



Safety Data Sheet

Section 01 - Product And Company Identification

Product Identifier	Silica Sand, Filter Sand
Other Means of Identification	Quartz, crystalline silica, silica dioxide, ground silica
Product Use and Restrictions on Use	Filter sand, foundry sand, glass sand, sandblasting sand, golf course sand, play sand, silica flour, sport surface, traction sand.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
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Section 02 - Hazard Identification

GHS-Classification

STOT-Repeated Exposure	Category 1
Carcinogenicity	Category 1A

Physical Hazards

No known physical hazards.

Danger

Hazards Statements

H372 – Causes damage to the lung through prolonged or repeated inhalation.
H350 – May cause cancer.

Pictograms



Precautionary Statements

P405 – Store locked up.
P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.
P308 + P313 – IF exposed or concerned: Get medical advice/attention.
P260 – Do not breathe dust.
P264 – Wash hands thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Crystalline Silica	14808-60-7	92-94%	
Aluminum Oxide	1344-28-1	< 5%	
Iron Oxide	1309-37-1	< 1%	
Titanium Oxide	13463-67-7	< 0.09%	

Section 04 - First Aid Measures

Inhalation	This chemical is a carcinogen and a chronic toxicity hazard. Remove victim to fresh air. Seek immediate medical attention.
Skin Contact / Absorption	No health effects expected. Remove contaminated clothing. Wash affected area with gently flowing water and non-abrasive soap for 5 minutes. Seek medical attention if irritation occurs or persists.
Eye Contact	DO NOT allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. If particle/dust does not dislodge flush with gently flowing water for at least 30 minutes or until particle/dust is removed while holding eyelid(s) open. If irritation persists, seek immediate medical attention. DO NOT attempt to manually remove anything stuck to the eye(s).
Ingestion	No health effects are expected. If irritation or discomfort occurs, obtain medical advice.
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

Suitable Extinguishing Media	Quartz is not combustible. Use extinguishing media suitable for surrounding fire.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Carbon monoxide, carbon dioxide and incomplete combustion products.
Special Protective Equipment and Precautions for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and full Bunker Gear. Wash down contaminated Bunker gear with water to remove any quartz fibers.
Further Information	Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.
Environmental Precautions	Avoid release of product into waterways and/or sewers.
Methods and Materials for Containment and Cleaning Up	Do not dry-sweep crystalline silica. Whenever possible, wet down with a water spray to minimize the amount of dust or use a vacuum equipped with HEPA filters. Shovel into clean, labelled containers and cover. Flush area with water.

Section 07 - Handling and Storage

Precautions for Safe Handling	This material is a VERY TOXIC solid. 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.
Conditions for Safe Storage	Keep container tightly closed when not in use. Keep quantity stored as small as possible. Product should be stored at temperatures above freezing.
Incompatibilities	Strong oxidizing agents, magnesium, manganese trifluoride, xenon hexafluoride, sodium, lithium, and hydrofluoric acid.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Crystalline Silica	OSHA	PEL-TWA	0.1mg/m ³
	ACGIH	TLV-TWA	0.025mg/m ³
Aluminum Oxide	ACGIH	TLV-TWA	1mg/m ³ (respirable fraction)
Iron Oxide	ACGIH	TLV-TWA	5mg/m ³
Titanium Oxide	ACGIH	TLV-TWA	10mg/m ³

Engineering Control(s)

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	Emergency shower and eyewash should be in close proximity.

Protective Equipment

Eyes/Face	Safety goggles suitable for dust protection.
Hand Protection	No specific requirement, but it is good practice to prevent skin contact. Wash hands thoroughly after handling.
Skin and Body Protection	No specific requirement, but it is good practice to prevent skin contact. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	Utilize respiratory equipment to prevent exposure to product vapors/mists.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Solid
Colour	Light to medium brown granular particles.
Odour	Odourless
Odour Threshold	Not Applicable

Property

pH	7.3
Melting Point/Freezing Point	1600°C
Initial Boiling Point and Boiling Range	2230°C
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	Not Applicable
Vapour Density (Air=1)	Not Applicable
Relative Density	Not Available
Solubility(ies)	Insoluble in water, organic solvents and most mineral acids and some bases.
Partition Coefficient: n-octanol/water	Not Applicable
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	573°C
Viscosity	Not Applicable
Explosive Properties	None known
Specific Gravity (Water=1)	~ 2.60
% Volatiles by Volume	Not Available
Formula	SiO ₂
Molecular Weight	60.09

Section 10 - Stability and Reactivity

Reactivity	Alpha-quartz is stable below 575°C where it transforms to beta-quartz, which is stable between 575°C and 870°C. Above 870°C, quartz transforms to tridymite.
Stability	Normally stable.
Possibility of Hazardous Reactions	None known.
Conditions to Avoid	Generation of dust.
Incompatible Materials	Strong oxidizing agents, magnesium, manganese trifluoride, xenon hexafluoride, sodium, lithium, and hydrofluoric acid.

Section 11 - Toxicological Information

Acute Toxicity Estimate

Component	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Silica Sand	524 mg/kg	Not Available	Not Available

The ATE of the mixture was determined by calculation from the ATE values for all relevant ingredients in reference to the formula stated in the GHS.

Chronic Toxicity – Carcinogenicity

Component	IARC
Crystalline silica	Group 1: Carcinogenic to humans.
Titanium oxide	Group 2B: Possibly carcinogenic to humans.

Skin Corrosion/Irritation	Not expected to be irritating to skin.
Ingestion	No health effects are known.
Inhalation	Respiratory diseases may develop such as silicosis, pneumoconiosis and pulmonary fibrosis from inhalation.
Serious Eye Damage/Irritation	Not expected to be irritating to eyes.
Respiratory or Skin Sensitization	Not a respiratory or skin sensitizer.
Germ Cell Mutagenicity	Not known to be mutagenic.
Reproductive Toxicity	Not known to cause reproductive toxicity.
STOT-Single Exposure	High concentrations may cause coughing and mild, temporary irritation following short-term exposure.
STOT-Repeated Exposure	Prolonged or repeated exposure to fine airborne dust is known to be harmful to the respiratory system and may cause lung injury.
Aspiration Hazard	Not Available
Synergistic Materials	There is disagreement about whether tobacco smoke increases the severity of the effect of crystalline silica on respiratory impairment. Simultaneous exposure to known carcinogens, for example, benzo(a)pyrene, can increase the carcinogenicity of crystalline silica

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Silica Sand	Not Available	Not Available	Not Available
Biodegradability	Not readily biodegradable.		
Bioaccumulation	Not expected to bioaccumulate.		
Mobility	Insoluble in water.		
Other Adverse 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 Considerations

Waste From Residues/Unused Products Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Contaminated Packaging Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number Not Regulated

UN Proper Shipping Name Not Regulated

Transport Hazard Class(es) Not Regulated

Packaging Group Not Regulated

Environmental Hazards Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.

Special Precautions Not Available

Transport in Bulk Not Available

TDG

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.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

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

Section 16 – Other Information

Preparation Date August 31, 2015

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 / SDS 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 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 center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA

ClearTech Industries Inc. - Locations

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