>
<td>Calcium Carbonate (Limestone)</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Polyvinyl chloride</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Petroleum distillates</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Xylene</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Hydrotreated heavy naphthenic distillate</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Nonane</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

### SARA 313 (TRI Reporting)

<table>
<thead>
<tr>
<th>Chemical Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
</tr>
<tr>
<td>Ethylbenzene</td>
</tr>
</tbody>
</table>

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

### 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](image)

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>Calcium Carbonate (Limestone)</td>
</tr>
<tr>
<td>Polyvinyl chloride</td>
</tr>
<tr>
<td>Titanium dioxide</td>
</tr>
<tr>
<td>Petroleum distillates</td>
</tr>
<tr>
<td>Calcium oxide</td>
</tr>
<tr>
<td>Xylene</td>
</tr>
<tr>
<td>Ethylbenzene</td>
</tr>
<tr>
<td>Hydrotreated heavy naphthenic distillate</td>
</tr>
</tbody>
</table>
US. Massachusetts RTK - Substance List

Chemical Identity
Calcium Carbonate (Limestone)
Titanium dioxide
Petroleum distillates
Calcium oxide
Xylene
Isophorone Diisocyanate
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Calcium Carbonate (Limestone)
Titanium dioxide
Petroleum distillates
Calcium oxide
Xylene

US. Rhode Island RTK

Chemical Identity
Calcium Carbonate (Limestone)
Polyvinyl chloride
Titanium dioxide
Petroleum distillates
Calcium oxide
Xylene

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) : 82 g/l
VOC Method 310 : 6.33 %
### 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.

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### 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.