



# SAFETY DATA SHEET

## 1. Identification

**Material name:** EUCOLASTIC 1SL GRAY - 12/30oz CS  
**Material:** 174C 96

**Recommended use and restriction on use**

**Recommended use:** Sealant  
**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor Information**

Euclid Admixture Canada Inc.  
2835 Grand-Allee  
Saint Hubert QC J4T 2R4  
CA

|                                    |  |
|------------------------------------|--|
| <b>Contact person:</b>             | EH&S Department                              |
| <b>Telephone:</b>                  | (450)465-2233                                |
| <b>Emergency telephone number:</b> | 1-800-424-9300 (US); 1-613-996-6666 (Canada) |

## 2. Hazard(s) identification

**Hazard Classification**

**Health Hazards**

|                        |             |
|------------------------|-------------|
| Respiratory sensitizer | Category 1  |
| Skin sensitizer        | Category 1  |
| Carcinogenicity        | Category 1A |

**Unknown toxicity - Health**

|  |         |
|--|---------|
| Acute toxicity, oral                     | 57.25 % |
| Acute toxicity, dermal                   | 62.57 % |
| Acute toxicity, inhalation, vapor        | 98.13 % |
| Acute toxicity, inhalation, dust or mist | 90.48 % |

**Environmental Hazards**

|  |            |
|--|------------|
| Acute hazards to the aquatic environment | Category 3 |
|--|------------|

**Unknown toxicity - Environment**

|  |         |
|--|---------|
| Acute hazards to the aquatic environment   | 91.14 % |
| Chronic hazards to the aquatic environment | 98.14 % |

**Label Elements**



**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause cancer.  
Harmful to aquatic life.

**Precautionary Statements**

**Prevention:** Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

**Response:** IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor/... IF ON SKIN: Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

**Storage:** Store locked up.

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

**Hazard(s) not otherwise classified (HNOC):** None.

**3. Composition/information on ingredients**

**Mixtures**

| Chemical Identity | CAS number | Content in percent (%)* |
|-------------------|------------|-------------------------|
|-------------------|------------|-------------------------|



|  |            |            |
|--|------------|------------|
| Calcium Carbonate (Limestone)            | 1317-65-3  | 10 - <20%  |
| Polyvinyl chloride                       | 9002-86-2  | 10 - <20%  |
| Petroleum distillates                    | 64742-47-8 | 1 - <5%    |
| Aliphatic naphtha                        | 64742-88-7 | 1 - <5%    |
| Titanium dioxide                         | 13463-67-7 | 1 - <5%    |
| Calcium oxide                            | 1305-78-8  | 1 - <5%    |
| Xylene                                   | 1330-20-7  | 1 - <5%    |
| Isophorone Diisocyanate                  | 4098-71-9  | 0.1 - <1%  |
| Ethylbenzene                             | 100-41-4   | 0.1 - <1%  |
| Hydrotreated heavy naphthenic distillate | 64742-52-5 | 0.1 - <1%  |
| Nonane                                   | 111-84-2   | 0.1 - <1%  |
| Diisodecyl phthalate                     | 26761-40-0 | 0.1 - <1%  |
| Aluminum oxide                           | 1344-28-1  | 0.1 - <1%  |
| Decanedioic acid ester                   | 52829-07-9 | 0.1 - <1%  |
| Iodopropynyl butylcarbamate              | 55406-53-6 | 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

##### Description of necessary first-aid measures

- Inhalation:** Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
- Skin Contact:** If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
- Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.
- Ingestion:** Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- 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:** Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

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

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

**Contact avoidance measures:** No data available.**Hygiene measures:** Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.**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   |
|---|----------|--|--|
| Calcium Carbonate (Limestone) - Total dust.                       | PEL      | 15 mg/m <sup>3</sup>                           | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)  |
| Calcium Carbonate (Limestone) - Respirable fraction.              | PEL      | 5 mg/m <sup>3</sup>                            | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)  |
| Polyvinyl chloride - Respirable fraction.                         | TWA      | 1 mg/m <sup>3</sup>                            | US. ACGIH Threshold Limit Values, as amended (2011)                                      |
| Polyvinyl chloride - as vinyl chloride monomer                    | TWA      | 1 ppm  | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (02 2006) |
|   | STEL     | 5 ppm  | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (02 2006) |
|   | OSHA_ACT | 0.5 ppm  | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended (02 2006) |
| Polyvinyl chloride - Respirable fraction.                         | PEL      | 5 mg/m <sup>3</sup>                            | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)  |
| Polyvinyl chloride - Total dust.                                  | PEL      | 15 mg/m <sup>3</sup>                           | 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 (2000)                                 |
| Polyvinyl chloride - Respirable fraction.                         | TWA      | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)                                 |
| Polyvinyl chloride - Total dust.                                  | TWA      | 15 mg/m <sup>3</sup>                           | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)                                 |
| Polyvinyl chloride - Respirable fraction.                         | TWA      | 5 mg/m <sup>3</sup>                            | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (2000)                                 |
| Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor | TWA      | 200 mg/m <sup>3</sup>                          | US. ACGIH Threshold Limit Values, as amended (2011)                                      |
|   | TWA      | 200 mg/m <sup>3</sup>                          | US. ACGIH Threshold Limit Values, as amended (2011)                                      |
| Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor     | TWA      | 200 mg/m <sup>3</sup>                          | US. ACGIH Threshold Limit Values, as amended (03 2014)                                   |
| Aliphatic naphtha   | PEL      | 100 ppm 400 mg/m <sup>3</sup>                  | US. OSHA Table Z-1 Limits for Air  |



|   |         |  |  |
|---|---------|--|--|
|   |         |  | Contaminants (29 CFR 1910.1000), as amended (01 2017)  |
| Titanium dioxide                        | TWA     | 10 mg/m3                                       | US. ACGIH Threshold Limit Values, as amended (2011)  |
| Titanium dioxide - Total dust.          | PEL     | 15 mg/m3                                       | 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/m3                                       | US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)  |
| Titanium dioxide - Respirable fraction. | TWA     | 5 mg/m3  | 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)  |
| Calcium oxide                           | TWA     | 2 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)                |
| Xylene                                  | STEL    | 150 ppm 655 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | REL     | 100 ppm 435 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | STEL    | 150 ppm 655 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | REL     | 100 ppm 435 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | STEL    | 150 ppm 655 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | REL     | 100 ppm 435 mg/m3                              | US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)   |
|   | STEL    | 150 ppm 655 mg/m3                              | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)   |
|   | TWA     | 100 ppm 435 mg/m3                              | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)   |
|   | TWA     | 100 ppm 435 mg/m3                              | US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)                     |
|   | STEL    | 150 ppm 655 mg/m3                              | US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)                     |
|   | ST ESL  | 350 µg/m3                                      | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)  |
|   | ST ESL  | 80 ppb   | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)  |
|   | AN ESL  | 42 ppb   | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)  |
|   | AN ESL  | 180 µg/m3                                      | US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)  |
|   | STEL    | 150 ppm 655 mg/m3                              | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010) |
|   | Ceiling | 300 ppm  | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010) |
|   | TWA PEL | 100 ppm 435 mg/m3                              | US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010) |
|   | 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 435 mg/m3                              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Isophorone Diisocyanate  | TWA | 0.005 ppm                                      | US. ACGIH Threshold Limit Values, as amended (2011)                                     |
| Ethylbenzene   | TWA | 20 ppm   | US. ACGIH Threshold Limit Values, as amended (2011)                                     |
|  | PEL | 100 ppm 435 mg/m3                              | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA | 5 mg/m3  | US. ACGIH Threshold Limit Values, as amended (03 2014)                                  |
| Hydrotreated heavy naphthenic distillate                       | PEL | 500 ppm 2,000 mg/m3                            | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Hydrotreated heavy naphthenic distillate - Mist.               | PEL | 5 mg/m3  | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006) |
| Nonane   | TWA | 200 ppm  | US. ACGIH Threshold Limit Values, as amended (02 2012)                                  |
| 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)                             |

| Chemical name                               | Type | Exposure Limit Values | Source  |
|---|------|-----------------------|---|
| Calcium Carbonate (Limestone) - 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) |
|   | 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 (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), as amended (09 2017)                                    |
| Polyvinyl chloride - 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) |
| Polyvinyl chloride - Respirable fraction.                         | TWA  | 1 mg/m3           | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Polyvinyl chloride - Total dust.                                  | TWA  | 10 mg/m3          | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor | TWA  | 200 mg/m3         | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Petroleum distillates   | TWA  | 525 mg/m3         | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor | TWA  | 200 mg/m3         | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
|   | TWA  | 200 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. 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)                                    |
| Calcium oxide   | 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) |
| Calcium oxide   | TWA  | 2 mg/m3           | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Calcium oxide   | TWA  | 2 mg/m3           | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Xylene  | TWA  | 100 ppm 434 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)   |
|   | STEL | 150 ppm 651 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (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), as amended (11 2010)  |
|  | STEL    | 150 ppm               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Xylene   | STEL    | 150 ppm 651 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|  | TWA     | 100 ppm 434 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Isophorone Diisocyanate  | 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) |
|  | 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) |
| Isophorone Diisocyanate  | TWA     | 0.005 ppm             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
|  | CEV     | 0.02 ppm              | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
| Isophorone Diisocyanate  | TWA     | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (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), as amended (06 2015)  |
| Ethylbenzene   | STEL    | 125 ppm 543 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|  | TWA     | 100 ppm 434 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Hydrotreated heavy naphthenic distillate - Mist.               | TWA     | 0.2 mg/m3             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
|  | TWA     | 1 mg/m3               | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA     | 5 mg/m3               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
|  | TWA     | 5 mg/m3               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
| Hydrotreated heavy naphthenic distillate - Mist.               | STEL    | 10 mg/m3              | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|  | TWA     | 5 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  |
|---|------|-----------------------|---|
| Calcium Carbonate (Limestone) - Total dust.                       | STEL | 20 mg/m <sup>3</sup>  | 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 <sup>3</sup>  | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Calcium Carbonate (Limestone) - Respirable fraction.              | TWA  | 3 mg/m <sup>3</sup>   | 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 <sup>3</sup>  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Polyvinyl chloride - Respirable.                                  | TWA  | 1 mg/m <sup>3</sup>   | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Polyvinyl chloride - Respirable fraction.                         | TWA  | 1 mg/m <sup>3</sup>   | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Polyvinyl chloride - Total dust.                                  | TWA  | 10 mg/m <sup>3</sup>  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor | TWA  | 200 mg/m <sup>3</sup> | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Petroleum distillates   | TWA  | 525 mg/m <sup>3</sup> | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Petroleum distillates - Non-aerosol. - as total hydrocarbon vapor | TWA  | 200 mg/m <sup>3</sup> | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
|   | TWA  | 200 mg/m <sup>3</sup> | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |



|   |         |                     |   |
|---|---------|---------------------|---|
| Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor | TWA     | 200 mg/m3           | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor | TWA     | 200 mg/m3           | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Aliphatic naphtha   | TWA     | 400 ppm 1,590 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| 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)                                    |
| Calcium oxide   | 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) |
| Calcium oxide   | TWA     | 2 mg/m3             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Calcium oxide   | TWA     | 2 mg/m3             | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Xylene  | TWA     | 100 ppm 434 mg/m3   | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (07 2009)   |
|   | STEL    | 150 ppm 651 mg/m3   | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (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), as amended (11 2010)  |
|   | STEL    | 150 ppm             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Xylene  | STEL    | 150 ppm 651 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|   | TWA     | 100 ppm 434 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Isophorone Diisocyanate                                       | 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) |
|   | 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)   |
| Isophorone Diisocyanate  | TWA  | 0.005 ppm             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
|  | CEV  | 0.02 ppm              | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
| Isophorone Diisocyanate  | TWA  | 0.005 ppm 0.045 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (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), as amended (06 2015)  |
| Ethylbenzene   | STEL | 125 ppm 543 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|  | TWA  | 100 ppm 434 mg/m3     | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Hydrotreated heavy naphthenic distillate - Mist.               | TWA  | 0.2 mg/m3             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
|  | TWA  | 1 mg/m3               | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Hydrotreated heavy naphthenic distillate - Inhalable fraction. | TWA  | 5 mg/m3               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
|  | TWA  | 5 mg/m3               | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
| Hydrotreated heavy naphthenic distillate - Mist.               | STEL | 10 mg/m3              | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|  | TWA  | 5 mg/m3               | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (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), as amended (06 2015)  |
| Nonane                                | TWA  | 200 ppm 1,050 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (12 2008)                                    |
| Diisodecyl phthalate                  | TWA  | 5 mg/m3             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| 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)                                    |
| 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)                                    |
| Carbon Black - Inhalable              | TWA  | 3 mg/m3             | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011) |
| Carbon Black - Inhalable fraction.    | TWA  | 3 mg/m3             | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
| Carbon Black                          | TWA  | 3.5 mg/m3           | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| 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) |



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|                           |      |          |  |
|---------------------------|------|----------|--|
| 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) |



|                                     |      |                  |   |
|-------------------------------------|------|------------------|---|
| Toluene                             | TWA  | 20 ppm           | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Toluene                             | TWA  | 20 ppm           | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Toluene                             | TWA  | 50 ppm 188 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Iron 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) (07 2007) |
| Iron oxide - Dust. - as Fe          | 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) |
| Iron oxide - Fume. - as Fe          | 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) |
| Iron 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) (07 2007) |
| Iron oxide - Fume. - as Fe          | 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) |
| Iron oxide - Respirable fraction.   | TWA  | 5 mg/m3          | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Iron 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)                                    |
| Iron oxide - Dust and fume. - as Fe | TWA  | 5 mg/m3          | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| 1,2,4-Trimethylbenzene              | TWA  | 25 ppm 123 mg/m3 | Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended (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), as amended (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), as amended (09 2017)                                    |
| Benzene                             | STEL | 2.5 ppm          | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|                                     | TWA  | 0.5 ppm          | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Benzene                             | TWA  | 0.5 ppm          | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |
|                                     | STEL | 2.5 ppm          | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)  |



|             |      |         |            |   |
|-------------|------|---------|------------|---|
| Benzene     | TWA  | 1 ppm   | 3 mg/m3    | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|             | STEL | 5 ppm   | 15.5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| 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), as amended (11 2010)  |
| Naphthalene | TWA  | 10 ppm  | 52 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|             | STEL | 15 ppm  | 79 mg/m3   | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (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), as amended (11 2010)  |
| Cumene      | TWA  | 50 ppm  | 246 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
| Methanol    | STEL | 250 ppm |            | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
|             | TWA  | 200 ppm |            | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Methanol    | STEL | 250 ppm |            | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
|             | TWA  | 200 ppm |            | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)  |
| Methanol    | STEL | 250 ppm | 328 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |
|             | TWA  | 200 ppm | 262 mg/m3  | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended (09 2017)                                    |





|   |     |                              |  |
|---|-----|------------------------------|--|
| Crystalline Silica (Quartz)/<br>Silica Sand - Respirable<br>fraction. | TWA | 0.025 mg/m <sup>3</sup>      | Canada. British Columbia OELs. (Occupational<br>Exposure Limits for Chemical Substances,<br>Occupational Health and Safety Regulation<br>296/97, as amended) (07 2007) |
| Crystalline Silica (Quartz)/<br>Silica Sand - Respirable<br>fraction. | TWA | 0.10 mg/m <sup>3</sup>       | Canada. Ontario OELs. (Control of Exposure to<br>Biological or Chemical Agents), as amended<br>(06 2015)   |
| Crystalline Silica (Quartz)/<br>Silica Sand - Respirable dust.        | TWA | 0.1 mg/m <sup>3</sup>        | Canada. Quebec OELs. (Ministry of Labor -<br>Regulation Respecting the Quality of the Work<br>Environment), as amended (09 2017)                                       |
| 1,3,5-Trimethylbenzene  | TWA | 25 ppm                       | Canada. British Columbia OELs. (Occupational<br>Exposure Limits for Chemical Substances,<br>Occupational Health and Safety Regulation<br>296/97, as amended) (07 2007) |
| 1,3,5-Trimethylbenzene  | TWA | 25 ppm                       | Canada. Ontario OELs. (Control of Exposure to<br>Biological or Chemical Agents), as amended<br>(11 2010)   |
| 1,3,5-Trimethylbenzene  | TWA | 25 ppm 123 mg/m <sup>3</sup> | Canada. Quebec OELs. (Ministry of Labor -<br>Regulation Respecting the Quality of the Work<br>Environment), as amended (09 2017)                                       |
| Phenol  | TWA | 5 ppm                        | Canada. British Columbia OELs. (Occupational<br>Exposure Limits for Chemical Substances,<br>Occupational Health and Safety Regulation<br>296/97, as amended) (07 2007) |
| Phenol  | TWA | 5 ppm                        | Canada. Ontario OELs. (Control of Exposure to<br>Biological or Chemical Agents), as amended<br>(11 2010)   |
| Phenol  | TWA | 5 ppm 19 mg/m <sup>3</sup>   | Canada. Quebec OELs. (Ministry of Labor -<br>Regulation Respecting the Quality of the Work<br>Environment), as amended (09 2017)                                       |
| 2-Ethylhexanoic acid - Vapor<br>and aerosol, inhalable.               | TWA | 5 mg/m <sup>3</sup>          | Canada. British Columbia OELs. (Occupational<br>Exposure Limits for Chemical Substances,<br>Occupational Health and Safety Regulation<br>296/97, as amended) (07 2007) |
| 2-Ethylhexanoic acid -<br>Inhalable fraction and vapor.               | TWA | 5 mg/m <sup>3</sup>          | Canada. Ontario OELs. (Control of Exposure to<br>Biological or Chemical Agents), as amended<br>(11 2010)   |
| Vinyl chloride  | TWA | 1 ppm                        | Canada. British Columbia OELs. (Occupational<br>Exposure Limits for Chemical Substances,<br>Occupational Health and Safety Regulation<br>296/97, as amended) (07 2007) |
| Vinyl chloride  | TWA | 1 ppm                        | Canada. Ontario OELs. (Control of Exposure to<br>Biological or Chemical Agents), as amended<br>(06 2015)   |
| Vinyl chloride  | TWA | 1 ppm 2.6 mg/m <sup>3</sup>  | Canada. Quebec OELs. (Ministry of Labor -<br>Regulation Respecting the Quality of the Work<br>Environment), as amended (09 2017)                                       |

**Biological Limit Values**

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

**Exposure guidelines**

|                       |   |                                      |
|-----------------------|---|--------------------------------------|
| Petroleum distillates | US. ACGIH Threshold Limit Values, as<br>amended | Can be absorbed through<br>the skin. |
|                       | US. ACGIH Threshold Limit Values, as<br>amended | Can be absorbed through<br>the skin. |



|                   |  |                                   |
|-------------------|--|-----------------------------------|
| Aliphatic naphtha | US. ACGIH Threshold Limit Values, as amended | Can be absorbed through the skin. |
|-------------------|--|-----------------------------------|

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

**Individual protection measures, such as personal protective equipment**

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

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

**Skin Protection**

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

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

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

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

**9. Physical and chemical properties**

**Appearance**

**Physical state:** solid

**Form:** Paste

**Color:** Gray

**Odor:** Mild

**Odor threshold:** No data available.

**pH:** No data available.

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

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

**Flash Point:** > 93 °C > 199 °F(Setaflash Closed Cup)

**Evaporation rate:** Slower than n-Butyl Acetate

**Flammability (solid, gas):** No

**Upper/lower limit on flammability or explosive limits**

**Flammability limit - upper (%):** No data available.

**Flammability limit - lower (%):** No data available.

**Explosive limit - upper (%):** No data available.

**Explosive limit - lower (%):** No data available.



|   |   |
|---|---|
| <b>Vapor pressure:</b>                          | No data available.  |
| <b>Vapor density:</b>                           | Vapors are heavier than air and may travel along the floor and in the bottom of containers. |
| <b>Relative density:</b>                        | 1.32  |
| <b>Solubility(ies)</b>                          |   |
| <b>Solubility in water:</b>                     | Insoluble in water  |
| <b>Solubility (other):</b>                      | No data available.  |
| <b>Partition coefficient (n-octanol/water):</b> | No data available.  |
| <b>Auto-ignition temperature:</b>               | No data available.  |
| <b>Decomposition temperature:</b>               | No data available.  |
| <b>Viscosity:</b>                               | No data available.  |

## 10. Stability and reactivity

|  |   |
|--|---|
| <b>Reactivity:</b>                         | No data available.  |
| <b>Chemical Stability:</b>                 | Material is stable under normal conditions.   |
| <b>Possibility of hazardous reactions:</b> | No data available.  |
| <b>Conditions to avoid:</b>                | Avoid heat or contamination.  |
| <b>Incompatible Materials:</b>             | Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture. |
| <b>Hazardous Decomposition Products:</b>   | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.   |

## 11. Toxicological information

### Information on likely routes of exposure

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

### Symptoms related to the physical, chemical and toxicological characteristics

|                      |                    |
|----------------------|--------------------|
| <b>Inhalation:</b>   | No data available. |
| <b>Skin Contact:</b> | No data available. |
| <b>Eye contact:</b>  | No data available. |
| <b>Ingestion:</b>    | 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):**

|  |                             |
|--|-----------------------------|
| Petroleum distillates                    | LD 50 (Rat): > 5,000 mg/kg  |
| Aliphatic naphtha                        | LD 50 (Rat): > 5,000 mg/kg  |
| Titanium dioxide                         | LD 50 (Rat): > 5,000 mg/kg  |
| Xylene                                   | LD 50 (Rat): 3,523 mg/kg    |
| Isophorone Diisocyanate                  | LD 50 (Rat): 4,814 mg/kg    |
| Ethylbenzene                             | LD 50 (Rat): 3,500 mg/kg    |
| Hydrotreated heavy naphthenic distillate | LD 50 (Rat): > 5,000 mg/kg  |
| Nonane                                   | LD 50 (Rat): > 5,000 mg/kg  |
| Diisodecyl phthalate                     | LD 50 (Rat): 64,000 mg/kg   |
| Aluminum oxide                           | LD 50 (Rat): > 10,000 mg/kg |
| Decanedioic acid ester                   | LD 50 (Rat): 3,700 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):**

|  |                               |
|--|-------------------------------|
| Petroleum distillates                    | LD 50 (Rabbit): > 2,000 mg/kg |
| Aliphatic naphtha                        | LD 50 (Rabbit): > 2,000 mg/kg |
| Xylene                                   | LD 50 (Rabbit): 12,126 mg/kg  |
| Isophorone Diisocyanate                  | LD 50 (Rat): > 7,000 mg/kg    |
| Ethylbenzene                             | LD 50 (Rabbit): 17,800 mg/kg  |
| Hydrotreated heavy naphthenic distillate | LD 50 (Rabbit): > 5,000 mg/kg |
| Nonane                                   | LD 50 (Rabbit): > 2,000 mg/kg |
| Diisodecyl phthalate                     | LD 50 (Rabbit): > 3,160 mg/kg |
| Decanedioic acid ester                   | LD 50 (Rat): > 3,170 mg/kg    |
| Iodopropynyl butylcarbamate              | LD 50 (Rabbit): > 2,000 mg/kg |

**Inhalation****Product:** ATEmix: 9.72 mg/l**Repeated dose toxicity****Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Specified substance(s):**



|  |                                     |
|--|-------------------------------------|
| Petroleum distillates                    | in vivo (Rabbit): Irritating        |
| Aliphatic naphtha                        | in vivo (Rabbit): Irritating        |
| Titanium dioxide                         | in vivo (Rabbit): Not irritant      |
| Xylene                                   | in vivo (Rabbit): Moderate irritant |
| Hydrotreated heavy naphthenic distillate | in vivo (Rabbit): Not irritant      |
| Nonane                                   | in vivo (Rabbit): Irritating        |
| Aluminum oxide                           | in vivo (Rabbit): Not irritant      |
| Decanedioic acid ester                   | in vivo (Rabbit): Not irritant      |

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

|  |                                       |
|--|---------------------------------------|
| Petroleum distillates                    | Rabbit, 24 - 72 hrs: Not irritating   |
| Aliphatic naphtha                        | Rabbit, 24 - 72 hrs: Not irritating   |
| Titanium dioxide                         | Rabbit, 24 hrs: Not irritating        |
| Xylene                                   | Rabbit, 24 hrs: Moderately irritating |
| Ethylbenzene                             | Rabbit, 7 d: Slightly irritating      |
| Hydrotreated heavy naphthenic distillate | Rabbit, 24 hrs: Not irritating        |
| Nonane                                   | Rabbit, 24 - 72 hrs: Not irritating   |
| Aluminum oxide                           | Rabbit, 24 hrs: Not irritating        |

**Respiratory or Skin Sensitization****Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause sensitization by inhalation.**Carcinogenicity****Product:** No data available.

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

|  |   |
|--|---|
| Titanium dioxide                         | Overall evaluation: Possibly carcinogenic to humans.  |
| Ethylbenzene                             | Overall evaluation: Possibly carcinogenic to humans.  |
| Hydrotreated heavy naphthenic distillate | Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall evaluation: Carcinogenic to humans. |

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

|  |                               |
|--|-------------------------------|
| Hydrotreated heavy naphthenic distillate | Known To Be Human Carcinogen. |
|--|-------------------------------|

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

|                    |        |
|--------------------|--------|
| Polyvinyl chloride | Cancer |
|--------------------|--------|

**Germ Cell Mutagenicity**

**In vitro**  
**Product:** No data available.

**In vivo**  
**Product:** No data available.

**Reproductive toxicity**  
**Product:** No data available.

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

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

**Aspiration Hazard**  
**Product:** No data available.

**Other effects:** No data available.

**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:**

**Fish****Product:** No data available.**Specified substance(s):**

|                             |  |
|-----------------------------|--|
| Petroleum distillates       | LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 2.9 mg/l Mortality          |
| Xylene                      | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 13.41 mg/l Mortality                       |
| Ethylbenzene                | LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 4.2 mg/l Mortality          |
| Diisodecyl phthalate        | LC 50 (Fathead minnow (Pimephales promelas), 96 h): > 0.47 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      |
| Ethylbenzene         | EC 50 (Water flea (Daphnia magna), 48 h): 1.37 - 4.4 mg/l Intoxication   |
| Diisodecyl phthalate | EC 50 (Opossum shrimp (Americamysis bahia), 96 h): > 0.08 mg/l Mortality |

**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

|  |  |
|--|--|
| Aliphatic naphtha                        | NOAEL (Oncorhynchus mykiss, 28 d): 0.098 mg/l QSAR QSAR, Key study           |
| Hydrotreated heavy naphthenic distillate | NOAEL (Oncorhynchus mykiss, 14 d): >= 1,000 mg/l QSAR QSAR, Supporting study |

**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.





**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**

Xylene Log Kow: 3.12 - 3.20

Ethylbenzene Log Kow: 3.15

Nonane Log Kow: 5.46

**Mobility in soil:** No data available.

**Other adverse effects:** Harmful to aquatic organisms.

**13. Disposal considerations**

**Disposal 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)**

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>  |
|---|--|
| Polyvinyl chloride                          | Blood<br>Liver<br>Cancer<br>Flammability<br>Central nervous system   |
| Benzene                                     | Blood<br>respiratory tract irritation<br>Central nervous system<br>Flammability<br>Cancer<br>Skin<br>Aspiration<br>Eye |
| Crystalline Silica<br>(Quartz)/ Silica Sand | kidney effects<br>lung effects<br>immune system effects<br>Cancer  |
| Vinyl chloride                              | Blood<br>Liver<br>Flammability<br>Central nervous system<br>Cancer   |

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Xylene                   | 100 lbs.                   |
| Ethylbenzene             | 1000 lbs.                  |
| Nonane                   | 100 lbs.                   |
| Toluene                  | 1000 lbs.                  |
| Benzene                  | 10 lbs.                    |
| Naphthalene              | 100 lbs.                   |
| Cumene                   | 5000 lbs.                  |
| Methanol                 | 5000 lbs.                  |
| Phenol                   | 1000 lbs.                  |
| Vinyl chloride           | 1 lbs.                     |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**Delayed (Chronic) Health Hazard  
Immediate (Acute) Health Hazards  
Respiratory or Skin Sensitization  
Carcinogenicity

**SARA 302 Extremely Hazardous Substance**

| <u>Chemical Identity</u> | <u>Reportable quantity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|----------------------------|------------------------------------|
| Isophorone Diisocyanate  | 500 lbs.                   | 500 lbs.                           |
| Phenol                   | 1000 lbs.                  | ---                                |

**SARA 304 Emergency Release Notification**

| <u>Chemical Identity</u>           | <u>Reportable quantity</u> |
|------------------------------------|----------------------------|
| Xylene                             | 100 lbs.                   |
| Isophorone Diisocyanate            |                            |
| Ethylbenzene                       | 1000 lbs.                  |
| Nonane                             | 100 lbs.                   |
| Diisodecyl phthalate               |                            |
| Toluene                            | 1000 lbs.                  |
| Benzene                            | 10 lbs.                    |
| Naphthalene                        | 100 lbs.                   |
| Cumene                             | 5000 lbs.                  |
| Methanol                           | 5000 lbs.                  |
| Diisodecyl phthalate<br>(mixed Is) |                            |
| Phenol                             | 1000 lbs.                  |
| Vinyl chloride                     | 1 lbs.                     |

**SARA 311/312 Hazardous Chemical**

| <u>Chemical Identity</u>                    | <u>Threshold Planning Quantity</u> |
|---|------------------------------------|
| Isophorone Diisocyanate                     | 500lbs                             |
| Phenol                                      | 500lbs                             |
| Calcium Carbonate<br>(Limestone)            | 10000 lbs                          |
| Polyvinyl chloride                          | 10000 lbs                          |
| Petroleum distillates                       | 10000 lbs                          |
| Aliphatic naphtha                           | 10000 lbs                          |
| Titanium dioxide                            | 10000 lbs                          |
| Calcium oxide                               | 10000 lbs                          |
| Xylene                                      | 10000 lbs                          |
| Ethylbenzene                                | 10000 lbs                          |
| Hydrotreated heavy<br>naphthenic distillate | 10000 lbs                          |
| Nonane                                      | 10000 lbs                          |
| Diisodecyl phthalate                        | 10000 lbs                          |
| Aluminum oxide                              | 10000 lbs                          |
| Decanedioic acid ester                      | 10000 lbs                          |
| Iodopropynyl<br>butylcarbamate              | 10000 lbs                          |

**SARA 313 (TRI Reporting)**

| <u>Chemical Identity</u> |
|--------------------------|
| Xylene                   |
| Ethylbenzene             |

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

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Vinyl chloride           | 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 and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

##### Chemical Identity

Calcium Carbonate (Limestone)  
Polyvinyl chloride  
Petroleum distillates  
Aliphatic naphtha  
Titanium dioxide  
Calcium oxide  
Xylene  
Ethylbenzene  
Hydrotreated heavy naphthenic distillate

#### US. Massachusetts RTK - Substance List

##### Chemical Identity

Calcium Carbonate (Limestone)  
Petroleum distillates  
Aliphatic naphtha  
Titanium dioxide  
Xylene  
Isophorone Diisocyanate  
Benzene  
Crystalline Silica (Quartz)/ Silica Sand  
Phenol

#### US. Pennsylvania RTK - Hazardous Substances

##### Chemical Identity

Calcium Carbonate (Limestone)  
Petroleum distillates  
Aliphatic naphtha  
Titanium dioxide  
Calcium oxide  
Xylene

#### US. Rhode Island RTK

##### Chemical Identity

Calcium Carbonate (Limestone)  
Polyvinyl chloride  
Petroleum distillates  
Aliphatic naphtha  
Titanium dioxide  
Xylene

### International regulations



**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**VOC:**

Regulatory VOC (less water and  
exempt solvent) : 110 g/l

VOC Method 310 : 8.37 %

**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. |
| 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:** 11/08/2019

**Version #:** 2.2

**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.

