

SAFETY DATA SHEET

1. Identification

Material name: BURmastic® Adhesive
Material: 364560U850

Recommended use and restriction on use

Recommended use: Adhesive
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

Physical Hazards

Flammable liquids Category 3

Health Hazards

Serious Eye Damage/Eye Irritation Category 2A

Germ Cell Mutagenicity Category 1B

Carcinogenicity Category 1A

Unknown toxicity - Health

Acute toxicity, oral 37.5 %

Acute toxicity, dermal 38.61 %

Acute toxicity, inhalation, vapor 100 %

Acute toxicity, inhalation, dust
or mist 100 %

Environmental Hazards

Acute hazards to the aquatic
environment Category 2

Unknown toxicity - Environment

Acute hazards to the aquatic
environment 98.52 %

Chronic hazards to the aquatic
environment 100 %

Label Elements

Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

Flammable liquid and vapor.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
Toxic 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. Wash thoroughly after handling. 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF exposed or concerned: Get medical advice/attention. 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 (%)* |
|--|------------|-------------------------|
| Asphalt | 8052-42-4 | 50 - <100% |
| Stoddard solvent (Mineral Spirits) | 8052-41-3 | 20 - <50% |
| Calcium Carbonate (Limestone) | 1317-65-3 | 5 - <10% |
| Calcium carbonate | 471-34-1 | 1 - <5% |
| Polyethylene | 9002-88-4 | 1 - <5% |
| Magnesite | 546-93-0 | 1 - <5% |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.1 - <1% |
| Nonane | 111-84-2 | 0.1 - <1% |
| Cellulose | 9004-34-6 | 0.1 - <1% |
| Quaternary ammonium salt | 8030-78-2 | 0.01 - <1% |
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 0.1 - <1% |
| Xylene | 1330-20-7 | 0.1 - <1% |
| Hydrogen sulfide | 7783-06-4 | 0.01 - <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:** Move to fresh air.
- Skin Contact:** Wash skin thoroughly with soap and water. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical 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.

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:

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

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. Avoid contact with eyes. Wash hands thoroughly after handling. 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. 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 |
|---------------------------------|------|-----------------------|---|
| Asphalt - Inhalable fraction. - | TWA | 0.5 mg/m3 | US. ACGIH Threshold Limit Values (2011) |

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| as benzene solubles | | | |
| Stoddard solvent (Mineral Spirits) | TWA | 100 ppm | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 500 ppm 2,900 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate (Limestone) - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium Carbonate (Limestone) - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium carbonate - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Polyethylene - Inhalable particles. | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (03 2015) |
| Polyethylene - Respirable particles. | TWA | 3 mg/m3 | US. ACGIH Threshold Limit Values (03 2015) |
| Polyethylene - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Polyethylene - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Polyethylene - Respirable fraction. | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| 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) |
| 1,2,4-Trimethylbenzene | REL | 25 ppm 125 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards (2010) |
| | TWA | 25 ppm 125 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989) |
| | TWA | 25 ppm 125 mg/m3 | 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/m3 | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013) |
| | AN ESL | 125 µg/m3 | US. Texas. Effects Screening Levels (Texas 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) |
| Nonane | TWA | 200 ppm | US. ACGIH Threshold Limit Values (02 2012) |
| Cellulose | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Cellulose - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Cellulose - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Crystalline Silica (Quartz)/ | TWA | 0.025 mg/m3 | US. ACGIH Threshold Limit Values (2011) |

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| Silica Sand - Respirable fraction. | | | |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | | 0.05 mg/m3 |
| | OSHA_ACT | | 0.025 mg/m3 |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | | 0.05 mg/m3 |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable. | TWA | | 2.4 millions of particles per cubic foot of air |
| | TWA | | 0.1 mg/m3 |
| Xylene | STEL | 150 ppm | 655 mg/m3 |
| | REL | 100 ppm | 435 mg/m3 |
| | STEL | 150 ppm | 655 mg/m3 |
| | REL | 100 ppm | 435 mg/m3 |
| | STEL | 150 ppm | 655 mg/m3 |
| | REL | 100 ppm | 435 mg/m3 |
| | STEL | 150 ppm | 655 mg/m3 |
| | TWA | 100 ppm | 435 mg/m3 |
| | TWA | 100 ppm | 435 mg/m3 |
| | STEL | 150 ppm | 655 mg/m3 |
| | ST ESL | | 350 µg/m3 |
| | ST ESL | | 80 ppb |
| | AN ESL | | 42 ppb |
| | AN ESL | | 180 µg/m3 |
| | STEL | 150 ppm | 655 mg/m3 |
| | Ceiling | 300 ppm | |
| | TWA PEL | 100 ppm | 435 mg/m3 |
| | TWA | 100 ppm | |
| | STEL | 150 ppm | |
| | PEL | 100 ppm | 435 mg/m3 |
| Hydrogen sulfide | TWA | 1 ppm | |
| | STEL | 5 ppm | |
| | Ceiling | 20 ppm | |
| | MAX. CONC | 50 ppm | |

| Chemical name | Type | Exposure Limit Values | Source |
|---|------|-------------------------------|---|
| Asphalt - Aerosol, inhalable. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Asphalt - Inhalable fraction. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Asphalt - Fume. | TWA | 5 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Stoddard solvent (Mineral Spirits) | STEL | 580 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 | 290 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Stoddard solvent (Mineral Spirits) | TWA | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Stoddard solvent (Mineral Spirits) | TWA | 100 ppm 525 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) |
| Calcium carbonate - 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) |
| Calcium carbonate - 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 - 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) |
| Calcium carbonate - 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) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m ³ | 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/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.1 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) |
| 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/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | TWA | 100 ppm 434 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |

| Chemical name | Type | Exposure Limit Values | Source |
|---|------|-------------------------------|---|
| Asphalt - Aerosol, inhalable. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Asphalt - Inhalable fraction. - as benzene solubles | TWA | 0.5 mg/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Asphalt - Fume. | TWA | 5 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Stoddard solvent (Mineral Spirits) | STEL | 580 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 | 290 mg/m ³ | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Stoddard solvent (Mineral Spirits) | TWA | 100 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Stoddard solvent (Mineral Spirits) | TWA | 100 ppm 525 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/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium Carbonate (Limestone) - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium carbonate - Total dust. | STEL | 20 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium carbonate - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium carbonate - 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) |
| Calcium carbonate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Polyethylene - 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) |
| Polyethylene - 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) |
| Polyethylene - Inhalable fraction. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Polyethylene - Respirable fraction. | TWA | 3 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Polyethylene - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Magnesite - Total dust. | TWA | 10 mg/m3 | 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/m3 | 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/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Nonane | TWA | 200 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Nonane | TWA | 200 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Nonane | TWA | 200 ppm 1,050 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008) |
| Cellulose - 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) |
| Cellulose - Total dust. | TWA | 10 mg/m3 | 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) |
| Cellulose | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Cellulose - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Propylene glycol - Aerosol. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Propylene glycol - Vapor and aerosol. | TWA | 50 ppm 155 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| 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) |
| Xylene | TWA | 100 ppm 434 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009) |
| | STEL | 150 ppm 651 mg/m3 | 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) |
| 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) |
| Isobutane | TWA | 1,000 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Isobutane | TWA | 800 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Naphthalene | STEL | 15 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| | TWA | 10 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Naphthalene | TWA | 10 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | STEL | 15 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Naphthalene | TWA | 10 ppm 52 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 15 ppm 79 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work |

| | | | |
|------------------|---------|-------------------|---|
| | | | Environment) (09 2017) |
| Ethylbenzene | TWA | 20 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Ethylbenzene | TWA | 20 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Ethylbenzene | STEL | 125 ppm 543 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) |
| Hydrogen sulfide | CEILING | 10 ppm | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Hydrogen sulfide | STEL | 15 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| | TWA | 10 ppm | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Hydrogen sulfide | TWA | 10 ppm 14 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| | STEL | 15 ppm 21 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) |

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: Provide easy access to water supply and eye wash facilities. 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. Use explosion-proof ventilation equipment.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

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

Other: Wear suitable protective clothing.

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. Avoid contact with eyes. When using do not smoke.

9. Physical and chemical properties

Appearance

| | |
|--|---|
| Physical state: | liquid |
| Form: | Viscous Liquid |
| Color: | Black |
| 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: | 43 °C 109 °F(Tagliabue Closed Cup) |
| Evaporation rate: | Slower than Ether |
| Flammability (solid, gas): | No |
| Upper/lower limit on flammability or explosive limits | |
| Flammability limit - upper (%): | No data available. |
| Flammability limit - lower (%): | No data available. |
| Explosive limit - upper (%): | No data available. |
| Explosive limit - lower (%): | No data available. |
| Vapor pressure: | No data available. |
| Vapor density: | Vapors are heavier than air and may travel along the floor and in the bottom of containers. |
| Relative density: | 0.864 |
| 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: | Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). |
| 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: | May be harmful in contact with skin. Causes mild skin irritation. |
| Eye contact: | Causes serious eye irritation. |
| 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. |
| Dermal Product: | Not classified for acute toxicity based on available data. |
| Inhalation Product: | |

| | |
|--|--------------------|
| Repeated dose toxicity Product: | No data available. |
|--|--------------------|

| | |
|---|--------------------|
| Skin Corrosion/Irritation Product: | No data available. |
|---|--------------------|

| | |
|---|--------------------|
| Serious Eye Damage/Eye Irritation Product: | No data available. |
|---|--------------------|

| | |
|---|--------------------|
| Respiratory or Skin Sensitization Product: | No data available. |
|---|--------------------|

Carcinogenicity**Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Asphalt Overall evaluation: Possibly carcinogenic to humans.

Crystalline Silica Overall evaluation: Carcinogenic to humans.
(Quartz)/ Silica
Sand**US. National Toxicology Program (NTP) Report on Carcinogens:**Crystalline Silica Known To Be Human Carcinogen.
(Quartz)/ Silica
Sand**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**Crystalline Silica
(Quartz)/ Silica Cancer
Sand**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.**Aquatic Invertebrates****Product:** No data available.**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.**Mobility in soil:**

No data available.

Other adverse effects:

Toxic 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:

UN1133, ADHESIVES, 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)

None present or none present in regulated quantities.

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

| <u>Chemical Identity</u> | <u>OSHA hazard(s)</u> |
|---|---|
| Crystalline Silica (Quartz)/ Silica Sand | kidney effects lung effects immune system effects Cancer |

CERCLA Hazardous Substance List (40 CFR 302.4):

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Asphalt | 100 lbs. |
| Nonane | 100 lbs. |
| Xylene | 100 lbs. |
| Isobutane | 100 lbs. |
| Naphthalene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Hydrogen sulfide | 100 lbs. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Germ Cell Mutagenicity
Carcinogenicity
Hazards Not Otherwise Classified (HNOC)

SARA 302 Extremely Hazardous Substance

| <u>Chemical Identity</u> | <u>Reportable quantity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|----------------------------|------------------------------------|
| Hydrogen sulfide | 100 lbs. | 500 lbs. |

SARA 304 Emergency Release Notification

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Asphalt | 100 lbs. |
| Nonane | 100 lbs. |
| Xylene | 100 lbs. |
| Isobutane | 100 lbs. |
| Naphthalene | 100 lbs. |
| Ethylbenzene | 1000 lbs. |
| Hydrogen sulfide | 100 lbs. |

SARA 311/312 Hazardous Chemical

| <u>Chemical Identity</u> | <u>Threshold Planning Quantity</u> |
|--|------------------------------------|
| Hydrogen sulfide | 500lbs |
| Asphalt | 10000 lbs |
| Stoddard solvent (Mineral Spirits) | 10000 lbs |
| Calcium Carbonate (Limestone) | 10000 lbs |
| Calcium carbonate | 10000 lbs |
| Polyethylene | 10000 lbs |
| Magnesite | 10000 lbs |
| 1,2,4-Trimethylbenzene | 10000 lbs |
| Nonane | 10000 lbs |
| Cellulose | 10000 lbs |
| Quaternary ammonium salt | 10000 lbs |
| Crystalline Silica (Quartz)/ Silica Sand | 10000 lbs |
| Xylene | 10000 lbs |

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Isobutane | lbs |
| Hydrogen sulfide | lbs |

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Xylene | Reportable quantity: lbs. |

US State Regulations

US. California Proposition 65



WARNING

Cancer - www.P65Warnings.ca.gov

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

Chemical Identity

Asphalt
Stoddard solvent (Mineral Spirits)
Calcium Carbonate (Limestone)
Calcium carbonate
Magnesite
Crystalline Silica (Quartz)/ Silica Sand

US. Massachusetts RTK - Substance List

Chemical Identity

Asphalt
Stoddard solvent (Mineral Spirits)
Calcium Carbonate (Limestone)
Calcium carbonate
Magnesite
Crystalline Silica (Quartz)/ Silica Sand
Hydrogen sulfide

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Asphalt
Stoddard solvent (Mineral Spirits)
Calcium Carbonate (Limestone)
Calcium carbonate

US. Rhode Island RTK

Chemical Identity

Asphalt
Stoddard solvent (Mineral Spirits)
Calcium Carbonate (Limestone)
Calcium carbonate
Polyethylene
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) : 242 g/l

VOC Method 310 : 27.99 %

Inventory Status:

| | |
|--|--|
| Australia AICS: | 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: | All components in this product are 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: | All components in this product are listed on or exempt from the Inventory. |
| New Zealand Inventory of Chemicals: | All components in this product are 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. |
| Canada DSL Inventory List: | All components in this product are listed on or exempt from the Inventory. |
| Korea Existing Chemicals Inv. (KECI): | All components in this product are listed on or exempt from the Inventory. |
| US TSCA Inventory: | All components in this product are 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. |

16. Other information, including date of preparation or last revision**Revision Date:** 07/21/2018**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.