



# MATERIAL SAFETY DATA SHEET

## Silica Ore

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Silica Ore**  
Synonyms: Sand  
Chemical Family: None

Company Identification: CALPORTLAND COMPANY  
2025 E. Financial Way  
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(626) 852-6200  
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Approved By: Jay Grady  
Approval Date: August 8, 2009

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>	<u>OSHA PEL (ppm) Total Dust</u>	<u>OSHA PEL (ppm) Respirable Dust</u>	<u>ACGIH TLV (ppm) Total Dust</u>
Crystalline Silica	99%	14808-60-7	2 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>

#### COMPOSITION COMMENT: --

Exposure limits vary with the % Quartz in dust. All limits are for 8-hr. TWA exposures.

Total dust (ACGIH & MSHA = 30 mg/m<sup>3</sup> divided by (% quartz + 3)

Respirable dust (ACGIH, MSHA & OSHA) = 10 mg/m<sup>3</sup> divided by (% quartz + 2)

Silica Quartz is listed by NTP, IARC or OSHA as containing carcinogens.

Trace Elements: These materials are mined from the earth. Trace amounts of naturally occurring elements might be detected during chemical analysis of these materials.

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**WARNING!** SILICA ORE CAN CAUSE ABRASION OR IRRITATION TO SKIN AND EYES. MATERIAL CAN CAUSE GASTROINTESTINAL IRRITATION IF INGESTED. RESPIRABLE DUST INHALED OVER A PERIOD OF TIME COULD CONSTITUTE A HEALTH HAZARD. DUST WILL CONTAIN RESPIRABLE CRYSTALLINE SILICA.

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### Routes of Exposure:

**Eye Contact:** Exposure to airborne dust during the handling of this product may cause immediate or delayed irritation and/or abrasion to the cornea.

**Skin Contact:** This product can cause abrasion and irritation to the skin.

**Ingestion:** No known health effect if ingested.

**Inhalation:** The ingredients in this product contain crystalline silica. Exposure to these ingredients in excess of the applicable TLV or PEL (see Section 2) may cause or aggravate other lung conditions. Exposure may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system.

**Medical Conditions which May be Aggravated by Inhalation or Dermal Exposure:** Pre-existing upper respiratory and lung diseases by exposure to this product.

**Acute Effects:** One form of Silicosis, Acute Silicosis, can occur with exposures to very high concentrations of respirable crystalline silica over a short period of time, sometimes as short as a few months.

**Chronic Effects:** the adverse health effects – lung disease, silicosis, cancer, autoimmune disease, tuberculosis and nephrotoxicity.

**Carcinogenic Potential:** This product is listed as a carcinogen by NTP, OSHA, or IARC.

### California Proposition 65:

**WARNING:** This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## 4. FIRST AID MEASURES

**Eyes:** Immediately flush eyes thoroughly with water for at least 15 minutes. Call physician if irritation persists.

**Skin:** Wash skin with soap and water. Call physician if irritation persists.

**Ingestion:** Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician for medical advice.

**Inhalation of Airborne Dust:** Remove to fresh air. Shortness of breath, coughing, reduced pulmonary function are signs of overexposure. Seek medical help if coughing and other symptoms do not subside.

## 5. FIRE FIGHTING MEASURES

Flash Point – None  
Lower Explosive Limit – None  
Upper Explosive Limit – None  
Auto Ignition Temperature – Not Combustible

Extinguishing Media – Not Combustible  
Special fire fighting Procedures – None  
Hazardous Combustion Products – None  
Unusual Fire & Explosion Hazards - None

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section 8.

**Method of Cleaning:** Vacuum cleaning is the preferred method for the dry fine materials. Avoid dry sweeping which creates dust. Apply water spray to prevent airborne dust. Scrape up wet material and place in an appropriate container.

### 7. HANDLING AND STORAGE

**Handling and Storage:** Normal temperatures and pressures do not affect the material. Do not breath dust which may be created during handling. Use good housekeeping procedures. Do not rely on vision to determine whether Respirable silica is present in the air, as it may be present without a visible cloud. Promptly remove dusty clothing and launder before reuse. Wash thoroughly after exposure to dust.

\*\*\* Warn your employees by posting and other means of the hazards and OSHA precautions to be used.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Eye Protection:** When engaged in activities where ingredients could contact the eye, wear safety glasses with side shields or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with ingredients.

**Skin Protection:** Prevention is essential to avoiding potentially severe skin injury. Avoid contact products ingredients. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to products might occur, wear impervious clothing and gloves to eliminate skin contact.

**Respiratory Protection:** Avoid actions that cause dust exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators should be used in the context of respiratory protection program meeting the requirements of the OSHA respiratory protection standard [29 CFR 1910.134] to control exposures when ventilation or other controls are inadequate or discomfort or irritation is experienced. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

**Ventilation:** Use local exhaust or general dilution ventilation to control exposure within applicable limits.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** – Light buff, gravel multicolored

**Odor** – No Distinct Odor

**Physical State** – Solid

**Specific Gravity (H<sub>2</sub>O=1)** – 2.65

**pH (in water) (ASTM D 1293-95)** – Not Applicable

**Solubility in Water** – Insoluble

**Vapor Pressure** – Not Applicable

**Vapor Density** – Not Applicable

**Boiling Point** – Not Applicable

**Melting Point** – Not Applicable

**Evaporation Rate** – Not Applicable

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### 10. STABILITY AND REACTIVITY

**Stability:** Stable.

**Conditions to avoid:** None

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Incompatibility with other materials:** Strong Oxidizing agents, such as fluorine, chlorine trifluoride, hydrogen fluoride, and oxygen trifluoride.

**Hazardous Decomposition:** Silica will dissolve in hydrofluoride acid and produce a corrosive gas – silicon tetrafluoride.

### 11. TOXICOLOGICAL INFORMATION

**Silicosis:** The major concern is silicosis (lung disease), caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic, accelerated or acute.

**Chronic or Ordinary Silicosis:** Is the most common form of silicosis, and can occur after many years of exposure to levels above the occupational exposure limits for airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis.

The overall IARC evaluation was that “crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** There is no data that suggests that crystalline silica is toxic to birds, fish or plants.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal:** Crystalline silica is not classified as a hazardous waste under the Resource Conservation and Recovery Act. Dispose of waste material according to local, state and federal regulations.

### 14. TRANSPORTATION INFORMATION

**Hazardous Materials Description/Proper Shipping Name:** Crystalline silica is not hazardous under U.S. Department of Transportation (DOT) regulations.

**Hazard Class:** Not Applicable

**Identification Number:** Not Applicable

**Required Label Text:** Not Applicable

**Hazardous Substances/Reportable Quantities:** Not Applicable

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### 15. REGULATORY INFORMATION

#### FEDERAL REGULATORY STATUS:

**Status under OSHA Hazard Communication Standard, 29 CFR 1910.1200:** Crystalline Silica is considered a "hazardous chemical" (because of its health hazard) under this regulation, and should be included in the employer's hazard communication program.

**Reportable Quantities Under the Clean Water Act, CERCLA, and EPCRA, 40 CFR 117, 302 and 355:** Not classified as hazardous substance.

**Status Under the Toxic Substances Control Act, 40 CFR 710:** Listed substance.

**Status under Workplace Hazardous Materials Information System (WHMIS), Canada:** Crystalline Silica is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS). WHMIS Classification: D-2A

### 16. OTHER INFORMATION

#### Label Requirements:

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Hazardous Material Information System (HMIS):	<b>Health</b>	<b>1</b>
	<b>Flammability</b>	<b>0</b>
	<b>Physical Hazards</b>	<b>0</b>
	<b>Personal Protection</b>	<b>B</b>

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: Safety glasses, gloves

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**

#### ADDITIONAL INFORMATION:

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CALPORTLAND, except that the product shall conform to contracted specifications. The information provided herein was believed by CalPortland Company to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.