

SAFETY DATA SHEET

1. Identification

Material name: GEOGARD® LV BASE COAT
Material: 352564G805

Recommended use and restriction on use

Recommended use: Coatings
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco Incorporated
3735 Green Road
BEACHWOOD OH 44122
US

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

2. Hazard(s) identification

Hazard Classification

Physical Hazards

| | |
|-------------------|------------|
| Flammable liquids | Category 3 |
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Health Hazards

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

Unknown toxicity - Health

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|--|---------|
| Acute toxicity, oral | 11.15 % |
| Acute toxicity, dermal | 28.53 % |
| Acute toxicity, inhalation, vapor | 100 % |
| Acute toxicity, inhalation, dust or mist | 99.69 % |

Environmental Hazards

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| Acute hazards to the aquatic environment | Category 3 |
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Unknown toxicity - Environment

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| Acute hazards to the aquatic environment | 87.72 % |
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Chronic hazards to the aquatic environment 100 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Flammable liquid and vapor.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
Harmful to aquatic life.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse. In case of fire: Use... to extinguish.

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

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

Hazard(s) not otherwise classified (HNOC):

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

| Chemical Identity | CAS number | Content in percent (%)* |
|--|------------|-------------------------|
| Clay | 1332-58-7 | 10 - 30% |
| Calcium Carbonate (Limestone) | 1317-65-3 | 10 - 30% |
| Aromatic petroleum distillates | 64742-95-6 | 10 - 30% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 3 - 7% |
| Titanium dioxide | 13463-67-7 | 3 - 7% |
| Trimethyl benzene (mixed isomers) | 25551-13-7 | 1 - 5% |
| 1,3,5-Trimethylbenzene | 108-67-8 | 1 - 5% |
| Magnesite | 546-93-0 | 1 - 5% |
| Xylene | 1330-20-7 | 0.5 - 1.5% |
| 1,2,3-Trimethylbenzene | 526-73-8 | 0.5 - 1.5% |
| Cumene | 98-82-8 | 0.1 - 1% |
| Amorphous silica | 7631-86-9 | 0.1 - 1% |
| Butyl benzyl phthalate | 85-68-7 | 0.1 - 1% |
| Aluminum hydroxide | 21645-51-2 | 0.1 - 1% |
| Aluminum oxide | 1344-28-1 | 0.1 - 1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - 1% |
| 2,4-Toluene diisocyanate | 584-84-9 | 0.1 - 1% |

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

4. First-aid measures

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

Most important symptoms/effects, acute and delayed

Symptoms: Respiratory tract irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

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

Suitable (and unsuitable) extinguishing media

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

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

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

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

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

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer.

7. Handling and storage

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. 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. Store in a well-ventilated place. Store in a cool place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Type | Exposure Limit Values | Source |
|--|--------|--|---|
| Clay - Respirable fraction. | TWA | 2 mg/m ³ | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 5 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Clay - Total dust. | PEL | 15 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Clay - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| | TWA | 5 mg/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Clay - Total dust. | TWA | 15 mg/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Calcium Carbonate (Limestone) - Total dust. | PEL | 15 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate (Limestone) - Respirable fraction. | PEL | 5 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 1,2,4-Trimethylbenzene | REL | 25 ppm 125 mg/m ³ | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | TWA | 25 ppm 125 mg/m ³ | US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) |
| | TWA | 25 ppm 125 mg/m ³ | US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008) |
| | AN ESL | 25 ppb | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011) |
| | ST ESL | 140 ppb | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013) |
| | ST ESL | 700 µg/m ³ | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013) |
| | AN ESL | 125 µg/m ³ | US. Texas. Effects Screening Levels (Texas |

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| | | | | Commission on Environmental Quality) (07 2011) |
| | TWA PEL | 25 ppm | 125 mg/m3 | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010) |
| | TWA | 25 ppm | | US. ACGIH Threshold Limit Values (2011) |
| 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) |
| Trimethyl benzene (mixed isomers) | TWA | 25 ppm | | US. ACGIH Threshold Limit Values (2011) |
| 1,3,5-Trimethylbenzene | TWA | 25 ppm | | US. ACGIH Threshold Limit Values (2011) |
| Magnesite - Total dust. | PEL | | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Magnesite - Respirable fraction. | PEL | | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Xylene | STEL | 150 ppm | 655 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | REL | 100 ppm | 435 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | STEL | 150 ppm | 655 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | REL | 100 ppm | 435 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | STEL | 150 ppm | 655 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | REL | 100 ppm | 435 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | STEL | 150 ppm | 655 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) |
| | TWA | 100 ppm | 435 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) |
| | TWA | 100 ppm | 435 mg/m3 | US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008) |
| | STEL | 150 ppm | 655 mg/m3 | US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008) |
| | ST ESL | | 350 µg/m3 | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011) |
| | ST ESL | | 80 ppb | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011) |
| | AN ESL | | 42 ppb | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011) |
| | AN ESL | | 180 µg/m3 | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011) |
| | STEL | 150 ppm | 655 mg/m3 | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010) |
| | Ceiling | 300 ppm | | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010) |
| | TWA PEL | 100 ppm | 435 mg/m3 | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 |

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| | | | 2010) |
| | TWA | 100 ppm | US. ACGIH Threshold Limit Values (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 100 ppm 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| 1,2,3-Trimethylbenzene | TWA | 25 ppm | US. ACGIH Threshold Limit Values (2011) |
| Cumene | TWA | 50 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 50 ppm 245 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Amorphous silica | TWA | 20 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.8 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Aluminum hydroxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum hydroxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum hydroxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum oxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Aluminum oxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum oxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum oxide - Total dust. | TWA | 15 mg/m3 | 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) |
| 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) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|-------------|------------------------------|---|
| Clay - Respirable. | TWA | 2 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Clay - Respirable fraction. | TWA | 2 mg/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Clay - Respirable dust. | TWA | 5 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium Carbonate (Limestone) - Total dust. | STEL | 20 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 10 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |

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| Calcium Carbonate (Limestone) - Respirable fraction. | TWA | | 3 mg/m ³ | 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/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 1,2,4-Trimethylbenzene | TWA | 25 ppm | 123 mg/m ³ | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| 1,2,4-Trimethylbenzene | TWA | 25 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 1,2,4-Trimethylbenzene | TWA | 25 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| 1,2,4-Trimethylbenzene | TWA | 25 ppm | 123 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Titanium dioxide - Total dust. | TWA | | 10 mg/m ³ | 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/m ³ | 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/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Titanium dioxide - Total dust. | TWA | | 10 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Trimethyl benzene (mixed isomers) | TWA | 25 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Trimethyl benzene (mixed isomers) | TWA | 25 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Trimethyl benzene (mixed isomers) | TWA | 25 ppm | 123 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 1,3,5-Trimethylbenzene | TWA | 25 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 1,3,5-Trimethylbenzene | TWA | 25 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| 1,3,5-Trimethylbenzene | TWA | 25 ppm | 123 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Magnesite - Total dust. | TWA | | 10 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Xylene | TWA | 100 ppm | 434 mg/m ³ | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| | STEL | 150 ppm | 651 mg/m ³ | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| Xylene | TWA | 100 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 150 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |

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| Xylene | TWA | 100 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 150 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Xylene | STEL | 150 ppm | 651 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | 100 ppm | 434 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Cumene | STEL | 75 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 25 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Cumene | TWA | 50 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Cumene | TWA | 50 ppm | 246 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | | 0.025 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | | 0.1 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| 2,4-Toluene diisocyanate | CEILING | 0.01 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 0.005 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| | CEV | 0.02 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 2,4-Toluene diisocyanate | TWA | 0.005 ppm | 0.036 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 0.02 ppm | 0.14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |

Biological Limit Values

| Chemical Identity | Exposure Limit Values | Source |
|---|-------------------------------|---------------------|
| Xylene (Methylhippuric acids: Sampling time: End of shift.) | 1.5 g/g (Creatinine in urine) | ACGIH BEI (03 2013) |
| 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 2018) |

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

Individual protection measures, such as personal protective equipment

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

Eye/face protection: Wear goggles/face shield.

Skin Protection

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

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

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

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

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| 9. Physical and chemical properties |
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Appearance

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|--|-------------------------------------|
| 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: | 48 °C 118 °F (Setaflash Closed Cup) |
| Evaporation rate: | Slower than Ether |
| Flammability (solid, gas): | No |
| Upper/lower limit on flammability or explosive limits | |

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|---|---|
| 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: | 1.1765 |
| Solubility(ies) | |
| Solubility in water: | Practically Insoluble |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water): | No data available. |
| Auto-ignition temperature: | No data available. |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |

10. Stability and reactivity

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

11. Toxicological information

Information on likely routes of exposure

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

Symptoms related to the physical, chemical and toxicological characteristics

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

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix: 13,253.61 mg/kg

Dermal

Product: ATEmix: 28,164.22 mg/kg

Inhalation

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

Specified substance(s):

| | |
|--------------------------|---------------------------------------|
| Clay | LC 50 (Rat): > 20 mg/l |
| 1,2,4-Trimethylbenzene | LC 50 (Rat): 10,200 mg/m ³ |
| Titanium dioxide | LC 50 (Rat): 3.43 mg/l |
| 1,3,5-Trimethylbenzene | LC 50 (Rat): 10,200 mg/m ³ |
| Amorphous silica | LC 50 (Rat): > 2.08 mg/l |
| Aluminum hydroxide | LC 50 (Rat): 7.6 mg/l |
| Aluminum oxide | LC 50 (Rat): 7.6 mg/l |
| 2,4-Toluene diisocyanate | LC 50 (Rat): 14 mg/l |

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

| | |
|--------------------------------|--|
| Aromatic petroleum distillates | in vivo (Rabbit): Irritating Experimental result, Key study |
| 1,2,4-Trimethylbenzene | 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 |
| 1,3,5-Trimethylbenzene | in vivo (Rabbit): Irritating Experimental result, Key study |
| Magnesite | In vitro (Human, in vitro reconstituted epidermis model): Not irritant Experimental result, Key study |
| Xylene | in vivo (Rabbit): Moderate irritant Experimental result, Weight of Evidence study |
| Cumene | in vivo (Rabbit): Not irritant Experimental result, Key study |
| Amorphous silica | in vivo (Rabbit): Not irritant Experimental result, Key study |
| Butyl benzyl phthalate | in vivo (Rabbit): Not irritant Experimental result, Key study |
| Aluminum hydroxide | in vivo (Rabbit): Not classified as an Irritant Experimental result, Key study |
| Aluminum oxide | in vivo (Rabbit): Not irritant Experimental result, Key study |
| 2,4-Toluene diisocyanate | in vivo (Rabbit): Moderately irritating Experimental result, Supporting study |

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

| | |
|--------------------------------|--|
| Aromatic petroleum distillates | Rabbit, 24 - 72 hrs: Not irritating |
| 1,2,4-Trimethylbenzene | Rabbit, 30 min: Not irritating |
| Titanium dioxide | Rabbit, 24 hrs: Not irritating |
| 1,3,5-Trimethylbenzene | Rabbit, 30 min: Not irritating |
| Magnesite | Reconstituted Corneal Epithelium model, 10 min: Not irritating |
| Xylene | Rabbit, 24 hrs: Moderately irritating |
| Cumene | Rabbit, 24 hrs: Not irritating |
| Amorphous silica | Rabbit, 24 hrs: Not irritating |

| | |
|--------------------------|-------------------------------------|
| Butyl benzyl phthalate | Rabbit, 24 - 72 hrs: Not irritating |
| Aluminum hydroxide | Rabbit, 24 hrs: Not irritating |
| Aluminum oxide | Rabbit, 24 hrs: Not irritating |
| 2,4-Toluene diisocyanate | Rabbit, 24 - 72 hrs: Category 2 |

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. |
| Cumene | Overall evaluation: Possibly carcinogenic to humans. |
| Crystalline Silica (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. |
| 2,4-Toluene diisocyanate | Overall evaluation: Possibly carcinogenic to humans. |

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

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

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro Product: No data available.

In vivo Product: No data available.

Reproductive toxicity

Product: May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.
Specified substance(s):
 Cumene Inhalation - vapor: Category 3 with respiratory tract irritation.

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

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

| | |
|--------------------------|--|
| 1,2,4-Trimethylbenzene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 7.19 - 8.28 mg/l Mortality |
| Xylene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality |
| Cumene | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 6.04 - 6.61 mg/l Mortality |
| Butyl benzyl phthalate | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 1.39 - 3.88 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 |
| Trimethyl benzene (mixed isomers) | LC 50 (Daggerblade grass shrimp (Palaemonetes pugio), 24 h): 7 mg/l Mortality |
| Cumene | LC 50 (Water flea (Daphnia magna), 48 h): 7.9 - 45.1 mg/l Mortality |
| Butyl benzyl phthalate | EC 50 (Water flea (Daphnia magna), 48 h): > 10 mg/l Intoxication |

EC 50 (Opossum shrimp (Americamysis bahia), 48 h): > 0.9 mg/l Mortality
 EC 50 (Water flea (Daphnia magna), 24 h): > 10 mg/l Intoxication
 EC 50 (Water flea (Daphnia magna), 21 d): > 0.76 mg/l Intoxication
 EC 50 (Water flea (Daphnia magna), 14 d): > 0.76 mg/l Intoxication

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Butyl benzyl phthalate NOAEL (Pimephales promelas, 126 d): 64.6 - 67.5 µg/l Experimental result, Key study
 NOAEL (Oncorhynchus mykiss, 124 d): 0.2 mg/l Experimental result, Key study
 LOAEL (Pimephales promelas, 126 d): 18.1 µg/l Experimental result, Key study
 LC 50 (Pimephales promelas, 4 d): 2.32 mg/l Experimental result, Supporting study
 LC 50 (Pimephales promelas, 14 d): 2.25 mg/l Experimental result, 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.

Specified substance(s):

Butyl benzyl phthalate Bluegill (Lepomis macrochirus), Bioconcentration Factor (BCF): 772 (Flow through)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Xylene Log Kow: 3.12 - 3.20

Cumene Log Kow: 3.66

Butyl benzyl phthalate Log Kow: 4.91

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:

UN1139, COATING SOLUTION, 3, PG III

Further Information:

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

15. Regulatory information

US Federal Regulations

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

Chemical Identity

P-chlorobenzotrifluoride
2,4-Toluene diisocyanate

Reportable quantity

De minimis concentration: TSCA 4% One-Time Export Notification only.
De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only.

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

| <u>Chemical Identity</u> | <u>OSHA hazard(s)</u> |
|--------------------------|--|
| Benzene | Blood respiratory tract irritation Central nervous system Flammability Cancer Skin Aspiration Eye |

CERCLA Hazardous Substance List (40 CFR 302.4):

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------------------|----------------------------|
| Xylene | 100 lbs. |
| Cumene | 5000 lbs. |
| Butyl benzyl phthalate | 100 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene | 1000 lbs. |
| Naphthalene | 100 lbs. |
| Benzene | 10 lbs. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely Hazardous Substance

| <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> |
|--------------------------------------|----------------------------|
| Xylene | 100 lbs. |
| Cumene | 5000 lbs. |
| Butyl benzyl phthalate | 100 lbs. |
| 2,4-Toluene diisocyanate | 100 lbs. |
| Toluene-2,6-Diisocyanate | 100 lbs. |
| Polymethylene polyphenyl isocyanate | |
| 4,4'-Methylene bis(phenylisocyanate) | 5000 lbs. |
| Toluene | 1000 lbs. |
| Naphthalene | 100 lbs. |
| Benzene | 10 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 |
| Clay | 10000 lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Aromatic petroleum distillates | 10000 lbs |
| 1,2,4-Trimethylbenzene | 10000 lbs |
| Titanium dioxide | 10000 lbs |
| Trimethyl benzene (mixed isomers) | 10000 lbs |
| 1,3,5-Trimethylbenzene | 10000 lbs |
| Magnesite | 10000 lbs |
| Xylene | 10000 lbs |
| 1,2,3-Trimethylbenzene | 10000 lbs |
| Cumene | 10000 lbs |
| Amorphous silica | 10000 lbs |
| Butyl benzyl phthalate | 10000 lbs |
| Aluminum hydroxide | 10000 lbs |
| Aluminum oxide | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |

SARA 313 (TRI Reporting)

| <u>Chemical Identity</u> |
|--------------------------|
| 1,2,4-Trimethylbenzene |
| 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

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

Clay
Calcium Carbonate (Limestone)
P-chlorobenzotrifluoride
1,2,4-Trimethylbenzene
Titanium dioxide
Trimethyl benzene (mixed isomers)
1,3,5-Trimethylbenzene
Magnesite
Butyl benzyl phthalate
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate

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

Clay
Calcium Carbonate (Limestone)
1,2,4-Trimethylbenzene
Titanium dioxide
Trimethyl benzene (mixed isomers)
1,3,5-Trimethylbenzene
Magnesite
Crystalline Silica (Quartz)/ Silica Sand
2,4-Toluene diisocyanate
Toluene-2,6-Diisocyanate
Benzene

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

Clay
Calcium Carbonate (Limestone)
1,2,4-Trimethylbenzene
Titanium dioxide
Trimethyl benzene (mixed isomers)
1,3,5-Trimethylbenzene

US. Rhode Island RTK**Chemical Identity**

Clay
Calcium Carbonate (Limestone)
1,2,4-Trimethylbenzene
Titanium dioxide
Trimethyl benzene (mixed isomers)
1,3,5-Trimethylbenzene
Magnesite

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) : 250 g/l

VOC Method 310 : 20.69 %

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. |

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

| | |
|-----------------------------|--------------------|
| Revision Date: | 10/12/2018 |
| Version #: | 1.2 |
| Further Information: | No data available. |

Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.