

"Frac" Sand Proppant



Safety DataSheet

according to Federal Register / Vol. 77, No. 58 / Monday, 26 March 2012 / Rules and Regulations

Revision Date: 10 Aug. 2017

Supersedes Date: 28 October 2015

Version: 4.1

SECTION 1: IDENTIFICATION

Product Identifier

Product Name: Frac Sand Proppant

Synonyms: Proppant Sand

Intended Use of the Product

Proppant Sand. For professional use only.

Name, Address, and Telephone of the Responsible Party

Company

Preferred Sands

One Radnor Corporate Center

100 Matsonford Road Ste 101

Radnor, PA 19087

855-FRAC HELP / 855-372-2435

www.preferredsands.com

Emergency Telephone Number: (800) 424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (HCS-2012-US), (WHMIS-2015)

Carc. 1A H350

STOT SE 3 H335

STOT RE 1 H372

Label Elements

HCS 2012-US Labeling

Hazard Pictograms



Signal Word

: Danger

Hazard Statements

: May cause respiratory irritation
May cause cancer (Inhalation)
Causes damage to organs (lung/respiratory system/kidneys) through prolonged or repeated exposure (Inhalation)

Precautionary Statements

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area. Wear respiratory protection.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

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Other Hazards

None

Unknown Acute Toxicity (GHS-US) None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

| Name | Product identifier (CAS) | % (w/w) | Classification |
|--------|--------------------------|---------|---------------------------------------|
| Quartz | 14808-60-7 | 100 | Carc. 1A, STOT SE 3, STOT RE 1, |

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water. Do not rub.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

Ingestion: For discomfort, rinse mouth. Do NOT induce vomiting.

Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Irritation of respiratory tract.

Symptoms/Injuries After Inhalation: Chronic inhalation of respirable quartz (crystalline silica) may cause silicosis, a fibrosis or scarring of the lungs. Silicosis may be progressive and may lead to disability and death. Adverse health effects such as lung disease, silicosis, cancer, autoimmune disease, tuberculosis and nephrotoxicity can occur with exposure. There are generally no symptoms or signs of exposure to quartz. Chronic silicosis often has no symptoms. Acute silicosis can occur with exposures to very high concentrations of respirable quartz over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

Symptoms/Injuries After Skin Contact: Prolonged contact with dust may cause irritation by abrasion.

Symptoms/Injuries After Eye Contact: Prolonged contact will cause abrasive irritation and may result in corneal injury.

Symptoms/Injuries After Ingestion: None expected under normal conditions of use.

Chronic Symptoms: Prolonged and frequent exposure through inhalation may cause cancer or damage lungs.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: None known.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable

Explosion Hazard: None

Reactivity: Product is stable.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Fight fire from safe distance and protected location.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: None

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Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not breathe dust. Avoid generating dust.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions Not available

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Avoid generation of dust during clean-up of spills.

Reference to Other Sections See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Good housekeeping is needed during storage, transfer, handling, and use of this material to avoid excessive dust accumulation.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Use only outdoors or in a well-ventilated area. Do not breathe dust.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a well-ventilated place.

Incompatible Materials: Strong bases. Strong acids. Strong oxidizers.

Specific End Use(s) Proppant. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Quartz (14808-60-7) | | |
|----------------------------|--------------------------------------|---|
| USA ACGIH | ACGIH TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| USA OSHA | OSHA PEL (STEL) (mg/m ³) | 250 mppcf/%SiO ₂ +5, (total dust) 10mg/m ³ /%SiO ₂ +2 (respirable fraction) |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) | 0.05 mg/m ³ (respirable fraction) |
| USA IDLH | US IDLH (mg/m ³) | 50 mg/m ³ |
| Alberta | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| British Columbia | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Manitoba | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| New Brunswick | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Newfoundland & Labrador | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Nova Scotia | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Nunavut | OEL TWA (mg/m ³) | 0.05 mg/m ³ (respirable fraction) |
| Northwest Territories | OEL TWA (mg/m ³) | 0.05 mg/m ³ (respirable fraction) |
| Ontario | OEL TWA (mg/m ³) | 0.10 mg/m ³ (respirable fraction) |
| Prince Edward Island | OEL TWA (mg/m ³) | 0.025 mg/m ³ (respirable fraction) |
| Québec | VEMP (mg/m ³) | 0.05 mg/m ³ (respirable fraction) |
| Saskatchewan | OEL TWA (mg/m ³) | 0.05 mg/m ³ (respirable fraction) |
| Yukon | OEL TWA (mg/m ³) | 300 particle/mL |

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Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Not available

Hand Protection: Impermeable protective gloves.

Eye Protection: In case of dust production: protective goggles.

Skin and Body Protection: Wear suitable working clothes.

Respiratory Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.

Other Information: When using, do not eat, drink or smoke

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

| | |
|---|---|
| Physical State | : Solid |
| Appearance | : White to tan sand |
| Odor | : Odorless |
| Odor Threshold | : None |
| pH | : None (solid) |
| Relative Evaporation Rate (butylacetate=1) | : None |
| Melting/Freezing Point | : 3110 F (Melting Point) (1710 C) |
| Boiling Point | : Not applicable |
| Flash Point | : Not flammable |
| Auto-ignition Temperature | : None |
| Decomposition Temperature | : Not determined |
| Flammability (solid, gas) | : Not flammable |
| Upper and Lower Flammable Limits | : Not flammable |
| Vapor Pressure | : Not determined but likely none. |
| Relative Vapor Density at 20 °C | : Not applicable |
| Relative Density/Specific Gravity | : 2.65 (water = 1) |
| Solubility | : Insoluble in water. |
| Partition coefficient: n-octanol/water | : None |
| Viscosity | : None (solid) |
| Explosion Data – Sensitivity to Mechanical Impact | : Not expected to present an explosion hazard due to mechanical impact. |
| Explosion Data – Sensitivity to Static Discharge | : Not expected to present an explosion hazard due to static discharge. |

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Product is stable.

Chemical Stability: Product is stable.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Avoid creating or spreading dust.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified as toxic

LD50 and LC50 Data: > 3000 mg/kg

Skin Corrosion/Irritation: Not a chemical irritant. May irritate by abrasion.

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Serious Eye Damage/Irritation: Not classified (pH: 6.5 - 7.5)

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: May cause cancer by inhalation.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Silicosis can be associated with kidney and autoimmune diseases.

Symptoms/Injuries After Skin Contact: Prolonged contact with large amounts of dust may cause irritation by abrasion.

Symptoms/Injuries After Eye Contact: Repeated or prolonged contact will cause abrasive irritation. Prolonged contact may result in corneal injury.

Symptoms/Injuries After Ingestion: None expected under normal conditions of use.

Chronic Symptoms: Prolonged and frequent exposure through inhalation may cause cancer. Repeated or prolonged inhalation may damage lungs.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| | |
|--|--------------------------|
| Quartz (14808-60-7) | |
| Oral LD50 (Rat) | >3000 mg/kg |
| Quartz (14808-60-7) | |
| IARC Group | 1 |
| National Toxicity Program (NTP) Status | Known Human Carcinogens. |

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not classified

Persistence and Degradability Not degradable

Bioaccumulative Potential None

Mobility in Soil Not mobile

Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

| | |
|-------------------------------------|---------------------------------|
| SARA Section 311/312 Hazard Classes | Delayed (chronic) health hazard |
|-------------------------------------|---------------------------------|

| | |
|---|--|
| Quartz (14808-60-7) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

US State Regulations

| | |
|---|--|
| Quartz (14808-60-7) | |
| U.S. - California - Proposition 65 - Carcinogens List | WARNING: This product contains chemicals known to the State of |

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| | |
|---|--|
| California to cause cancer. | |
| Quartz (14808-60-7) | |
| RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List RTK - U.S. - Pennsylvania - RTK (Right to Know) List | |
| Canadian Regulations | |
| WHMIS 2015 Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |
| Quartz (14808-60-7) | |
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Carc. 1A, STOT SE 3, STOT RE 1, |

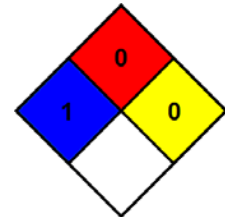
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 10 Aug. 2017
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Classification:

| | |
|-----------|---|
| Carc. 1A | Carcinogenicity Category 1A |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |

NFPA Health Hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA Fire Hazard : 0 - Materials that will not burn.
NFPA Reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1* Slight Hazard - Irritation or minor reversible injury possible Chronic hazard.
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard
Personal Protection : E

Party Responsible for the Preparation of This Document

Preferred Sands
+1 855-FRAC HELP / 855-372-2435

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North America GHS US 2012 & WHMIS