



## MATERIAL SAFETY DATA SHEET

### SECTION 1: CHEMICAL PRODUCTS AND COMPANY IDENTIFICATION

**Product Name/Trade Name:** Blast Off, Dustnet

**Other Names:** Silica sand, silica, quartz, silicon dioxide, PTFE/Cellulose

**Use:** Raw material for sandblasting

**Manufacturer:** California Silica Products, LLC.

12808 Rancho Rd. Adelanto, CA 92301

**Effective Date:** July 17, 2008

Substance Name	CAS Number	UN Number	EINECS Number	Proportion (by weight)
Crystalline Silica (Quartz)	14808-60-7	238-878-4 Not hazardous for shipping purposes	238-878-4	>95%
Ferric Oxide		1332-37-2		>2%
Feldspar		68476-25-5		>2%
Mica		12001-26-2		>2%

### SECTION 2: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Substance Name	CAS Number	UN Number	EINECS Number	Proportion (by weight)
Crystalline Silica (Quartz)	14808-60-7	238-878-4 Not hazardous for shipping purposes	238-878-4	>95%
Mica	12001-26-2	Not hazardous for shipping purposes	310-127-6	<2%

### SECTION 3: HAZARDOUS IDENTIFICATION

**Exposure Limits:** Government Regulation

**Other Limits:** (Dustnet) Mist: 5 Mg/M3 (OSHA PEL/ACGIH TL V)

**Emergency Overview:** Not explosive, not a fire hazard

**Primary Routes of Entry and Potential Health Effects:**

#### Inhalation (Blast Off)

**Acute effects:** Dust may cause irritation of the nose, throat, and airways, resulting in coughing and sneezing. Certain susceptible individuals may experience wheezing (spasms of the bronchial airways) on inhaling dust.

**Chronic Effects:** Repeated and prolonged overexposures to dust containing crystalline silica causes silicosis (scarring of the lung) and increases the risk of bronchitis, tuberculosis, lung cancer, renal disease, and scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels, and internal organs). Studies have shown cigarette smoking increases the risk of silicosis, bronchitis, and lung cancer in persons also exposed to crystalline silica.

#### Inhalation (Dustnet)

**Acute effects:** No acute effects expected to twice exposure limit

#### Ingestion (Blast Off)

Unlikely under normal conditions of use, but swallowing this product may result in irritation or damage to the mouth and gastrointestinal tract due to mechanical abrasion.



#### **Ingestion (Dustnet)**

Negligible effect. Estimated LD50 in rats is 30 GM/KG.

#### **Eye**

Dust may irritate the eyes from mechanical abrasion causing watering and redness.

#### **Skin**

Dust may cause irritation of the skin from friction but cannot be absorbed through intact skin.

Medical conditions generally aggravated by exposure: pulmonary function may be reduced by inhalation of respirable crystalline silica. If lung scarring occurs, such scarring could aggravate other lung conditions such as asthma, emphysema, pneumonia, or restrictive lung disease. Lung scarring from crystalline silica may also increase risks to pulmonary tuberculosis.

#### **Smoking**

Cigarette smoking increases the risk of occupational respiratory diseases.

#### **Carcinogenicity**

##### **Proposition 65 Warning**

Respirable crystalline silica is known to the State of California to cause cancer.

##### **International Agency for the Research on Cancer (IARC)**

Crystalline silica inhaled in the forms of quartz or cristobalite from occupational sources is carcinogenic to humans.

##### **The National Toxicology Program (NTP)**

NTP has concluded that respirable crystalline silica is a known human carcinogen.

#### **LD50**

*Silicon Dioxide:* Rat oral >22,500 mg/kg    Mouse oral >10,500 mg/kg

NFPA Ratings (scale 0–4): Health=2, Flammability=0, Reactivity=0, Personal Protection=E

## **SECTION 4: FIRST AID MEASURES**

**Signs and symptoms of over exposure:** Breathlessness, wheezing, cough, sputum production (a release from glands in the walls of the bronchi airways and from cells lining the nose and sinuses).

#### **First Aid:**

##### **Swallowed**

If swallowed, dilute by drinking large amounts of water. Do not induce vomiting. Seek medical attention. If unconscious, loosen tight clothing and lay the person on his/her left side. Give nothing by mouth to an individual who is not alert and conscious.

##### **Eye Contact**

Remove contact lenses. Flush with running water or saline for at least 15 minutes. Seek medical attention if redness persists or if visual changes occur.

##### **Skin Contact**

Wash with mild soap and water. Contact physician if irritation persists or later develops.

##### **Inhaled**

Remove to fresh air. If shortness of breath or wheezing develops, seek medical attention.

#### **Advice to Doctor:**

Treat symptomatically.



## **SECTION 5: FIRE FIGHTING MEASURES**

**Flammable Classification:** OSHA: N/A DOT: Not Required

### **Fire and Explosion Hazard:**

1. Flash Point: (BlastOff) Not applicable, (Dustnet) 368 °F (does not flash by standard procedures)
2. Auto-ignition: Not applicable
3. Non-flammable and non-explosive

### **Extinguishing Media:**

(Blast Off) This material is not combustible. Appropriate extinguishing media for surrounding fire should be used.

(Dustnet) Foam (insoluble in water)

**Unusual Fire and explosion Hazards:** (Dustnet) Can possibly be ignited with high intensity sources of heat, high temperatures or pressure

**Fire Fighting:** Fire fighting personnel should wear normal protective equipment and positive self-contained breathing apparatus.

## **SECTION 6: ACCIDENTAL RELEASE**

**Precautions:** Good housekeeping practices are necessary for cleaning up areas where spills or leaks have occurred. Take measures to either eliminate or minimize the creation of dust. Respirable dust and silica levels should be monitored regularly.

Whenever possible, practices likely to generate dust should be controlled with engineering controls such as local exhaust ventilation, dust suppression with water and containment, enclosure or covers.

Use respiratory protection as described in Section 8.

**Clean-up Methods:** A fine water spray should be used to suppress dust when sweeping (dry sweeping should not be attempted). Vacuuming, preferably with an industrial vacuum cleaner outfitted with a high efficiency particulate (HEPA) filter, is preferred to sweeping. Waste may be disposed of by landfill and compliance with federal, state, and local requirements.

In the event of an accidental release, observe all protection measures set out in this MSDS. Avoid using materials and products that are incompatible with the product (Refer to Section 10).

## **SECTION 7: HANDLING AND STORAGE**

Keep away from reactive products. Do not store near food, beverages or smoking materials. Avoid spilling and creating dust. Maintain appropriate dust controls during handling. Use appropriate respiratory protection during handling as described in Section 8.

**Eye:** Avoid contact with eyes. When handling the product, dust resistant safety goggles/glasses should be worn.

**Skin:** Direct contact with skin should be avoided by wearing long sleeved shirts, pants, hat and gloves. Exposure to dust on work clothes should be avoided when changing or removing clothes. Work clothes should be washed regularly. Hands should be washed carefully and thoroughly after handling.

**Inhalation:** When engineering and administrative controls are inadequate to reduce exposures below exposure criteria, a NIOSH or MSHA approved respirator can be used to provide respiratory protection from the respirable crystalline silica. The approved respirators are a function of the type of respirator and the level of exposure for which protection is being afforded. Respiratory protection must be used in accordance with applicable regulations (e.g. 29 CFR 1910. 134). Applicable regulations include provisions for a user training program, respirator repair and cleaning, respirator fit testing and other requirements.



## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA Permissible Exposure Standards (PEL); Exposures shall not exceed an 8-hour time weighted average limit as stated in 29 CFR 1910.1000 Table Z-3 for mineral dusts, expressed in million particles per cubic feet (Mppcf) and/or milligrams per cubic meter (mg/m<sup>3</sup>). The American Conference of Governmental Industrial Hygienists Threshold Limit Values (TLV) is a recommended exposure limit based on an 8-hour time weighted average.

Substance Name	TLV mg/m <sup>3</sup>	OSHA PEL Mppcf	OSHA PEL mg/m <sup>3</sup>	MSHA PEL mg/m <sup>3</sup>
Crystalline Silica (quartz) (Respirable)	0.05 mg/m <sup>3</sup>	250 %SiO <sub>2</sub> +5	10 mg/m <sup>3</sup> %SiO <sub>2</sub> +2	10 mg/m <sup>3</sup> %SiO <sub>2</sub> +2
Quartz (Total Dust)	–	– %SiO <sub>2</sub> +2	30 mg/m <sup>3</sup> %SiO <sub>2</sub> +2	30 mg/m <sup>3</sup>
Mica (Respirable)	3 mg/m <sup>3</sup>	20		
Nuisance Dust (Not otherwise specified)				
(Total Dust)	10 mg/m <sup>3</sup>	50	15 mg/m <sup>3</sup>	
(Respirable)	3 mg/m <sup>3</sup>	15	5 mg/m <sup>3</sup>	

**Other Limits Recommended:** The National Institute of Occupational Safety and Health also has a Recommended Exposure Limit (REL) of 0.05 mg/m<sup>3</sup> for respirable crystalline silica, based on a 10-hour time weighted average.

**Personal Protection:** When handling products that may generate silica dust:

1. Work outdoors where feasible, otherwise use mechanical ventilation. Ventilate low-lying areas such as pits or sumps where dust or vapor might collect
2. Use NIOSH or MSHA approved respirator.
3. Use impervious gloves and apron
4. Use chemical tight goggles or full face shield
5. Warn others in area.

Use and maintain respirators that conform to ANSI Standard (Z88.2) particulate respirators. Select respirators based on the level of exposure to crystalline silica as measured by dust sampling. Use respirators that offer protection to the highest concentrations of crystalline silica if the actual concentrations are unknown. Put in place a respiratory protection and monitoring program that complies with MSHA or OSHA (e.g. 29 CFR 1910.134) standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements. Comply with all other federal state laws.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Order:** Granular, white or tan; odorless.

**Vapor Density:** (Blast Off) Not relevant, (Dustnet) 4.5 Heavier, Faster Than Water: Heavier

**Flash Point:** Not relevant

**Specific Gravity:** 2.55–2.75

**Autoignition Temp:** No relevant

**Flammability:** Not relevant

**Volatility:** Not relevant



**Boiling Point:** (Blastoff) 4045 °F (2930 °C), (Dustnet) 165 °F (74 °C)

**Solubility in Water:** Insoluble

**Melting Point:** 3050 °F (1677 °C)

**Evaporation Rate:** Not applicable

NFPA Ratings (Scale 0–4): Health=2, Flammability=0, Reactivity=0, Personal protection=E

## **SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Crystalline silica is stable under ordinary conditions.

**Conditions to Avoid:** Excessive dust generation during storage and handling.

**Materials to Avoid:** *Incompatibility:* Hydrofluoric acid will dissolve silica and can generate silicon tetrafluoride, a corrosive gas. Contact with strong oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, or oxygen difluoride may cause fires and/or explosions.

**Hazardous Decomposition Products:** (Dustnet) Combustion will produce carbon monoxide, hydrogen chloride

**Polymerization:** Will not occur

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **Acute Effects:**

#### **Swallowed**

Unlikely under normal conditions of use, but swallowing this product may result in irritation or damage to the mouth and gastrointestinal tract due to mechanical abrasion.

#### **Eye Contact**

Dust may irritate the eyes from mechanical abrasion causing watering and redness.

#### **Skin Contact**

Dust may cause irritation of the skin from friction but cannot be absorbed through intact skin.

#### **Inhaled**

Dust may cause irritation of the nose, throat, and airways, resulting in coughing and sneezing. Certain susceptible individuals may experience wheezing (spasms of the bronchial airways) on inhaling dust.

### **Chronic Effects:**

#### **Inhaled**

Repeated and prolonged overexposures to dust containing crystalline silica causes silicosis (scarring of the lung) and increases the risk of bronchitis, tuberculosis, lung cancer, renal disease, and scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels, and internal organs). Studies have shown cigarette smoking increases the risk of silicosis, bronchitis, and lung cancer in persons also exposed to crystalline silica.

Acute silicosis, a sub-chronic disease associated with acute, massive silica exposures, is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include, but are not limited to: shortness of breath, cough, fever, weight loss, and chest pain. Such exposure may cause pneumoconiosis and pulmonary fibrosis.

## **SECTION 12: ECOLOGICAL INFORMATION**

There is a limited amount of ecological data available on this product, primarily because it is a naturally occurring mineral. An adequate representation of this data is beyond the scope of this document.



### **SECTION 13: DISPOSAL CONSIDERATIONS**

Dispose of material as inert, non-metallic mineral in conformance with local, state, and federal regulations. Crystalline silica is not a RCRA hazardous waste. Do not flush to drain/storm sewer.

### **SECTION 14: TRANSPORT INFORMATION**

**UN No.:** None allocated  
**Dangerous Goods Class:** None allocated  
**Hazchem Code:** None allocated  
**Poisons Schedule:** None allocated  
**Packing Group:** Not applicable  
**Label:** Not a DOT hazardous material. Local regulations may apply.

### **SECTION 15: REGULATORY INFORMATION**

**DOT Hazard Classification:** None

**Placard Requirement:** Not a DOT hazardous material. Local regulations may apply.

**California Proposition 65 Warning:** Airborne particles of respirable size of crystalline silica are known to the State of California to cause cancer.

#### **CERCLA Hazardous Substance (40 CFR Part 302):**

Listed Substance: No  
Unlisted Substance: No  
Reportable Quantity (RQ): None  
Characteristic(s): Not applicable  
RCRA Waste Number: Not Applicable

#### **SARA, Title III, Sections 302/303 (40 CFR Part 355-Emergency Planning Notification):**

Extremely Hazardous Substance: No

#### **SARA, Title III, Sections 311/312 (40 CFR Part 3570-Hazardous Chemical Reporting: Community Right-To-Know):**

Acute: Yes  
Chronic: Yes  
Fire: No  
Pressure: No  
Reactivity: No

#### **SARA, Title III, Sections 313 (40 CFR Part 372-Toxic Chemical Release Reporting: Community Right-To-Know):**

Not a RCRA Hazardous Waste

**TSCA Inventory List:** Yes

**TSCA 8(d):** No



**WARNING**

**WARNING – AVOID BREATHING SILICA DUST**

Product contains silica. Inhalation of respirable silica dust can cause silicosis, a potentially disabling lung disease, and is known to the State of California to cause lung cancer. When handling products that may generate silica dust:

1. Work outdoors where feasible, otherwise use mechanical ventilation.
2. Wear a dust mask or if dust may exceed PEL, use NIOSH-approved respirator.
3. Warn others in area.

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