



CEMENT &amp; CONCRETE PRODUCTS™

Sid Harvey item # 650-1

SDS # Z0319

## C4: Portland Cement Based Concrete Products

**SAFETY DATA SHEET**  
(Complies with OSHA 29 CFR 1910.1200)

### SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies  
One Securities Centre  
3490 Piedmont Road, Suite 1300  
Atlanta, GA 30305

Emergency Telephone Number  
(770) 216-9580  
Information Telephone Number  
(770) 216-9580

Revision: Nov-15  
SDS C4

<b>QUIKRETE® Product Name</b>	<b>Item #(s)</b>
MORTAR MIX	1102
VIEUX CARRE MORTAR MIX	1102-86
ALL-STAR MORTAR MIX	1122
MASON MIX	1136
ALL-STAR MASON MIX	1136
QUIKRETE® PRO-FINISH BLENDED MASON MIX	1136-58
ALL-STAR VENEER STONE MORTAR	1137
ROOF TILE MORTAR	1140
VENEER STONE MORTAR	1137
POLYMER MODIFIED VENEER STONE MORTAR	1137-85
CSC-4	1191-84
TUCKPOINTING MORTAR – ZIP AND MIX	1251-15
GLASS BLOCK MORTAR	1610
K-1 Mortar	210280
HANDICRETE MORTAR MIX	
NATURAL STONE MORTAR	
RED-E-CRETE MORTAR	
BULK MASONRY MORTARS: MIX 101M, 102 S, 104 N, 112 M, 112 N, 112 S, 122 M, 122 N, 122 S, 132 S, 142, 201 M, 202 PLN, 202 S, 203 PLS, 203 S, 203 N, 204 N, 205 P/L type O, 203 M, 212 M, 212 N, 212 S, 222 M, 222 S, 253 S, 294 N	

**Product Use:** Masonry Mortars for construction with block, brick, veneer stones, etc.

### SECTION II - HAZARD IDENTIFICATION

**Hazard-determining components of labeling:** Silica, Portland cement

#### 2.1 Classification of the substance or mixture

Carcinogen – Category 1A

Skin Corrosion – Category 1B

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Skin Sensitization – Category 1B

Specific Target Organ Toxicity Repeat Exposure – Category 1

Specific Target Organ Toxicity: Single Exposure – Category 3

## 2.2a Signal word DANGER!

### 2.2b Hazard Statements

May cause cancer through chronic inhalation

Causes severe skin burns and serious eye damage

May cause an allergic skin reaction

Causes damage to lungs through prolonged or repeated inhalation

May cause respiratory irritation

### 2.2c Pictograms



### 2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.

Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Use only in a well-ventilated area.

Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.

If significant skin irritation or rash occurs: get medical advice or attention.

**Immediately seek medical advice or attention if symptoms are significant or persist.**

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/containers in accordance with all regulations.

**2.3 Additional Information** Precautions must be observed because burns occur with little warning -- little heat is sensed.



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**2.3a HNOC – Hazards not otherwise classified:** Not applicable

**2.3b Unknown Acute Toxicity:** None

**2.3C WHMIS Classification**

Class D2B – Skin/Eye Irritant

Class D2A – Chronic Toxic Effects – Carcinogen

Class E – Corrosive Material

**2.3d Label Elements According To WHMIS**

**Hazard Symbols**



**Signal Word**

DANGER!

**SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

<b>Hazardous Components</b>	<b>CAS No.</b>	<b>% by Weight</b>
Sand, Silica, Quartz	14808-60-7	40-70*
Portland Cement	65997 15 1	10-30*
Lime	01305-62-0	5-10*
Alternately to Lime, May Contain:		
Calcium Carbonate	1317-65-3	5-10*
Calcium Sulfate Dihydrate	7778-18-9	1-5*

\*The concentrations ranges are provided due to batch-to-batch variability.  
None of the constituents of this material are of unknown toxicity.

**SECTION IV – FIRST AID MEASURES**

**4.1 Description of the first-aid measures**

**General information:**

**After inhalation:** Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.

**After skin contact:** Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.

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**After eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**After swallowing:** Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms/effects, acute and delayed

**Inhalation:** May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

**Skin contact:** Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes. Precautions must be observed because burns occur with little warning -- little heat is sensed.

**Eye Contact:** Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

**Ingestion:** May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

#### 4.3 Indication of immediate medical attention and special treatment needed:

Immediately seek medical advice or attention if symptoms are significant or persist.

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### SECTION V - FIRE FIGHTING MEASURES

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**5.1 Flammability of the Product:** Non-flammable and non-combustible

**5.2 Suitable extinguishing agents:** Treat for surrounding material

**5.3 Special hazards arising from the substance or mixture:** None

**5.3a Products of Combustion:** None

**5.3b Explosion Hazards in Presence of Various Substances:** Non-explosive in presence of shocks

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### SECTION VI – ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** Wear personal protective equipment (See section VIII). Keep unprotected persons away.

**6.2 Methods and material for containment and cleaning up:**



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Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

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## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

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### 7.1 Handling

**Precautions for safe handling:** Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8). Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

### 7.2 Storage

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

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## SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

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### 8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M <sup>3</sup>	TLV (ACGIH) mg/M <sup>3</sup>
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Lime	01305-62-0	5	5
Pulverized Limestone	01317-65-3	5 (resp) 15 (total)	10 (resp)

### 8.2 Exposure Controls

Use ventilation adequate to keep exposures below recommended exposure limits.

### 8.3 General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

#### 8.3a Personal protective equipment

##### Protection of hands:

Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. Precautions must be observed because burns occur with little warning -- little heat is sensed.



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### Eye protection:

Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses).

### Respiratory protection:

A NIOSH-approved dust mask or filtering face piece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

## SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

### General Information

<b>Appearance</b>	Form: Granular Solid Color: Gray to gray-brown colored Odor: None
<b>pH-value at 20°C (68 °F):</b>	13 (10%)
<b>Boiling point/Boiling range:</b>	Not applicable
<b>Flash point:</b>	Not applicable
<b>Auto igniting:</b>	Product is not self-igniting
<b>Vapor pressure at 21°C (70°F)</b>	Not available
<b>Density at 25°C (77 °F):</b>	2.6 to 3.15

### Solubility in / Miscibility with

<b>Water:</b>	Insoluble
<b>VOC content:</b>	0 g/L VOC

## SECTION X – STABILITY AND REACTIVITY

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Stable under normal storage conditions. Keep in dry storage.

### 10.3 Possibility of hazardous reaction

No dangerous reaction known under conditions of normal use.

### 10.4 Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### 10.5 Incompatible materials

Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires

### 10.6 Hazardous Decomposition or By-products

Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

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**SECTION XI – TOXICOLOGICAL INFORMATION**

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**11.1 Exposure Routes:** Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

**11.2 Symptoms related to physical/chemical/toxicological characteristics:**

**Inhalation:** May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

**Skin contact:** Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

**Eye Contact:** Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

**Ingestion:** Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

**11.3 Delayed, immediate and chronic effects of short-term and long-term exposure**

**Short Term**

Skin Corrosion/Irritation: Causes severe skin burns.

Serious Eye Damage/Irritation: Causes severe eye damage.

Respiratory Sensitization: Not available

Skin Sensitization: May cause an allergic skin reaction.

Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.

Aspiration Hazard: Not available

**Long Term**

Carcinogenicity: May cause cancer through chronic inhalation.

Germ Cell Mutagenicity: Not available

Reproductive Toxicity: Not available

Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure

Synergistic/Antagonistic Effects: Not available.

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**SECTION XII – ECOLOGICAL INFORMATION**

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**12.1 Ecotoxicity**



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May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

### 12.2 Persistence and degradability

No further relevant information available.

### 12.3 Bioaccumulative potential:

No further relevant information available.

### 12.4 Mobility in soil

No further relevant information available.

### 12.5 Other Adverse Effects

No further relevant information available.

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## SECTION XIII – DISPOSAL CONSIDERATIONS

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### 13.1 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 the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

### 13.2 Other disposal considerations

#### Uncleaned packaging

**Recommendation:** Disposal must be made in accordance with local, state and federal regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

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## SECTION XIV – TRANSPORT INFORMATION

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	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

### 14.1 Environmental hazards:

Not Available

### 14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code

Not available





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### 14.3 Special precautions for user

Do not handle until all safety precautions have been read and understood.

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## SECTION XV – OTHER REGULATORY INFORMATION

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### 15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

#### Canada

**WHMIS Classification:** Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

### 15.2 US Federal Information

#### SARA 302/311/312/313 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.

**RCRA:** Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

**CERCLA:** Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

**Emergency Planning and Community Right to Know Act (SARA Title III):** Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

**FDA:** Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

**NTP:** Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

**OSHA Carcinogen:** Crystalline silica (quartz) is not listed.

### 15.3 State Right to Know Laws

#### California Prop. 65 Components

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**California Inhalation Reference Exposure Level (REL):** California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

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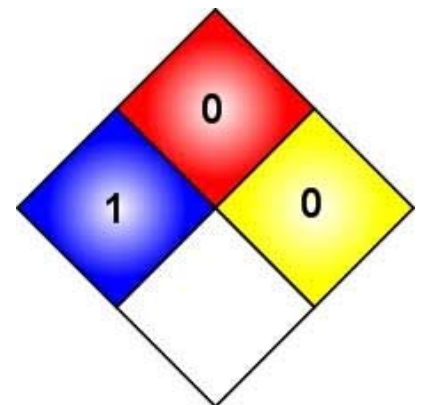
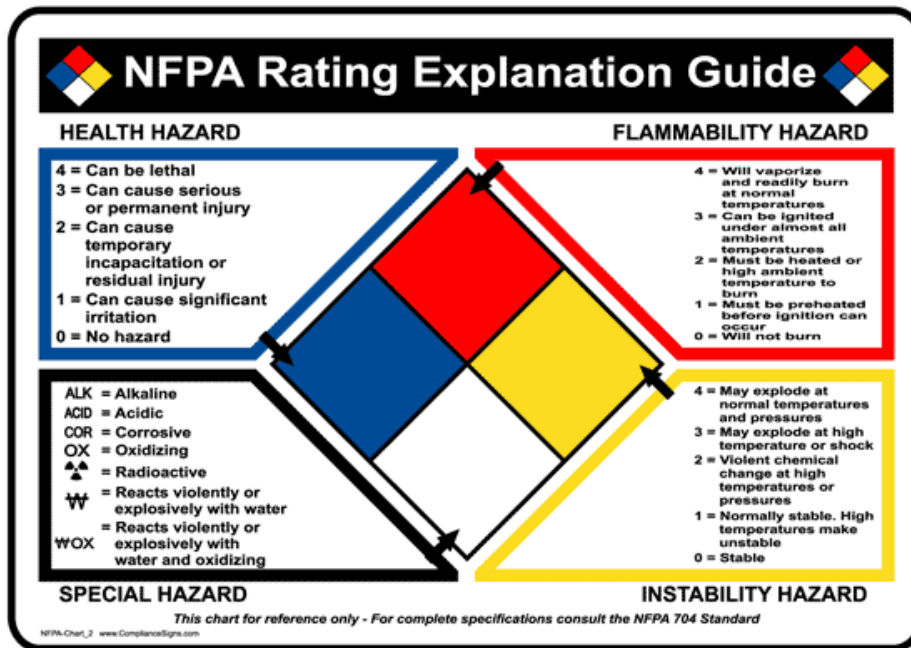
**Massachusetts Toxic Use Reduction Act:** Silica, crystalline (respirable size, <10 microns) is “toxic” for purposes of the Massachusetts Toxic Use Reduction Act.

**15.4 Global Inventories**

**DSL** All components of this product are on the Canadian DSL list.

**TSCA No.:** Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

**15.5 NFPA Ratings**



**SECTION XVI – OTHER INFORMATION**

**Last Updated: November 5, 2015**

**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.

**QUIKRETE**<sup>®</sup>**CEMENT & CONCRETE PRODUCTS™**

Prepared by

The QUIKRETE<sup>®</sup> Companies  
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**End of SDS**

## Masonry Mortars

### MATERIAL SAFETY DATA SHEET (Complies with OSHA 29 CFR 1910.1200)

#### SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies  
One Securities Centre  
3490 Piedmont Road, Suite 1300  
Atlanta, GA 30329

Emergency Telephone Number  
(770) 216-9580

Information Telephone Number  
(770) 216-9580

MSDS E1  
Revision: Feb-07

HEALTH		1
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION Safety Glasses, Gloves and Dust Respirator		

**QUIKRETE® Product Name****Code #**

MORTAR MIX	1102
MASON MIX	1136
GLASS BLOCK MORTAR	1610
ROOF TILE MORTAR	1140
CSC-4	1191-84
VENEER STONE MORTAR	1137
POLYMER MODIFIED VENEER STONE MORTAR	1137-85
QUIKRETE® PRO-FINISH BLENDED MORTAR MIX	1136-58
BULK MASONRY MORTARS: MIX 101M, 102 S, 104 N, 112 M, 112 N, 112 S, 122 M, 122 N, 122 S, 132 S, 142, 201 M, 202 PLN, 202 S, 203 PLS, 203 S, 203 N, 204 N, 205 P/L type O, 203 M, 212 M, 212 N, 212 S, 222 M, 222 S, 253 S, 294 N	

**PRODUCT USE:** MASONRY MORTARS FOR CONSTRUCTION WITH BLOCK, BRICK, VENEER STONES, ETC.

#### SECTION II - HAZARD IDENTIFICATION

**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 affect 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.

**Carcinogenicity:** Since Portland cement and blended cements are manufactured from raw materials mined from the earth (limestone, marl, sand, shale, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possibly harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 % insoluble residue. A fraction of these residues may be free crystalline silica. 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.

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<b>Carcinogenicity Listings:</b>	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)

**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.

**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. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)

**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.

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**SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**


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Hazardous Components	CAS No.	PEL (OSHA) mg/M <sup>3</sup>	TLV (ACGIH) mg/M <sup>3</sup>
Portland Cement	65997-15-1	5	5
Silica Sand, crystalline	14808-60-7	<u>10</u> %SiO <sub>2</sub> +2	0.05 (respirable)

May contain one or more of the following ingredients:

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Lime	01305-62-0	5	5
Pulverized Limestone	01317-65-3	5	5
Iron Oxide Pigments	01309-37-1	5	5
Clay	01332-58-7	5	5

**Other Limits:** National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M<sup>3</sup> (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 IV – First Aid Measures**

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**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. Inhalations 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.

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**SECTION V - FIRE AND EXPLOSION HAZARD DATA**

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**Flammability:** Noncombustible and not explosive.

**Auto-ignition Temperature:** Not Applicable

**Flash Points:** Not Applicable

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**SECTION VI – ACCIDENTAL RELEASE MEASURES**

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If spilled, use dustless methods (vacuum) and place into covered container for disposal (if not contaminated or wet). Use adequate ventilation to keep exposure to airborne contaminants below the exposure limit.

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**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE**

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Do not allow water to contact the product until time of use. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended.

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**SECTION VIII – EXPOSURE CONTROL MEASURES**

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**Engineering Controls:** Local exhaust can be used, if necessary, to control airborne dust levels.

**Personal Protection:** 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.

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

**Exposure Limits:** Consult local authorities for acceptable exposure limits

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**SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS**

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<b>Appearance:</b> Gray to gray-brown colored powder;			
<b>Specific Gravity:</b> 2.6 to 3.15	<b>Melting Point:</b>		>2700°F
<b>Boiling Point:</b> >2700°F	<b>Vapor Pressure:</b>		Not Available
<b>Vapor Density:</b> Not Available	<b>Evaporation Rate:</b>		Not Available
<b>Solubility in Water:</b> Slight	<b>Odor:</b>		Not Available

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**SECTION X - REACTIVITY DATA**

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**Stability:** Stable.

**Incompatibility (Materials to Avoid):** Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or 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.

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**SECTION XI – TOXICOLOGICAL INFORMATION**

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**Routes of Entry:** Inhalation, Ingestion

**Toxicity to Animals:**

LD50: Not Available

LC50: Not Available

**Chronic Effects on Humans:** Conditions aggravated by exposure include eye disease, skin disorders and Chronic Respiratory conditions.

**Special Remarks on Toxicity:** Not Available

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**SECTION XII – ECOLOGICAL INFORMATION**

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**Ecotoxicity:** Not Available

**BOD5 and COD:** Not Available

**Products of Biodegradation:** Not available

**Toxicity of the Products of Biodegradation:** Not available

**Special Remarks on the Products of Biodegradation:** Not available

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**SECTION XIII – DISPOSAL CONSIDERATIONS**

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**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 the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

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**SECTION XIV – TRANSPORT INFORMATION**

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Not hazardous under U.S. DOT and TDG regulations.

**SECTION XV – OTHER REGULATORY INFORMATION**

**US OSHA 29CFR 1910.1200:** Considered hazardous under this regulation and should be included in the employers' hazard communication program

**SARA (Title III) Sections 311 & 312:** Qualifies as a hazardous substance with delayed health effects

**SARA (Title III) Section 313:** Not subject to reporting requirements

**TSCA (May 1997):** Some substances are on the TSCA inventory list

**Federal Hazardous Substances Act:** Is a hazardous substance subject to statues promulgated under the subject act

**Canadian Environmental Protection Act:** Not listed

**Canadian WHMIS:** Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E- Corrosive Material) and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

**SECTION XVI – OTHER INFORMATION**

<b>HMIS-III:</b>	Health –	0 = No significant health risk
		1 = Irritation or minor reversible injury possible
		2 = Temporary or minor injury possible
		3 = Major injury possible unless prompt action is taken
	Flammability-	4 = Life threatening, major or permanent damage possible
		0 = Material will not burn
		1 = Material must be preheated before ignition will occur
		2 = Material must be exposed to high temperatures before ignition
	Physical Hazard-	3 = Material capable of ignition under normal temperatures
		4 = Flammable gases or very volatile liquids; may ignite spontaneously
		0 = Material is normally stable, even under fire conditions
		1 = Material normally stable but may become unstable at high temps
		2 = Materials that are unstable and may undergo react at room temp
		3 = Materials that may form explosive mixtures with water
		4 = Materials that are readily capable of explosive water reaction

**Abbreviations:**

<b>ACGIH</b>	American Conference of Government Industrial Hygienists
<b>CAS</b>	Chemical Abstract Service
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>CPR</b>	Controlled Products Regulations (Canada)
<b>DOT</b>	Department of Transportation
<b>IARC</b>	International Agency for Research
<b>MSHA</b>	Mine Safety and Health Administration
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicity Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act



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<b>SARA</b>	Superfund Amendments and Reauthorization Act
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time-weighted Average
<b>WHMIS</b>	Workplace Hazardous Material Information System

**Revision #07-01, supersedes all previous revisions.**

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**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.