

Version: 6.0 Revision Date: 05/15/2019

SAFETY DATA SHEET

1. Identification

Material name: SPEED CRETE RED LINE Material: TR5101650

Recommended use and restriction on use

Recommended use: Cement, Portland, chemicals Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY 19218 REDWOOD ROAD CLEVELAND OH 44110 US

Contact person: Telephone: Emergency telephone number: EH&S Department 216-531-9222 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

| Skin Corrosion/Irritation | Category 2 |
|---|--------------------------|
| Serious Eye Damage/Eye Irritation | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 1A |
| Specific Target Organ Toxicity - Single Exposure | Category 3 ^{1.} |
| Specific Target Organ Toxicity - Repeated Exposure | Category 1 ^{2.} |

Target Organs

1. Respiratory tract irritation.

2. Lung

Unknown toxicity - Health

| Acute toxicity, oral | 92.79 % |
|--|---------|
| Acute toxicity, dermal | 92.95 % |
| Acute toxicity, inhalation, vapor | 93.02 % |
| Acute toxicity, inhalation, dust or mist | 99.99 % |

Label Elements

Hazard Symbol:



| Signal Word: | Danger |
|---|--|
| Hazard Statement: | Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. |
| Precautionary Statements | |
| Prevention: | Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. |
| Response: | IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water/ If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse. |
| Storage: | Store locked up. Store in a well-ventilated place. Keep container tightly closed. |
| 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 (%)* | |
|-----------------------|--------------------------------|--|
|-----------------------|--------------------------------|--|



| Portland cement | 65997-15-1 | 50 - <100% |
|---|------------|------------|
| Crystalline Silica (Quartz)/ Silica Sand | 14808-60-7 | 20 - <50% |
| Calcium sulfate hemihydrate | 10034-76-1 | 10 - <20% |
| Kaolin Clay | 1332-58-7 | 5 - <10% |
| Titanium dioxide | 13463-67-7 | 0.1 - <1% |

4. First-aid measures

| Description of necessary first-aid measures | | | |
|---|--|--|--|
| Inhalation: | Move to fresh air. | | |
| Skin Contact: | Get medical 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: | Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. | | |
| 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/effe | cts, acute and delayed | | |
| Symptoms: | Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing. Respiratory tract irritation. | | |
| Hazards: | No data available. | | |
| Indication of immediate medica | al 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: | See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. |
|--|--|
| 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: | Do not contaminate water sources or sewer. 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: | 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 get in eyes. Wash hands thoroughly after handling. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.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. |
| Contact avoidance measures: | No data available. |
| Hygiene measures: | Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace. |
| 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 | Туре | Exposure Limit Values | Source |
|---|--------------|--|---|
| Portland cement - Respirable fraction. | TWA | 1 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Portland cement - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Portland cement - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Portland cement | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.05 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| | OSHA_AC T | 0.025 mg/m3 | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | PEL | 0.05 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable. | TWA | 2.4 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| | TWA | 0.1 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Calcium sulfate hemihydrate - Inhalable fraction. | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Calcium sulfate hemihydrate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium sulfate hemihydrate - Respirable fraction. | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Calcium sulfate hemihydrate - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Kaolin Clay - Respirable fraction. | TWA | 2 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| | PEL | 5 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Kaolin Clay - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| | TWA | 50 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Kaolin Clay - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Kaolin Clay - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide | TWA | 10 mg/m3 | US. ACGIH Threshold Limit Values (2011) |
| Titanium dioxide - Total dust. | PEL | 15 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006) |
| Titanium dioxide - Respirable fraction. | TWA | 15 millions of particles per cubic foot of air | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |



| Titanium dioxide - Total dust. | TWA | 15 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
|--------------------------------|-----|----------------|---|
| | | | 2016) |
| Titanium dioxide - Respirable | TWA | 5 mg/m3 | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| fraction. | | | 2016) |
| Titanium dioxide - Total dust. | TWA | 50 millions of | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 |
| | | particles per | 2016) |
| | | cubic foot of | (and the street street |
| | | air | |

| Chemical name | Туре | Exposure Limit Values | Source |
|---|------|-----------------------|--|
| Portland cement - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Portland cement - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Portland cement - Respirable. | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2017) |
| Portland cement - Respirable fraction. | TWA | 1 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 2017) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.1 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - 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 sulfate hemihydrate - 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 sulfate hemihydrate - Inhalable | 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 sulfate hemihydrate - Inhalable fraction. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium sulfate hemihydrate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Kaolin Clay - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Kaolin Clay - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Kaolin Clay - Respirable fraction. | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 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) (11 2010) |
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |



| Chemical name | Туре | Exposure Limit Values | Source |
|---|------|-----------------------|--|
| Portland cement - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Portland cement - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Portland cement - Respirable. | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (06 2017) |
| Portland cement - Respirable fraction. | TWA | 1 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 2017) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.025 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction. | TWA | 0.10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Crystalline Silica (Quartz)/ Silica Sand - Respirable dust. | TWA | 0.1 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - 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 sulfate hemihydrate - 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 sulfate hemihydrate - Inhalable | 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 sulfate hemihydrate - Inhalable fraction. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Calcium sulfate hemihydrate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Calcium sulfate hemihydrate - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Kaolin Clay - Respirable. | TWA | 2 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Kaolin Clay - Respirable dust. | TWA | 5 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Kaolin Clay - Respirable fraction. | TWA | 2 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 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) (11 2010) |
| Titanium dioxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Aluminum oxide - Respirable. | TWA | 1 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007) |
| Aluminum oxide - Total dust. | TWA | 10 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Aluminum oxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013) |
| Aluminum oxide - Respirable fraction. | TWA | 1 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Aluminum oxide - Inhalable fraction. | TWA | 10 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015) |
| Aluminum oxide - Respirable fraction. | TWA | 3 mg/m3 | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (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) (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) (11 2010) |
| Iron oxide - Total dust. | TWA | 10 mg/m3 | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (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) (09 2017) |

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

| | 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. |
|-------------------------------------|--|
| Eye/face protection: | Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a 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: | 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. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace. |



9. Physical and chemical properties

| Appearance | |
|--|----------------------|
| Physical state: | solid |
| Form: | Powder |
| Color: | Gray |
| Odor: | Odorless |
| Odor threshold: | No data available. |
| pH: | No data available. |
| Melting point/freezing point: | No data available. |
| Initial boiling point and boiling range: | No data available. |
| Flash Point: | No data available. |
| Evaporation rate: | No data available. |
| Flammability (solid, gas): | No |
| Upper/lower limit on flammability or explo | sive 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: | No data available. |
| Relative density: | 2.9 |
| Solubility(ies) | |
| Solubility in water: | Miscible with water. |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water): | No data available. |
| Auto-ignition temperature: | No data available. |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |
| 10. Stability and reactivity | |

10. Stability and reactivity

| Reactivity: | No data available. |
|--|---|
| Chemical Stability: | Material is stable under normal conditions. |
| Possibility of hazardous reactions: | No data available. |
| Conditions to avoid: | Avoid heat or contamination. |
| Incompatible Materials: | No data available. |
| 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 ex Inhalation: | xposure In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes. | | |
| Skin Contact: | Causes skin irritation. May cause an allergic skin reaction. | | |
| Eye contact: | Causes serious eye damage. | | |
| Ingestion: | May be ingested by accident. Ingestion may cause irritation and malaise. | | |
| Symptoms related to the physical, chemical and toxicological characteristics | | | |
| Inhalation: | No data available. | | |
| Skin Contact: | No data available. | | |
| Eye contact: | No data available. | | |
| Ingestion: | No data available. | | |
| Information on toxicological effects | | | |
| Acute toxicity (list all possible routes of exposure) | | | |
| Oral Product: | Not classified for acute toxicity based on available data. | | |
| Specified substance(s): Kaolin Clay | LD 50 (Rat): > 5,000 mg/kg | | |
| Titanium dioxide | LD 50 (Rat): > 5,000 mg/kg | | |
| Dermal Product: | Not classified for acute toxicity based on available data. | | |
| Specified substance(s): Kaolin Clay | LD 50 (Rat): > 5,000 mg/kg | | |
| Inhalation Product: | Not classified for acute toxicity based on available data. | | |
| Specified substance(s): Kaolin Clay | LC 50 (Rat): > 20 mg/l | | |
| Titanium dioxide | LC 50 (Rat): 3.43 mg/l | | |

Repeated dose toxicity



| Product: | No data available. | | | |
|---|--|--|--|--|
| Skin Corrosion/Irritation Product: | No data available. | | | |
| Specified substance(s): Titanium dioxide | : in vivo (Rabbit): Not irritant | | | |
| Serious Eye Damage/Eye Irrit Product: Specified substance(s): | No data available. | | | |
| Titanium dioxide | Rabbit, 24 hrs: Not irritating | | | |
| Respiratory or Skin Sensitiza Product: | tion No data available. | | | |
| Carcinogenicity Product: | No data available. | | | |
| IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: | | | | |
| Crystalline Silica (Quartz)/ Silica Sand | Overall evaluation: Carcinogenic to humans. | | | |
| Titanium dioxide | Overall evaluation: Possibly carcinogenic to humans. | | | |
| US. National Toxicology Prog Crystalline Silio (Quartz)/ Silio Sand | r am (NTP) Report on Carcinogens: ca Known To Be Human Carcinogen. ca | | | |
| US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): | | | | |
| Crystalline Silica (Quartz)/ Silica Sand | 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.

Target Organs Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation. Specific Target Organ Toxicity - Repeated Exposure: Lung

Aspiration Hazard Product:

No data available.

Other effects:

No data available.

12. Ecological information

Ecotoxicity:

| Ecotoxicity: | | | | |
|--|---|----|--|--|
| Acute hazards to the aquatic environment: | | | | |
| Fish Product: | No data available. | | | |
| Aquatic Invertebrates Product: | No data available. | | | |
| Specified substance(s): Titanium dioxide | EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication | | | |
| 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. | 14 | | |

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| BOD/COD Ratio Product: | No data available. |
|--|---|
| Bioaccumulative potential Bioconcentration Factor (B0 Product: | CF) No data available. |
| Partition Coefficient n-octanol / v Product: | vater (log Kow) No data available. |
| Mobility in soil: | No data available. |
| Other adverse effects: | No data available. |
| 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 | tification (40 CEP 707 Subat D) |

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)



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None present or none present in regulated quantities.

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

Chemical Identity

| 1 | | 1 / | na | zar |
|---|---|-----|-------|-----|
| 0 | 3 | 10 | i i a | 2ai |

Crystalline Silica (Quartz)/ Silica Sand

(s) kidney effects

lung effects immune system effects Cancer

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards Delayed (Chronic) Health Hazard Skin Corrosion or Irritation Serious eye damage or eye irritation Respiratory or Skin Sensitization Carcinogenicity Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

| Chemical Identity | Threshold Planning Quantity |
|------------------------------|-----------------------------|
| Portland cement | 10000 lbs |
| Crystalline Silica (Quartz)/ | 10000 lbs |
| Silica Sand | |
| Calcium sulfate | 10000 lbs |
| hemihydrate | |
| Kaolin Clay | 10000 lbs |
| Titanium dioxide | 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) None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3) None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65







WARNING Cancer - www.P65Warnings.ca.gov

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

<u>Chemical Identity</u> Portland cement Crystalline Silica (Quartz)/ Silica Sand Calcium sulfate hemihydrate Kaolin Clay

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u> Portland cement Crystalline Silica (Quartz)/ Silica Sand Calcium sulfate hemihydrate Kaolin Clay

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Portland cement Crystalline Silica (Quartz)/ Silica Sand Calcium sulfate hemihydrate Kaolin Clay

US. Rhode Island RTK

Chemical Identity

Portland cement Crystalline Silica (Quartz)/ Silica Sand Kaolin Clay

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) | | 0 g/l |
|---|---|--------|
| VOC Method 310 | : | 0.00 % |



| Inventory Status: Australia AICS: | All components in this product are 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: | 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. |
| 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: | 05/15/2019 |
|----------------------|---|
| Version #: | 6.0 |
| Further Information: | No data available. |
| Disclaimer: | For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. |