



Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification: Refractory cement made from Silica (SiO₂)

Product Name: Fused Silica Nozzle, Rod, Crucible, and other Cast Shapes

Made in China

Imported by:

Ceramsource, Inc.

P.O. Box 6026

East Brunswick, NJ 08816

Tel: 800-608-5828

2. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Hazardous Components</u>	<u>CAS Number</u>	<u>OSH PEL</u>	<u>ACGIH</u>	<u>NIOSH</u>	<u>%</u>
Fused Silica (SiO _s)	60676-86-0			6.0 mg/m ³	95-99
Colloidal Silica (SiO ₂)	7631-86-9	6 mg/m ³	10 mg/m ³	N/A	<3.0
Cristobalite (SiO ₂)*	14464-46-1	-	0.05 mg/m ³	N/A	<1.2

As supplied, this materials contains less than 1.2% crystalline silica (SiO₂). During use at temperatures greater than 900 C crystalline silica (SiO₂) will be progressively formed. As a solid refractory shape, there is no consequential health hazard. Only when this material is transformed into dust particles, by machining or disposal, should care be taken to avoid breathing the dust.

3. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A

Melting Point: >1600 °C

Specific Gravity (H₂O-1):

Vapor Pressure: N/A

Solubility: None in water

1.90 – 1.06 g/cm³

Evaporation Rate: None at room temperature

Appearance & Odor: Off-white granular paste, No odor.

4. FIRE FIGHTING MEASURES

Flammable Properties: Non-flammable
Flash Point: None
Upper and Lower Flammability Limits: None
Extinguishing Media: Non-flammable
Special Fire Fighting Procedures: None

5. STABILITY AND REACTIVITY

Incompatibility: None
Conditions to Avoid: None
Hazardous: Will not occur
Polymerization: May occur
Hazardous decomposition products: May oxidize to form carbon dioxide (CO₂), and carbon monoxide (CO) when heated above 300°C.

6. HAZARDS IDENTIFICATION

Potential Health Effects When Dust Is Generated

Eye contact: Dust or particles may cause irritation

Skin contact: yes

Ingestion: N/A

Inhalation: Acute exposure to nuisance dust may result in upper respiratory irritation.

Health Hazards (Acute and Chronic): This material is a solid article and has no health hazard unless dust is created by dry cutting or grinding. Acute exposure will have only nuisance dust effects. Chronic exposure to dust containing crystalline silica (SiO₂) in concentrations higher than TLV limit lead to silicosis in lungs. NIOSH lists respirable crystalline silica (SiO₂) as a potential occupational human carcinogen. IARC lists respirable crystalline silica (SiO₂) as a know occupational human carcinogen. Signs and symptoms of Exposure: Dust may cause irritation of the respiratory system, skin, and eye. Symptoms for chronic exposure include coughing and difficulty in breathing. Syptoms of silicosis are normally delayed in a number of years.

Medical Conditions Aggravated by Exposure: Other pulmonary conditions and diseases.

Emergency and First Aid Procedures:

Eye contact: Flush immediately with large amounts of water. Do not rub eyes. Get medical help if irritation persists.

Skin contact: Wash affected area with soap and water.

Inhalation: Remove affected individual to a dust free place. Seek medical help if irritation persists.

7. ACCIDENTAL RELEASE MEASURES

Personal Precautions: If dust is generated during work activity, approved respirator and safety glasses should be worn. Care should be exercised to minimize the generation of fugitive dusts when handling or machining this product.

Cleanup Measures: Dry sweeping of materials should be avoided to minimize dust emissions into the air. Settled dust and particles should be cleaned up using wet sweeping techniques or with a HEPA filtered vacuum.

8. HANDLING AND STORAGE

Handling: Handled so as not to create dust. Ceramic materials are brittle; care must be taken to prevent cracking or unsafe conditions may occur in contact with a molten metal

Storage: Keep product dry. If wet, potentially violent cracking may occur in contact with molten metal.

9. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Machining or grinding can result in dust that may contain crystalline silica (SiO₂)

Respiratory Protection: NIOSH-approved respirator is recommended if PEL's or TLV's are exceeded.

Skin and Hand Protection: Abrasive resistant gloves. Do not handle hot refractories.

Eye and Face Protection: Safety glasses with full side shields or goggles.

10. DISPOSAL CONCERNS

During removal, nuisance dust may be generated. Exposure to respirable dust should be minimized by appropriate engineering controls and personal protective equipment. Loose material should be contained to prevent airborne dust.

Can be disposed of as non-hazardous waste in accordance with local, state federal regulations.

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