

Material Safety Data Sheet (MSDS)

Revised October 8, 1999

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I. Product Identification

Trade Name: Silica Sand - All Grades
Manufacturer's Name: Manley Bros. of Indiana, Inc.
Manufacturer's Address: P.O. Box 80, Vermillion Road
Troy Grove, IL 61372
Manufacturer's Telephone: (815) 539-7486
Date Revised: 10/99

II. Hazardous Ingredients

Chemical Names	CAS Number	
Silica, Quartz, SiO ₂	14808-60-7	
Exposure Limits in Air	ACGIH-TLV	0.1 mg/cubic meter
Percentage >95	OSHA-PEL	0.1 mg/cubic meter
	NIOSH *	0.05 mg/cubic meter
	(* Recommended Standard)	

Exposure Limits refer to the respirable fraction

III. Physical Properties

Vapor Density: Not Applicable
Specific Gravity: 2.65 Crystalline
Solubility in Water: Insoluble
Vapor Pressure, mmHg at 20° C: Essentially Zero
Melting Point or Range, °F: Above 2000 °F
Boiling Point or Range, °F: Above 3500 °F
Evaporation Rate: None
Appearance and Odor: Light Buff to White Sand, No Odor
How to Detect This Substance: Detect sand by appearance. The dangerous respirable dust may only be detected using special measuring equipment. It should be assumed that wherever silica sand is re-handled some dust will be generated and routine measuring performed to detect and determine the level.

IV. Fire and Explosion

Flash Point:	None
Auto Ignition Temperature:	None
Flammable Limits in Air:	Not Combustible
Special Fire Fighting Procedures:	None, may be used to extinguish fire
Unusual Fire and Explosion Hazards:	None

V. Health Hazard Information

Health Effects or Risks from Exposure

Silicosis PROLONGED INHALATION OF RESPIRABLE SILICA (DUST) WILL RESULT IN PERMANENT LUNG DAMAGE. A Condition known as Silicosis. To prevent its occurrence, dust levels must be monitored and personnel exposed to respirable silica at or above the Permitted Exposure Level, MUST wear OSHA approved respirators.

Cancer Agent: YES NTP: Yes IARC: Yes Federal OSHA: No

NTP: Respirable crystalline silica has been listed by The National Toxicology Program in the 6th Annual Report on Carcinogens to Humans (1992) as an anticipated carcinogen. IARC: The International Agency for Research on Cancer Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans, in Vol. 68, concludes that there is sufficient evidence of the carcinogenicity of inhaled crystalline silica to humans.

EXPOSURE TO RESPIRABLE SILICA CAN CAUSE CANCER. Personnel exposed to respirable silica MUST wear OSHA approved respirators.

Symptoms of Overexposure

Inhaled:	Coughing, shortness of breath, reduced pulmonary function. Effects may be delayed, the disease usually being contracted over an extended period of exposure.
Contact with Skin or Eyes:	Irritation
Absorbed through Skin:	Not Applicable
Swallowed:	May Cause Nausea

First Aid - Emergency Procedures

Eye Contact:	Flush with water for 15 minutes. Seek medical attention.
Skin Contact:	Wash with soap and water. If irritation persists seek medical attention.
Inhaled:	Remove to fresh air at once. Apply artificial respiration if breathing has stopped. Seek immediate medical attention.
Swallowed:	If discomfort persists seek medical attention.

All other pulmonary medical conditions are aggravated by exposure to respirable quartz.

VI. Reactivity Data

Stability:	Stable
Incompatibility (materials to avoid):	Strong Oxidizing Agents
Hazardous Decomposition Products (Including combustion products):	None
Hazardous Polymerization:	Will not occur

VII. Spill, Leak and Disposal Procedures

Spill Response Procedures:	Clean up using approved dustless methods (flush with water, or vacuum) to minimize generation of airborne respirable dust.
Waste Disposal:	Dispose of all waste in accordance with federal, state and local regulations in a facility approved for silica disposal.

VIII. Special Handling Information

Ventilation and Engineering Controls:	Local mechanical ventilation where necessary to keep below safe levels (PEL) Use NIOSH approved respiratory equipment for respirable quartz (<u>supplied air types are strongly recommended</u>)
Eye Protection:	Safety goggles
Gloves:	Not normally necessary
Other Clothing and Equipment:	Provide eye wash
Work Practices, Hygienic Practices:	Minimize dust generation. Clean up spills promptly. Monitor respirable quartz in workplace on a frequent regular basis.
Other Handling and Storage Requirements:	Avoid dust generation during handling. Clean up spills. Practice good housekeeping. No special storage requirements. Train all employees in all aspects of this MSDS <u>before</u> they work with this product.

See OSHA Hazard Communication Rule CFR 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21, state and local worker or community "right to know" laws and regulations. Familiarize and train your employees with the requirements of the MSDS. **WARN YOUR EMPLOYEES, AND YOUR CUSTOMERS IF YOU MERCHANT OR RE-SELL THE PRODUCTS, OF THE HAZARD AND THE OSHA PRECAUTIONS TO BE USED.**

IX. Other Information

H.M.I.S. Rating:	
Health Hazard Rating:	1 Chronic exposure to respirable silica will result in silicosis exposure to respirable silica can cause cancer
Flammability Hazard Rating:	0
Reactivity Hazard Rating:	0
Personal Protective Equipment	E Comply with special OSHA respiratory protection if sandblasting
D.O.T.	Not Regulated
SARA Title III.	Not Listed

CAUTION!

PROLONGED INHALATION OF RESPIRABLE QUARTZ WILL CAUSE LUNG DAMAGE. A CONDITION KNOWN AS SILICOSIS.

Silica sands may generate respirable dust during use. Examples of conditions which promote the generation of respirable dust include, thermal shock, sandblasting, grinding, machining or operations where abrasion with silica takes place.

Monitor work area on a frequent regular basis for respirable quartz (silica). Use appropriate ventilation and/or respiratory protection unless exposure levels are known to be below permitted exposure levels.

INHALATION OF RESPIRABLE QUARTZ CAN CAUSE CANCER!

The International Agency for Research on Cancer (IARC) has determined that there is evidence for the carcinogenicity of crystalline silica to humans.

The department of Health and Human Services' National Toxicology Program (NTP), in its Sixth Annual Report on Carcinogens, has listed respirable crystalline silica in a category of substances which may 'reasonably be anticipated to be carcinogenic.' Such substances are defined as those for which there is limited evidence of carcinogenicity in experimental animals.

Monitor work area on a frequent regular basis for respirable quartz (silica). Use appropriate ventilation and/or respiratory protection unless exposure levels are known to be below permitted exposure levels.

It is extremely important that your company follow OSHA standards for respiratory protection as they exist or are hereafter modified or amended. As part of your training program, please distribute this information to all employees

Manley Bros. of Indiana, Inc.

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