



Material Safety Data Sheet [OSHA 29 CFR 1910.1200]

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MSDS 99-B

SECTION I: PRODUCT IDENTIFICATION

Product Types: SILICA SANDS AND GRAVEL

QUIKRETE® Product Name	Code #	QUIKRETE® Product Name	Code #
ALL- PURPOSE SAND	1152	ALL PURPOSE GRAVEL	1151
PLAY SAND	1113	POOL FILTER SAND	1153
TUBE SAND	1159	DECO PEBBLES	9905
PATIO PAVER SAND	1150	MASON SAND	1952
TRACTION SAND	1158	PLASTER SAND	1113-54

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M ³	TLV (ACGIH) mg/M ³
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.1
Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M³ (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

DO NOT USE FOR SANDBLASTING.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: White or tan sand, granular, crushed, or ground to fine mesh sizes

Specific Gravity: 2.5 to 2.7 **Melting Point:** >3110 °F (1710 C) **Boiling Point:** 4046 F (2230 C)

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Vapor Pressure: None Vapor Density: None Evaporation Rate: None
 Solubility in Water: Slight Odor: None

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.

Extinguishing Media: None required; Sand may be used as extinguishing media for Class A and B fires.

SECTION V - REACTIVITY DATA

Stability: Stable.

Incompatibility (Materials to Avoid): Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.

Hazardous Polymerization: Will Not Occur. **Condition to Avoid:** None

SECTION VI - HEALTH HAZARD DATA

The product contains silica particles that may be broken down to the respirable size range during shipping, handling, or use, and thus may be inhaled.

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

Health Hazards (Acute and Chronic):

Contains Silica dust that can cause severe and permanent lung damage and other diseases.

Breathing silica dust can cause silicosis, a lung disease that can cause serious breathing difficulties and death.

Breathing Silica dust may cause cancer.

Breathing silica dust may cause scleroderma, a scarring of the skin and internal organs.

Breathing silica dust may not cause noticeable injury or illness, even though permanent lung damage may be occurring.

Carcinogenicity Listings:

NTP:	Probable carcinogen
OSHA:	Not listed as a carcinogen
IARC Monographs:	Group 1 Carcinogen
California Proposition 65:	Known carcinogen

NTP: The national Toxicology Program, in its sixth Annual Report on Carcinogens concluded that "silica, crystalline (respirable)" may reasonably be anticipated to be a carcinogen, based on sufficient evidence in experimental animal and limited evidence in humans.

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IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." 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)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997)

Signs and symptoms of Exposure: Undue breathlessness, wheezing, cough, and sputum production.

Medical Conditions Generally Aggravated by Exposure: Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also lung scarring produced by such inhalation may lead to a progressive massive fibrosis of the lung (silicosis) which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary failure. Smoking aggravates the effect of exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Emergency and First Aid Procedures: For sand in eyes, wash immediately with water. If irritation persists, seek medical attention. For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into closable container for disposal or flush with water. Do not dry sweep. Wear protective equipment specified below.

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

SECTION VIII - CONTROL MEASURES/PERSONAL PROTECTION

Inhalation: DO NOT BREATHE DUST. In cases where the sand can be used in a damp condition, the most effective dust control measure is to keep the sand damp. Many uses of silica sand require it to be used in a dry condition, in such cases PEL exposure limits may be exceeded. Local exhaust can be helpful to reduce airborne dust levels. When dust levels exceed PEL exposure limits, the use of an OSHA, MSHA or NIOSH approved respirator is required. Respirator requirements are based on exposure level as shown below:

5 x PEL or less: Any dust respirator

10 x PEL or less: Any dust respirator, except single-use or quarter-mask respirator. Any fume respirator or high efficiency particulate filter respirator.

50 x PEL or less: A high efficiency particulate filter respirator with a full face-piece.

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500 x PEL or less: A powered air-purifying respirator with a high efficiency particulate filter. A Type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.

Greater than 500 x PEL or entry and escape from unknown concentrations: Self-contained breathing apparatus with a full face-piece operated pressure-demand or other positive pressure mode. A combination respirator which includes a Type C supplied-air respirator with a full face-piece operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode.

Eyes: Wear tight fitting goggles

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Customers-users must comply with all applicable health and safety laws, regulations and orders covering silica.