

# Ready Mix Concrete

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 07/16/2015 Date of issue: 07/16/2015

Version: 1.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Ready Mix Concrete

**Synonyms:** Freshly Mixed Unhardened Concretes

#### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** Building materials, construction

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

GRANITE CONSTRUCTION INCORPORATED

P. O. BOX 50085

WATSONVILLE, CA 95077-5085

831-724-1011

#### 1.4. Emergency Telephone Number

**Emergency Number** : 831-724-1011

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### Classification (GHS-US)

Skin Irrit. 2 H315

Eye Dam. 1 H318

Skin Sens. 1 H317

Carc. 1A H350

STOT SE 3 H335

STOT RE 1 H372

Full text of H-phrases: see section 16

#### 2.2. Label Elements

##### GHS-US Labeling

##### Hazard Pictograms (GHS-US)



##### Signal Word (GHS-US)

: Danger

##### Hazard Statements (GHS-US)

: H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H335 - May cause respiratory irritation.  
H350 - May cause cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
: P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe dust.  
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves, protective clothing, and eye protection.  
P302+P352 - If on skin: Wash with plenty of water.  
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P314 - Get medical advice/attention if you feel unwell.  
P321 - Specific treatment (see section 4 on this SDS).  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.

##### Precautionary Statements (GHS-US)

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P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Mineral Aggregates (crushed stone, sand and gravel)	N/A	60 - 95	Not classified
Cement, portland, chemicals	(CAS No) 65997-15-1	3 - 20	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Quartz	(CAS No) 14808-60-7	1 - 20	Carc. 1A, H350 STOT RE 1, H372
Ashes, residues	(CAS No) 68131-74-8	0 - 11	Eye Irrit. 2B, H320
Silica, cristobalite	(CAS No) 14464-46-1	< 1	Carc. 1A, H350 STOT RE 1, H372
Tridymite	(CAS No) 15468-32-3	< 1	Carc. 1A, H350 STOT RE 1, H372

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**First-aid Measures After Ingestion:** Do not induce vomiting. Rinse mouth. Obtain medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Causes serious eye damage. Causes skin irritation. Causes damage to organs through prolonged or repeated exposure. May cause an allergic skin reaction.

**Symptoms/Injuries After Inhalation:** Repeated exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis.

**Symptoms/Injuries After Skin Contact:** Contact with wet cement may cause abrasion of the skin and contact dermatitis (cement dermatitis), the symptoms of which include (but may not be limited to) reddening, irritation, and rash. More severe effects, including chemical (caustic) burns and skin ulcers may occur. Concrete dust may be irritating. Hydraulic (Portland) cement may contain trace amount of hexavalent chromium. Hexavalent chromium has been associated in some individuals with causing allergic skin reactions which may be manifested as contact dermatitis and skin ulcerations. Individuals who develop allergies to skin sensitizers, such as hexavalent chromium, may experience a reaction upon repeated contact with those compounds. The symptoms of allergic reactions may include (but are not limited to) reddening of the skin, rash, and irritation. Irritated or broken skin is more likely to develop further complications such as ulcers and infection.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

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**Chronic Symptoms:** May cause cancer. Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Other Information:** Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all contact with skin, eyes, or clothing. Do not breathe dust.

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

### 6.2. Environmental Precautions

No additional information available

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain and collect as any solid.

### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep/Store away from Incompatible materials.

**Incompatible Products:** Strong acids. Strong bases. Strong oxidizers.

### 7.3. Specific End Use(s)

Building materials, construction.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable fraction)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable dust)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup> (respirable dust)
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	250 mppcf/%SiO <sub>2</sub> +5, 10mg/m <sup>3</sup> /%SiO <sub>2</sub> +2
Silica, cristobalite (14464-46-1)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable fraction)

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<b>USA ACGIH</b>	ACGIH chemical category	Suspected Human Carcinogen
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable dust)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup> (respirable dust)
<b>Tridymite (15468-32-3)</b>		
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable dust)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup> (respirable dust)
<b>Cement, portland, chemicals (65997-15-1)</b>		
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)
<b>USA ACGIH</b>	ACGIH chemical category	Not Classifiable as a Human Carcinogen
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	5000 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)

## 8.2. Exposure Controls

### Appropriate Engineering Controls

: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

### Personal Protective Equipment

: Protective goggles. Gloves. Protective clothing. Dust formation: dust mask.



### Materials for Protective Clothing

: Chemically resistant materials and fabrics.

### Hand Protection

: Wear chemically resistant protective gloves.

### Eye Protection

: Chemical goggles or safety glasses.

### Skin and Body Protection

: Wear suitable protective clothing.

### Respiratory Protection

: Use NIOSH-approved dust mask if dust has the potential to become airborne.

### Environmental Exposure Controls

: Do not allow the product to be released into the environment.

### Consumer Exposure Controls

: Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

<b>Physical State</b>	: Liquid
<b>Appearance</b>	: Light to dark gray liquid of varying viscosity
<b>Odor</b>	: May smell like damp earth
<b>Odor Threshold</b>	: No data available
<b>pH</b>	: No data available
<b>Evaporation Rate</b>	: No data available
<b>Melting Point</b>	: No data available
<b>Freezing Point</b>	: No data available
<b>Boiling Point</b>	: No data available
<b>Flash Point</b>	: No data available
<b>Auto-ignition Temperature</b>	: No data available
<b>Decomposition Temperature</b>	: No data available
<b>Flammability (solid, gas)</b>	: No data available
<b>Vapor Pressure</b>	: No data available
<b>Relative Vapor Density at 20 °C</b>	: No data available
<b>Relative Density</b>	: No data available
<b>Specific Gravity</b>	: 1.7 - 3.0
<b>Solubility</b>	: Insoluble in water
<b>Partition Coefficient: N-Octanol/Water</b>	: No data available

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Viscosity : No data available

**9.2. Other Information** No additional information available

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.

**10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**10.4. Conditions to Avoid:** Incompatible materials.

**10.5. Incompatible Materials:** Wet Portland cement is caustic (pH approximately 12) and could react with strong acids. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, oxygen difluoride and hydrogen peroxide yielding possible fire and/or explosions. Silica is also incompatible with acetylene and ammonia.

**10.6. Hazardous Decomposition Products:** Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
Ashes, residues (68131-74-8)	
LD50 Oral Rat	> 2000 mg/kg

**Skin Corrosion/Irritation:** Causes skin irritation.

**Serious Eye Damage/Irritation:** Causes serious eye damage.

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** May cause cancer.

Quartz (14808-60-7)	
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Silica, cristobalite (14464-46-1)	
IARC group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
Tridymite (15468-32-3)	
IARC group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** May cause respiratory irritation.

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Repeated exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis.

**Symptoms/Injuries After Skin Contact:** Contact with wet cement may cause abrasion of the skin and contact dermatitis (cement dermatitis), the symptoms of which include (but may not be limited to) reddening, irritation, and rash. More severe effects, including chemical (caustic) burns and skin ulcers may occur. Concrete dust may be irritating. Hydraulic (Portland) cement may contain trace amount of hexavalent chromium. Hexavalent chromium has been associated in some individuals with causing allergic skin reactions which may be manifested as contact dermatitis and skin ulcerations. Individuals who develop allergies to skin sensitizers, such as hexavalent chromium, may experience a reaction upon repeated contact with those compounds. The symptoms of allergic reactions may include (but are not limited to) reddening of the skin, rash, and irritation. Irritated or broken skin is more likely to develop further complications such as ulcers and infection.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

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**Chronic Symptoms:** May cause cancer. Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

## SECTION 12: ECOLOGICAL INFORMATION

- 12.1. Toxicity** No additional information available
- 12.2. Persistence and Degradability** No additional information available
- 12.3. Bioaccumulative Potential**
- 12.4. Mobility in Soil** No additional information available
- 12.5. Other Adverse Effects**
- Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods**
- Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
- Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

- 14.1. In Accordance with DOT** Not regulated for transport
- 14.2. In Accordance with IMDG** Not regulated for transport
- 14.3. In Accordance with IATA** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

<b>Ready Mix Concrete</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>Quartz (14808-60-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Delayed (chronic) health hazard
<b>Silica, cristobalite (14464-46-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Delayed (chronic) health hazard
<b>Tridymite (15468-32-3)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Delayed (chronic) health hazard
<b>Cement, portland, chemicals (65997-15-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard
<b>Ashes, residues (68131-74-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard

### 15.2 US State Regulations

<b>Quartz (14808-60-7)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Quartz (14808-60-7)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Silica, cristobalite (14464-46-1)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Tridymite (15468-32-3)</b>	
U.S. - Massachusetts - Right To Know List	

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U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

## **Cement, portland, chemicals (65997-15-1)**

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

## **SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

**Revision Date** : 07/16/2015

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### **GHS Full Text Phrases:**

Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H320	Causes eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)