

SAFETY DATA SHEET

1. Identification

Material name: Tremco® T24 Coating
Material: 2400700005P

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

Carcinogenicity Category 2

Unknown toxicity - Health

| | |
|--|---------|
| Acute toxicity, oral | 7.75 % |
| Acute toxicity, dermal | 17.41 % |
| Acute toxicity, inhalation, vapor | 53.01 % |
| Acute toxicity, inhalation, dust or mist | 52.51 % |

Environmental Hazards

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

Unknown toxicity - Environment

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| Acute hazards to the aquatic environment | 88.39 % |
| Chronic hazards to the aquatic environment | 96.61 % |

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

Response: IF exposed or concerned: Get medical advice/attention. Collect spillage.

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

| Chemical Identity | CAS number | Content in percent (%)* |
|---|------------|-------------------------|
| Titanium dioxide | 13463-67-7 | 5 - <10% |
| Zinc oxide | 1314-13-2 | 2.5 - <5% |
| Isobutyric acid polymer | 25265-77-4 | 1 - <5% |
| Aluminum oxide | 1344-28-1 | 0.1 - <1% |
| Dipropylene glycol methyl ether | 34590-94-8 | 0.1 - <1% |
| Glycerine | 56-81-5 | 0.1 - <1% |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | 330-54-1 | 0.1 - <0.25% |
| Iodopropynyl butylcarbamate | 55406-53-6 | 0.01 - <0.1% |

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

4. First-aid measures

Description of necessary first-aid measures

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.

Ingestion: Rinse mouth thoroughly.

Personal Protection for First-aid Responders: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Hazards: No data available.

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.

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

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.

Environmental Precautions:

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

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):

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.

Safe handling advice:

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.

Contact avoidance measures:

No data available.

Hygiene measures:

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

Storage

Safe storage conditions:

Store locked up.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Type | Exposure Limit Values | Source |
|---|------|--|---|
| Titanium dioxide | TWA | 10 mg/m ³ | US. ACGIH Threshold Limit Values, as amended (2011) |
| Titanium dioxide - Total dust. | PEL | 15 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (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), as amended (03 2016) |
| Titanium dioxide - Total dust. | TWA | 15 mg/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (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), as amended (03 2016) |
| Zinc oxide - Respirable fraction. | TWA | 2 mg/m ³ | US. ACGIH Threshold Limit Values, as amended (2011) |
| | STEL | 10 mg/m ³ | US. ACGIH Threshold Limit Values, as amended (2011) |
| Zinc oxide - Fume. | PEL | 5 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as |

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|---|------|--|---|
| | | | amended (02 2006) |
| Zinc oxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Zinc oxide - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Aluminum oxide - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values, as amended (2011) |
| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Aluminum oxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (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), as amended (03 2016) |
| | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016) |
| Aluminum oxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016) |
| Dipropylene glycol methyl ether | TWA | 100 ppm | US. ACGIH Threshold Limit Values, as amended (2011) |
| | STEL | 150 ppm | US. ACGIH Threshold Limit Values, as amended (2011) |
| | PEL | 100 ppm 600 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Glycerine - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Glycerine - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values, as amended (2011) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|------|-----------------------|---|
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Zinc oxide - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 10 mg/m3 | 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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| Zinc oxide - Respirable fraction. | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Zinc oxide - Fume. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Zinc oxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|------|-----------------------|---|
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Titanium dioxide | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Zinc oxide - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Zinc oxide - Respirable fraction. | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Zinc oxide - Fume. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |

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| Zinc oxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Aluminum oxide - Respirable. | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Aluminum oxide - Total dust. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Aluminum oxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Aluminum oxide - Respirable fraction. | TWA | 1 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Aluminum oxide - Inhalable fraction. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| Aluminum oxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| Aluminum oxide - Total dust. - as Al | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Dipropylene glycol methyl ether | 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) |
| Dipropylene glycol methyl ether | TWA | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 150 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Dipropylene glycol methyl ether | STEL | 150 ppm 909 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| | TWA | 100 ppm 606 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |

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| Glycerine - Mist. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Glycerine - Respirable mist. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Glycerine - Mist. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (12 2008) |
| Zirconium dioxide - as Zr | STEL | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 5 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Zirconium dioxide - as Zr | TWA | 5 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Zirconium dioxide - as Zr | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| | STEL | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Amorphous silica - Total | TWA | 4 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica - Respirable. | TWA | 1.5 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous silica - Respirable dust. | TWA | 6 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Kaolin Clay - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Kaolin Clay - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Kaolin Clay - Respirable fraction. | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (08 2017) |
| Methyl methacrylate | TWA | 50 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 100 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, |

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| | | | Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Methyl methacrylate | TWA | 50 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Methyl methacrylate | TWA | 50 ppm 205 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Formaldehyde | TWA | 0.3 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | CEILING | 1 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Formaldehyde | STEL | 1 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | CEV | 1.5 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Formaldehyde | CEILING | 2 ppm 3 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Sodium hydroxide | CEILING | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Sodium hydroxide | CEV | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Sodium hydroxide | CEILING | 2 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Amorphous Precipitated Silica - Total | TWA | 4 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous Precipitated Silica - Respirable. | TWA | 1.5 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Amorphous Precipitated Silica - Respirable dust. | TWA | 6 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Acrylonitrile | TWA | 2 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Acrylonitrile | CEV | 10 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| | TWA | 2 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| Acrylonitrile | TWA | 2 ppm 4.3 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (12 2008) |
| Ammonium hydroxide | STEL | 35 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) |
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| Ammonium hydroxide | TWA | 25 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 35 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Vinyl chloride | TWA | 1 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Vinyl chloride | TWA | 1 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| Vinyl chloride | TWA | 1 ppm 2.6 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Ethyl Acrylate | TWA | 5 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 15 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Ethyl Acrylate | TWA | 5 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| | STEL | 15 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Ethyl Acrylate | STEL | 15 ppm 61 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| | TWA | 5 ppm 20 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Ethylene glycol - Vapor. | CEILING | 50 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Ethylene glycol - Aerosol. | CEILING | 100 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Ethylene glycol - Particulate. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 20 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |

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|----------------------------------|---------|---------|-----------|---|
| Ethylene glycol - Aerosol. | CEV | | 100 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Ethylene glycol - Vapor and mist | CEILING | 50 ppm | 127 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| Acetaldehyde | CEILING | 25 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Acetaldehyde | CEV | 25 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| Acetaldehyde | CEILING | 25 ppm | 45 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |
| p-Dioxane | TWA | 20 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| p-Dioxane | TWA | 20 ppm | | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010) |
| p-Dioxane | TWA | 20 ppm | 72 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (12 2008) |
| Ethylene oxide | TWA | 0.1 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | STEL | 1 ppm | | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Ethylene oxide | STEL | 10 ppm | 18 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| | TWA | 1 ppm | 1.8 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015) |
| Ethylene oxide | TWA | 1 ppm | 1.8 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017) |

Exposure guidelines

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|---------------------------------|--|-----------------------------------|
| Dipropylene glycol methyl ether | US. ACGIH Threshold Limit Values, as amended | Can be absorbed through the skin. |
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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: No data available.

Melting point/freezing point: No data available.

Initial boiling point and boiling range: No data available.

Flash Point: No data available.

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: 1.125

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.

Incompatible Materials: Strong acids. Strong bases.

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):

| | |
|---|-----------------------------|
| Titanium dioxide | LD 50 (Rat): > 5,000 mg/kg |
| Zinc oxide | LD 50 (Rat): > 5,000 mg/kg |
| Isobutyric acid polymer | LD 50 (Rat): > 3,200 mg/kg |
| Aluminum oxide | LD 50 (Rat): > 10,000 mg/kg |
| Dipropylene glycol methyl ether | LD 50 (Rat): 5,180 mg/kg |
| Glycerine | LD 50 (Rat): 27,200 mg/kg |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | LD 50 (Rat): 4,150 mg/kg |
| Iodopropynyl butylcarbamate | LD 50 (Rat): 1.1 g/kg |

Dermal**Product:**

Not classified for acute toxicity based on available data.

Specified substance(s):

| | |
|---|-------------------------------|
| Zinc oxide | LD 50 (Rat): > 2,000 mg/kg |
| Dipropylene glycol methyl ether | LD 50 (Rabbit): 9,500 mg/kg |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | LD 50 (Rat): > 5,000 mg/kg |
| Iodopropynyl butylcarbamate | LD 50 (Rabbit): > 2,000 mg/kg |

Inhalation**Product:**

ATEmix: 95.42 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 |
| Zinc oxide | in vivo (Rabbit): Not irritant |
| Isobutyric acid polymer | in vivo (Rabbit): Category 3 |
| Aluminum oxide | in vivo (Rabbit): Not irritant |
| Dipropylene glycol methyl ether | in vivo Not irritant |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | Possibly Irritating in vivo (Rabbit): Not irritant |

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

| | |
|---------------------------------|-------------------------------------|
| Titanium dioxide | Rabbit, 24 hrs: Not irritating |
| Zinc oxide | Rabbit, 24 - 72 hrs: Not irritating |
| Isobutyric acid polymer | Rabbit, 24 hrs: Slightly irritating |
| Aluminum oxide | Rabbit, 24 hrs: Not irritating |
| Dipropylene glycol methyl ether | Rabbit, 24 - 72 hrs: Not irritating |
| Glycerine | Rabbit, 24 hrs: Not irritating |

Respiratory or Skin Sensitization**Product:** No data available.**Carcinogenicity****Product:** Suspected of causing cancer.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Titanium dioxide Overall evaluation: Possibly carcinogenic to humans.

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

No carcinogenic components identified

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity

Product: 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):

Zinc oxide LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2,246 mg/l Mortality

Glycerine LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 51,000 - 57,000 mg/l Mortality

n-(3,4-dichlorophenyl)-
n,n-dimethylurea LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.4 - 15 mg/l Mortality

Iodopropynyl
butylcarbamate LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.05 - 0.089 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

n-(3,4-dichlorophenyl)-
n,n-dimethylurea EC 50 (Water flea (Daphnia pulex), 48 h): 1.4 mg/l Mortality

Chronic hazards to the aquatic environment:**Fish**

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability**Biodegradation**

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential**Bioconcentration Factor (BCF)**

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Glycerine Log Kow: -1.76

n-(3,4-dichlorophenyl)-
n,n-dimethylurea Log Kow: 2.68

Mobility in soil:

No data available.

Other adverse effects:

Toxic to aquatic life with long lasting effects.

13. Disposal considerations**Disposal methods:**

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. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs)
(40 CFR 721, Subpt E)**

Chemical Identity

Sodium nitrite

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

| <u>Chemical Identity</u> | <u>OSHA hazard(s)</u> |
|---------------------------------|--|
| Formaldehyde | Acute toxicity Skin irritation Skin sensitization Flammability respiratory tract irritation Respiratory sensitization Cancer Eye irritation |
| Acrylonitrile | Liver Central nervous system Flammability Eye irritation Skin irritation Skin sensitization Respiratory irritation Cancer Acute toxicity |
| Vinyl chloride | Blood Liver Flammability Central nervous system Cancer |
| Ethylene oxide | Skin sensitization Reproductive toxicity Mutagenicity Eye irritation Acute toxicity respiratory tract irritation Cancer Skin irritation Flammability Central nervous system |

CERCLA Hazardous Substance List (40 CFR 302.4):

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|---|----------------------------|
| n-(3,4-dichlorophenyl)- n,n-dimethylurea | 100 lbs. |
| Tert-Butyl hydroperoxide | 100 lbs. |
| Tert-Butyl hydroperoxide | 100 lbs. |
| Methyl benzimidazole-2- yl carbamate | 10 lbs. |
| Sodium nitrite | 100 lbs. |
| Methyl methacrylate | 1000 lbs. |
| Formaldehyde | 100 lbs. |
| Sodium hydroxide | 1000 lbs. |
| Acrylonitrile | 100 lbs. |
| Ammonium hydroxide | 1000 lbs. |
| Vinyl chloride | 1 lbs. |
| Ethyl Acrylate | 1000 lbs. |
| Ethylene glycol | 5000 lbs. |
| Acetaldehyde | 1000 lbs. |
| p-Dioxane | 100 lbs. |
| Ethylene oxide | 10 lbs. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Delayed (Chronic) Health Hazard
Carcinogenicity

SARA 302 Extremely Hazardous Substance

| <u>Chemical Identity</u> | <u>Reportable quantity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|----------------------------|------------------------------------|
| Formaldehyde | 100 lbs. | 500 lbs. |
| Acrylonitrile | 100 lbs. | 10000 lbs. |
| Ethylene oxide | 10 lbs. | 1000 lbs. |

SARA 304 Emergency Release Notification

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|---|----------------------------|
| Zinc oxide | |
| n-(3,4-dichlorophenyl)- n,n-dimethylurea | 100 lbs. |
| Tert-Butyl hydroperoxide | 100 lbs. 100 lbs. |
| Methyl benzimidazole-2- yl carbamate | 10 lbs. |
| Sodium nitrite | 100 lbs. |
| Methyl methacrylate | 1000 lbs. |
| Formaldehyde | 100 lbs. |
| Sodium hydroxide | 1000 lbs. |
| Acrylonitrile | 100 lbs. |
| Ammonium hydroxide | 1000 lbs. |
| Vinyl chloride | 1 lbs. |
| Ethyl Acrylate | 1000 lbs. |
| Ethylene glycol | 5000 lbs. |
| Acetaldehyde | 1000 lbs. |
| p-Dioxane | 100 lbs. |
| Ethylene oxide | 10 lbs. |

SARA 311/312 Hazardous Chemical

| <u>Chemical Identity</u> | <u>Threshold Planning Quantity</u> |
|---|------------------------------------|
| Formaldehyde | 500lbs |
| Acrylonitrile | 500lbs |
| Ethylene oxide | 500lbs |
| Titanium dioxide | 10000 lbs |
| Zinc oxide | 10000 lbs |
| Isobutyric acid polymer | 10000 lbs |
| Aluminum oxide | 10000 lbs |
| Dipropylene glycol methyl ether | 10000 lbs |
| Glycerine | 10000 lbs |
| n-(3,4-dichlorophenyl)-n,n-dimethylurea | 10000 lbs |
| Iodopropynyl butylcarbamate | 10000 lbs |

SARA 313 (TRI Reporting)

| <u>Chemical Identity</u> |
|--------------------------|
| Zinc oxide |

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Formaldehyde | lbs |
| Acrylonitrile | lbs |
| Vinyl chloride | lbs |
| Acetaldehyde | lbs |
| Ethylene oxide | lbs |

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

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

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

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

| <u>Chemical Identity</u> |
|--------------------------|
| Titanium dioxide |
| Zinc oxide |

US. Massachusetts RTK - Substance List

| <u>Chemical Identity</u> |
|--------------------------|
| Titanium dioxide |
| Zinc oxide |
| Formaldehyde |
| Acrylonitrile |
| Vinyl chloride |
| Ethyl Acrylate |

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Titanium dioxide
Zinc oxide

US. Rhode Island RTK

Chemical Identity

Titanium dioxide
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) : 31 g/l

VOC Method 310 : 1.30 %

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. |
| New Zealand Inventory of Chemicals: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan ISHL Listing: | One or more components in this product are not listed on or exempt from the Inventory. |
| Japan Pharmacopoeia Listing: | One or more components in this product are not listed on or exempt from the Inventory. |
| Mexico INSQ: | One or more components in this product are not listed on or exempt from the Inventory. |
| Ontario Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| Taiwan Chemical Substance Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |
| US TSCA Inventory: | One or more components in this product are not listed on or exempt from the Inventory. |

16. Other information, including date of preparation or last revision**Revision Date:** 09/18/2019**Version #:** 1.0**Further Information:** No data available.**Disclaimer:** For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.