



Material Safety Data Sheet

[OSHA 29 CFR 1910.1200]

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MSDS D

SECTION I: PRODUCT IDENTIFICATION

PRODUCT TYPES: QUIKRETE® DRY PACKAGED PORTLAND CEMENT BASED PRODUCTS (SERIES 2)

<u>QUIKRETE® Product Name</u>	<u>Code #</u>	<u>QUIKRETE® Product Name</u>	<u>Code #</u>
SHOTCRETE (FORMERLY GUN-ITE)	1228	SHOTCRETE MS (FORMERLY GUN-ITE MS)	1229
NON-SHRINK PRECISION GROUT ANCHORING CEMENT	1585 1245	NON-SHRINK GENERAL PURPOSE GROUT	1585-01
RAPID HARDENING SAND MIX	1243-50	QUIKWALL® FOUNDATION COATING	1215
HYDRAULIC WATER STOP	1126	RAPID ROAD REPAIR, FIBERED	1242-50
QUICK SETTING CEMENT	1240	RAPID ROAD REPAIR, UNFIBERED	1242-52
CONCRETE RESURFACER, SKID RESISTANT	1131-61	CONCRETE RESURFACER	1131-60
FIBERCRETE	1009-00	EXTERIOR USE ANCHORING CEMENT	1245-80
SELF LEVELING FLOOR RESURFACER		GEO THERMAL WELL GROUT	1590-55
FAST-SETTING SELF LEVELING FLOOR RESURFACER (FORMERLY KNOWN AS SELF LEVELING FLOOR RESURFACER: NORMAL SET, FAST SET)			1249-50 1249-51

(ALSO APPLIES TO CUSTOM BLENDED SHOTCRETE MIXES)

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	<u>10</u> %SiO ₂ +2	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	<u>80 mg/M³</u> % SiO ₂	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized 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.



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SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate.

Specific Gravity: 2.6 to 3.15	Melting Point: >2700°F	Boiling Point: >2700°F
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.

SECTION V - REACTIVITY DATA

Stability: Stable.

Incompatibility (Materials to Avoid): Contact of silica 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: Keep dry until used to preserve product utility.

SECTION VI - HEALTH HAZARD DATA

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

Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

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

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al.*, 1997; Hind *et al.*, 1997)

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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: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from 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 First Aid Procedures:

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.

Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into covered container for disposal or use if not contaminated or wet. Use adequate ventilation.

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 dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.

Eyes: Wear tight fitting goggles.

Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

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.