

MATERIAL SAFETY DATA SHEET

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SECTION 1
PRODUCT IDENTIFICATION

Chemical Name(s) and Synonym(s): Silicon Dioxide Formula: SiO₂

Chemical Family: Metal Oxide Chem. Abstract No.: 14808-60-7

TSCA: Product is Listed Cal. Molecular Weight: 60.08

SECTION 2
INGREDIENTS/SUMMARY OF HAZARDS

<u>Ingredient(s)</u>	<u>CAS #</u>	<u>%</u>	<u>TLV</u>	<u>OSHA PEL</u>
Silicon Dioxide	14808-60-7	100	0.1mg/m ³	0.1mg/m ³

SECTION 3
PHYSICAL DATA

Boiling Point (°C) : 2230 Density (gm/cc): 2.6

Vapor Pressure: NA % Volatile by Volume: NA

Reaction with Water: None Evaporation Rate: NA

Solubility with Water: Insoluble Melting Point (°C): 1710

Appearance/Odor: White, no odor.

Other: Readily dissolves in hydrofluoric acid to form the gas silicon tetrafluoride.

SECTION 4
FIRE AND EXPLOSION HAZARD DATA

Flashpoint/Method: NA

Autoignition Temp (°C): NA

Flammability: Non-flammable

Extinguishing Media: Water Foam Class D Extinguisher
 Dry Chemical CO(2)
 Other (specify):

Special Fire Fighting Procedures: Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

FIRE AND EXPLOSION HAZARD DATA (Continued)

Unusual Fire and Explosion Hazards: Material may generate toxic fumes if involved in a fire.

SECTION 5
HEALTH HAZARD DATA

Toxicity Data

HMS Hazard Rating:

Health:	3	Flammability:	0
Reactivity:	0	Personal Protection:	H

Route(s) of Entry: (x) Inhalation () Skin (x) Ingestion

EFFECTS OF OVEREXPOSURE (acute and chronic)

Inhalation: Prolonged exposure can cause fibrosis of the lung, silicosis.

Dermal/Eye Contact: May cause irritation, inflammation.

Other (specify): No adverse effects since material is insoluble.

Medical Conditions Generally Aggravated By Exposure: Respiratory disorders

CARCINOGENICITY: yes NTP: no IARC MONOGRAPHS: yes OSHA REGULATED: no

The action of crystalline silica on the lungs results in the production of a diffuse, modular fibrosis in which the parenchyma and the lymphatic system are involved. The fibrosis is, to a certain extent, progressive and may continue to increase for several years after exposure is terminated. When the pulmonary reserve is sufficiently reduced, the worker complains of shortness of breath or exertion. This is the first and most common symptom in cases of uncomplicated silicosis. If severe, it may incapacitate the worker for heavy or even light, physical exertion. The most common physical sign of silicosis is a limitation of expansion of the chest. There may be a dry cough, sometimes very troublesome.

EMERGENCY AND FIRST AID PROCEDURES:

Ingestion: Administer 1-2 glasses of milk to induce vomiting. Seek medical attention.

Inhalation: Remove victim to fresh air. Administer oxygen. Seek medical attention.

Skin: Brush material off skin. Wash affected area with soap and water.

Eyes: Flush eyes with water for 15 mins. Seek medical attention.

SECTION 6

REACTIVITY DATA

Stability: Stable Unstable

Conditions to avoid: NA

Incompatibility (materials to avoid):

Water Combustible materials Strong bases
 Reducing Agents Strong oxidizing materials Strong acids
 Other (specify): ClF3, MnF3, OF2, and F containing compounds

Hazardous Decomposition Products: NA

Hazardous Polymerization: May occur Will not occur

Conditions to avoid: NA

SECTION 7

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Wear protective clothing. Isolate the area and insure proper ventilation. Vacuum up spill using a high efficiency unit and place in proper container for disposal.

Waste disposal method: In accordance with regulations.

SECTION 8
INFORM SPECIAL PROTECTIVE ATION

Respiratory Protection: (Specify type) NIOSH approved respirator.

Ventilation: Local Exhaust: Maintain exposure below TLV for Silicon
Mechanical (General): Recommended
Special:

Protective Gloves: Neoprene

Eye Protection: (x) Safety Glasses with Side Shields
() Chemical Workers Dust-Proof Goggles (under dusting
conditions)
() Gas-Tight Goggles or Equivalent
() Other (specify):

Other Protective Equipment: Maintain sink, shower and eyewash fountain
in
work area. Wear protective clothing to prevent contamination of skin.

SECTION 9
SPECIAL PRECAUTIONS AND TRANSPORTATION REGULATIONS

Precautions To Be Taken In Handling And Storing: Store in tightly closed
containers in a cool, dry place. Wash hands and face thoroughly.

Transportation Requirements:

DOT Class: Not Classified
UN Number: Not Classified
IMCO Class: Not Classified
Other:

ND = No Data Found NA = Not Applicable

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