



# MATERIAL SAFETY DATA SHEET

## Silica/Filter Sand

### Section 01 - Product And Company Information

**Product Identifier** ..... Silica Sand, Filter Sand

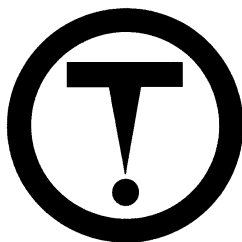
**Product Use** ..... Filter sand, foundry sand, glass sand, sandblasting sand, golf course sand, play sand, silica flour, sport surface, traction sand

**Supplier Name**..... ClearTech Industries Inc.  
1500 Quebec Avenue  
Saskatoon, SK. Canada  
S7K 1V7

**Prepared By**..... ClearTech Industries Inc. Technical Department  
Phone: (306)664-2522

**Preparation Date**..... December 6, 2012

**24-Hour Emergency Phone**..... 306-664-2522



### Section 02 - Composition / Information on Ingredients

<b>Hazardous Ingredients</b> .....	Crystalline Silica	92-94%
	Aluminium Oxide	< 5%
	Iron Oxide	< 1%
	Titanium Oxide	< 0.09
<b>CAS Number</b> .....	Crystalline Silica	14808-60-7
	Aluminium Oxide	1344-28-1
	Iron Oxide	1309-37-1
	Titanium Oxide	13463-67-7
<b>Synonym (s)</b> .....	Quartz, crystalline silica, silica dioxide, ground silica	



**Section 03 - Hazard Identification**

- Inhalation**..... Respiratory diseases may develop such as silicosis, pneumoconiosis and pulmonary fibrosis from inhalation.
- Skin Contact / Absorption**..... Abrasions of the skin may develop from contact.
- Eye Contact**..... Crystalline silica (quartz) may cause abrasions to the cornea.
- Ingestion**..... No health effects are known.
- Exposure Limits**..... OSHA-PEL: 10mg/m<sup>3</sup>  
ACGIH: 0.05mg/m<sup>3</sup>  
NIOSH: 0.05mg/m<sup>3</sup>

**Section 04 - First Aid Measures**

- Inhalation**..... Health effects associated with crystalline silica are chronic. If a massive amount of crystalline silica is inhaled, remove the person to fresh air, perform artificial respiration as needed, and obtain medical attention as needed.
- Skin Contact / Absorption**..... Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
- Eye Contact**..... Do not rub eyes. Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek medical attention.
- Ingestion**..... Seek immediate medical attention if large amounts are ingested.
- Additional Information**..... Good personal hygiene is essential. Always wash your hands after handling crystalline silica, prior to handling food and/or drinkable liquids.

**Section 05 - Fire Fighting Measures**

- Conditions of Flammability**..... None
- Means of Extinction**..... Use extinguishing media appropriate for the surrounding fire.



- Flash Point**..... Not combustible
  
- Auto-ignition Temperature**..... None
  
- Upper Flammable Limit** ..... None
  
- Lower Flammable Limit**..... None
  
- Hazardous Combustible Products**.... None
  
- Special Fire Fighting Procedures**..... At extreme temperatures, calcium oxide fumes may evolve, wear NIOSH-approved self-contained breathing apparatus and protective clothing.
  
- Explosion Hazards**..... None

**Section 06 - Accidental Release Measures**

- Leak / Spill**..... Wear appropriate personal protective equipment if required (Section 8). Use dustless methods (vacuum) during clean up. Do not dry sweep. Wet down spilled material if sweeping is the most feasible method of clean up. Place the silica in a covered container appropriately designed for disposal. Dispose of the silica according to federal, state, provincial, and local regulations. Avoid release of product into waterways and/or sewers.
  
- Deactivating Materials**..... Not available

**Section 07 - Handling and Storage**

- Handling Procedures**..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
  
- Storage Requirements**..... No special storage requirements are needed other than keep away from incompatibles listed in Section 10.

**Section 08 - Personal Protection and Exposure Controls**

- Protective Equipment**
  
- Eyes**..... Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.



**Respiratory**..... Use only NIOSH approved respiratory protection equipment with a minimum N95 rating. Avoid breathing dust produced during the use of this and handling of this material. If the workplace airborne crystalline silica concentration is unknown for a given task, Air Quality Monitoring should be conducted in order to determine the appropriate level of respiratory protection. Ensure the appropriate respirators are worn during, and following the task, including clean up or whenever airborne dust is present, to insure ambient dust levels are below occupational exposure limits. Provisions should be made for a respiratory protection-training program.

Also see ANSI standard Z88.2 “American National Standard for Respiratory Protection”, or the CSA Standard Z94.4-02 “Selection, Use, And Care of Respirators.”

**Gloves**..... Impervious gloves of chemically resistant material should be worn. Wash contaminated clothing and dry thoroughly before reuse.

**Clothing**..... Body suits, aprons, and/or coveralls of chemical resistant material should be worn. Wash contaminated clothing and dry thoroughly before reuse.

**Footwear**..... No special footwear is required other than what is mandated at place of work.

### Engineering Controls

**Ventilation Requirements**..... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Other**..... Keep an eye wash fountain and safety shower available and in close proximity to work area.

## Section 09 - Physical and Chemical Properties

**Physical State**..... Solid

**Odor and Appearance**..... Odorless light to medium brown granular particles.

**Odor Threshold**..... Not applicable

**Specific Gravity (Water=1)**..... ~ 2.60

**Vapor Pressure (mm Hg, 20°C)**..... Not applicable

**Vapor Density (Air=1)**..... Not applicable

**Evaporation Rate**..... Not applicable

**Boiling Point**..... Not applicable



**Freeze/Melting Point**..... ~ 2,200°C  
**pH**..... 7.3  
**Water/Oil Distribution Coefficient**.... Not applicable  
**Bulk Density**..... Not available  
**% Volatiles by Volume**..... Not available  
**Solubility in Water**..... Not applicable  
**Molecular Formula**..... Not available  
**Molecular Weight**..... Not available

**Section 10 - Stability and Reactivity**

**Stability**..... Stable  
**Incompatibility**..... Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride may cause fires.  
**Hazardous Products of Decomposition**... Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.  
**Polymerization**..... Will not occur

**Section 11 - Toxicological Information**

**Irritancy**..... Mild irritant to skin and eyes, highly irritating with chronic exposure.  
**Sensitization**..... Not available  
**Chronic/Acute Effects**..... Acute:  
One form of silicosis, acute silicosis, can occur with exposures to very concentrations of respirable crystalline silica over a short period of time, sometimes as short as a few months. The symptoms of acute silicosis includes progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.  
  
Chronic:  
The various forms of chronic effects of silicosis include lung cancer, autoimmune and chronic kidney diseases, tuberculosis and non-malignant respiratory disease. The condition of individuals with lung disease (ie: bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure.



- Synergistic Materials**..... Not available
- Animal Toxicity Data**..... No evidence to suggest that crystalline silica is toxic to birds or fish.
- Carcinogenicity**..... Overall evaluation by IARC is crystalline silica inhaled in the forms of quartz and cristobalite is considered a carcinogen to humans. Crystalline silica is not regulated as a carcinogen by OSHA.
- Reproductive Toxicity**..... Not available
- Teratogenicity**..... Not available
- Mutagenicity**..... Not available

**Section 12 - Ecological Information**

- Fish Toxicity**..... No evidence to suggest that crystalline silica is toxic to fish, invertebrates or microorganisms.
- Biodegradability**..... Not available
- Environmental Effects**..... Crystalline silica (quartz) is not known to be ecotoxic, no evidence to suggest that crystalline silica is toxic to plant life.

**Section 13 - Disposal Consideration**

- Waste Disposal**..... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

**Section 14 - Transport Information**

**TDG Classification**

- Class**..... Not regulated
- Group**..... Not regulated
- PIN Number**..... Not regulated
- Other**..... Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.



**Section 15 - Regulatory Information**

WHMIS Classification.....D2

**NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

**Section 16 - Other Information**

**Note:** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

**Attention: Receiver of the chemical goods / MSDS coordinator**

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Material Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service or technical service department.

**ClearTech Industries Inc. - Locations**

**Corporate Head Office: 1500 Quebec Avenue, Saskatoon, SK, S7K 1V7**

**Phone: 306-664-2522**

**Fax: 306-665-6216**

**www.ClearTech.ca**

Location	Address	Postal Code	Phone Number	Fax Number
Richmond, B.C.	12431 Horseshoe Way	V7A 4X6	604-272-4000	604-272-4596
Calgary, AB.	5516E - 40 <sup>th</sup> St. S.E.	T2C 2A1	403-279-1096	403-236-0989
Edmonton, AB.	11750 - 180 <sup>th</sup> Street	T5S 1N7	780-452-6000	780-452-4600
Saskatoon, SK.	19 Peters Ave, North Corman Park	S7K 1V7	306-933-0177	306-933-3282
Regina, SK.	555 Henderson Drive	S42 5X2	306-721-7737	306-721-8611
Winnipeg, MB.	340 Saulteaux Crescent	R3J 3T2	204-987-9777	204-987-9770
Mississauga, ON.	7480 Bath Road	L4T 1L2	905-612-0566	905-612-0575

**24 Hour Emergency Number - All Locations - 306-664-2522**