



# SAFETY DATA SHEET

MATERIAL: GRANITIC AGGREGATE

## Section 1 – Product Identification

**Product Name:** Granitic Aggregate

**Product Codes/Synonyms:** Granite, granitic rock, gabbro, monzonite, rhyodacite, diorite, gneiss, manufactured sand

**Product Form:** Solid: granules, pebbles, rocks, boulders

**Intended Use of Product:** Granitic aggregate is used as an additive to concrete, asphalt and other building and construction products. It may also be used as road base and for soil stabilization.

**Name, Address and Telephone of Responsible Party**

Aggregate Industries  
24 Crosby Drive  
Bedford, MA 01730  
(888) 646-5246

**Emergency Contact Information:**

CHEMTREC: 1-800-424-9300

## Section 2 – Hazards Identification

**Classification of the Substance or Mixture**

**Classification (GHS-US)**

Eye Irritant 2B  
Specific Target Organ Toxicity: Repeat Exposure 1  
Carcinogen 1A

**Label Elements**

**Hazard Pictograms**



**Signal Word**

Danger

**Hazard Statements**

Causes eye irritation.  
May cause cancer (lungs).  
Causes damage to organs (lungs) through prolonged or repeated exposure.

**Precautionary Statements**

- |                      |  |
|----------------------|--|
| <b>Prevention</b>    | Do not breathe dust. Use only outdoors or in a well-ventilated area.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>Wash thoroughly after handling.<br>Do not eat, drink or smoke when using this product.<br>Obtain special instructions before use. Do not use until all safety precautions have been read and understood.   |
| <b>Response</b>      | <b>If inhaled:</b> Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. If exposed or concerned, get medical advice.<br><b>If in eyes:</b> Rinse cautiously with clean water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.<br><b>If on skin:</b> Wash with plenty of water.<br><b>If swallowed:</b> Rinse mouth. Do not induce vomiting. Immediately call a poison center/doctor. |
| <b>Storage</b>       | Store in an appropriate container or containment structure.  |
| <b>Disposal</b>      | Dispose of contents/container in accordance with local/state/national regulations.   |
| <b>Other Hazards</b> | Exposure to dust may aggravate pre-existing eye, skin or respiratory conditions or illnesses.  |

### Section 3 – Composition/Information on Ingredients

Component/Ingredient	CAS #	Percent Present (Range)
Silicon dioxide (Crystalline silica - quartz)	14808-60-7	30 - 70
Silicon dioxide (Amorphous)	7631-86-9	30 - 70
Aluminum oxide	1344-28-1	12 - 15
Potassium oxide	12136-45-7	4 - 6
Sodium oxide	1313-59-3	4 - 6
Ferrous oxide	1345-25-1	2 - 4
Calcium oxide	1305-78-8	1 - 2
Magnesium oxide	1309-48-4	< 1
Diphosphorus pentoxide	1314-56-3	< 1

#### Other Components

Granite is a naturally occurring igneous rock comprised mainly of feldspar, quartz, mica, and amphibole minerals. Depending on the deposits from which it is mined, silicon dioxide (SiO<sub>2</sub>) may be present in its amorphous form or its crystalline form (quartz), with varying percentages of both commonly being present. Up to 100% of the SiO<sub>2</sub> may be present as crystalline silica. Crystalline silica (quartz) respirable dust has been identified as a human carcinogen and may cause silicosis if inhaled in its respirable form. Refer to Section 16 for additional information.

### Section 4 – First Aid Measures

#### Description of First Aid Measures

- Eyes** Rinse eyes and under lids cautiously with clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
- Skin** Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
- Inhalation** Remove person to fresh air away from dust and keep comfortable for breathing. Get medical attention.
- Ingestion** Rinse the mouth with water to remove any material and drink plenty of water to dilute any swallowed material. Do not give drink or attempt to force water to an unconscious person.

#### Important Symptoms and Effects (Acute and Delayed)

- Eyes** Redness, tearing and swelling. May scratch eye surface due to particle abrasion.
- Skin** May cause localized redness due to mechanical abrasion by particles.
- Inhalation** Irritation of nose and throat if dust is inhaled. Prolonged or repeated inhalation of respirable dust may lead to respiratory tract and lung damage or disease.
- Ingestion** Practically non-toxic. Ingestion of large quantities may cause intestinal irritation.

#### Recommendations for Immediate Medical Care or Special Treatment

Seek immediate medical attention for inhalation of large quantities of dust. Seek immediate medical attention if particles in eyes cannot be easily removed.

### Section 5 – Fire Fighting Measures

- General Fire Hazards** None. Material is not considered flammable or combustible.
- Extinguishing Media** Use water or water spray to extinguish any fires involving this material.
- Extinguishing Media to Avoid** None.
- Hazards of Combustion** None.
- Fire Fighting Recommendations** Firefighters should always wear full protective gear to fight any fire. Refer to Section 9 for flammability information.

### Section 6 – Accidental Release Measures

- Precautions** Avoid creating dust. Prevent material from entering sewers, drains, ditches or waterways.
- Personal Protection** Wear respiratory protection and protective eyewear/clothing to avoid eye or skin contact.
- Emergency Procedures** Ventilate area and avoid creating dust. Remove unnecessary persons from area.
- Containment Procedures** Barricade solid material to prevent additional spillage.
- Clean Up Procedures** Scoop or vacuum up spilled material while avoiding dust creation. Place in approved container.

## Section 7 – Handling and Storage

<b>Safe Handling Practices</b>	Avoid breathing dust. Use only in well ventilated areas. Wear appropriate personal protective equipment to prevent eye or skin contact and use respiratory protection equipment if dusty or in poorly ventilated areas.
<b>Safe Storage Measures</b>	Store in well-ventilated areas away from incompatible materials. If stored in containers, keep containers closed when not in use.
<b>Incompatible Materials</b>	Keep away from fluoride compounds, strong acids and oxidizers.

## Section 8 – Exposure Controls & Personal Protection

### Exposure Limits for Individual Components (T= Total Respirable, R=Respirable fraction, I=Inhalable-aerosol)

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Silicon dioxide (Amorphous)	80 mg/m <sup>3</sup> / (% SiO <sub>2</sub> )	None	6 mg/m <sup>3</sup>
Crystalline Silica (Quartz)	10 mg/m <sup>3</sup> (R) / (% SiO <sub>2</sub> + 2) 30 mg/m <sup>3</sup> (T) / (% SiO <sub>2</sub> + 2)	0.025 mg/m <sup>3</sup> (R)	0.05 mg/m <sup>3</sup> (R)
Aluminum Oxide	15 mg/m <sup>3</sup> (T) 5 mg/m <sup>3</sup> (R) (as Al)	1 mg/m <sup>3</sup> (R) (as Al metal & insoluble compounds)	Not established
Calcium oxide	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Ferrous Oxide	10 mg/m <sup>3</sup> (as fume)	5 mg/m <sup>3</sup> (R)	5 mg/m <sup>3</sup> (dust/fume as Fe)
Magnesium oxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> (I)	Not established
Potassium oxide (PNOC)	5 mg/m <sup>3</sup> (R) / 15 mg/m <sup>3</sup> (T)	5 mg/m <sup>3</sup> (R) / 10 mg/m <sup>3</sup> (T)	Not established
Sodium oxide (PNOC)	5 mg/m <sup>3</sup> (R) / 15 mg/m <sup>3</sup> (T)	5 mg/m <sup>3</sup> (R) / 10 mg/m <sup>3</sup> (T)	Not established
Diphosphorus pentoxide	1 mg/m <sup>3</sup> (as phosphoric acid)	1 mg/m <sup>3</sup> (as phosphoric acid)	Not established

### Exposure Controls

<b>Engineering Controls</b>	Use outdoors or in well-ventilated areas. Employ natural or mechanical ventilation to maintain exposure within applicable limits.
<b>Personal Protection</b>	Avoid contact with eyes. Avoid creating or breathing dust.
<b>Face and Eyes</b>	Safety glasses with side shields or protective goggles should be worn while using this product. For extremely dusty conditions, non-vented goggles or goggles with indirect venting are recommended. Avoid contact lens wear when using this product.
<b>Body</b>	Long sleeved shirts and trousers should be worn while using this material. If working in dusty conditions, impervious over garments are recommended.
<b>Respiratory</b>	If exposure levels cannot be maintained below acceptable limits, suitable particulate-filtering facemasks or respirators approved by MSHA/NIOSH should be worn in accordance with the user's respiratory protection program and OSHA/MSHA guidelines.
<b>Hands</b>	Protective gloves with wrist/arm cuffs should be worn to avoid direct contact with skin.

## Section 9 – Physical and Chemical Properties

<b>Physical State</b>	Solid	<b>Specific Gravity</b>	2.6 – 2.8
<b>Appearance &amp; Color</b>	White, grey to black rock	<b>Flash Point/Method</b>	None. Not flammable.
<b>Odor</b>	None	<b>Auto Ignition Temperature</b>	Not determined
<b>pH</b>	6 - 8	<b>Lower Flammability Limit</b>	Not applicable
<b>Boiling Point</b>	Not applicable	<b>Upper Flammability Limit</b>	Not applicable
<b>Solubility (Water)</b>	Negligible (< 1%)	<b>Octanol/H<sub>2</sub>O Coefficient</b>	Not determined
<b>Evaporation Rate</b>	Not applicable	<b>Viscosity</b>	Not applicable
<b>Melting Point</b>	Not determined	<b>Freezing Point</b>	Solid at room temperature
<b>Vapor Density</b>	Not applicable	<b>Explosion Risk: Static</b>	Not considered a hazard
<b>Vapor Pressure</b>	Not applicable	<b>Explosion Risk: Shock</b>	Not considered a hazard

## Section 10 – Stability and Reactivity

<b>Reactivity</b>	Not considered reactive.
<b>Chemical Stability</b>	Stable at standard temperature and pressures.
<b>Hazardous Reactions</b>	None. Hazardous polymerization will not occur.
<b>Conditions to Avoid</b>	Contact with incompatible materials.
<b>Incompatible Materials</b>	Avoid contact with strong acids, oxidizers and fluorine compounds.

## Section 11 – Toxicological Information

**Product: Granitic aggregate**

<b>Acute Toxicity</b>	Not classified.
<b>LD50/LC50 Data</b>	Not classified.
<b>Skin Corrosion/Irritation</b>	Not classified.
<b>Critical Eye Damage/Irritation</b>	May cause eye injury due to mechanical irritation.
<b>Respiratory or Skin Sensitization</b>	Not classified
<b>Germ Cell Mutagenicity</b>	Not reported/no data available.
<b>Teratogenicity</b>	Not reported/no data available.
<b>Carcinogenicity</b>	Material may contain trace amounts of respirable crystalline silica, which may cause lung cancer through repeated or prolonged exposure to respirable dust.
<b>Specific Organ Toxicity (Single Exposure)</b>	Not reported/no data available.
<b>Specific Organ Toxicity (Repeated Exposure)</b>	May cause damage/disease to lungs through repeated or prolonged exposure.
<b>Reproductive Toxicity</b>	Not reported/no data available.
<b>Aspiration Respiratory Hazard</b>	Not reported/no data available.
<b>Symptoms: Inhalation</b>	Irritation of nose and throat. Coughing, sneezing, dyspnea and mucous discharge. Extended contact with respirable dust may lead to silicosis (see Section 16).
<b>Symptoms: Skin Contact</b>	May cause redness to skin due to mechanical abrasion.
<b>Symptoms: Eye Contact</b>	Redness and itching. Extended contact may lead to corneal abrasion.
<b>Symptoms: Ingestion</b>	Practically non-toxic. Ingestion of large amounts may cause intestinal irritation.
<b>Other Toxicological Information</b>	No additional data available.

<b>Components</b>	<b>Toxicity</b>	<b>Carc: IARC</b>	<b>Carc: NTP</b>	<b>Carc: OSHA</b>
Silica dioxide (Amorphous)	Oral LD50 Rat >5000 mg/kg Inhalation LC50 Rat >2.2 mg/L (1 h) Dermal LD50 Rabbit >2000 mg/kg	Group 3	Not listed	Not listed
Crystalline Silica (Quartz) (refer to Section 16 for more information)	Oral LD50 Rat >22,500 mg/kg LC50 Carp >10,000 mg/L (72 h)	Group 1	Known	Not listed
Aluminum Oxide	Oral LD50 Rat >5000mg/kg	Not listed	Not listed	Not listed
Ferrous Oxide	Oral LD50 Rat > 15mg/kg	Not listed	Not listed	Not listed
Calcium oxide	Oral LD50 Rat 500 mg/kg	Not listed	Not listed	Not listed
Magnesium oxide	Oral LD50 Rat 810 mg/kg	Not listed	Not listed	Not listed
Potassium oxide	Not established	Not listed	Not listed	Not listed
Sodium oxide	Not established	Not listed	Not listed	Not listed
Diphosphorus pentoxide	LC50 Rat 1217 mg/m <sup>3</sup> (as phosphoric acid)	Not listed	Not listed	Not listed

## Section 12 – Ecological Information

<b>General Ecotoxicity</b>	Not classified.
<b>Persistence and Degradability</b>	Not reported/no data available.
<b>Bioaccumulation Potential</b>	Not reported/no data available.
<b>Mobility in Soil to Groundwater</b>	Not reported/no data available.
<b>Environmental Fate</b>	Not reported/no data available.
<b>Other Environmental Precautions or Information</b>	Prevent material from entering sewers, drains, ditches or waterways.

## Section 13 – Disposal Considerations

<b>Disposal Methods</b>	Dispose as an inert mineral in accordance with applicable federal, state, and local regulations.
<b>Special Considerations</b>	Avoid creation or breathing dust during disposal. Avoid contact with skin and eyes. Refer to Section 8 for personal protection information.
<b>Other Disposal Information</b>	Prevent material from entering sewers, drains, ditches or waterways.

## Section 14 – Transport Information

Proper Shipping Name	N/A – not regulated.
Hazard Class	N/A – not regulated.
UN Shipping ID Number	N/A – not regulated.
Packing Group	N/A – not regulated.
Environmental/IMDG Codes	N/A – not regulated.

## Section 15 – Regulatory Information

### Federal

This product contains one or more chemical components or ingredients that may require identification and/or reporting under SARA Section 302, SARA Section 311/312/313, CERCLA and/or TSCA. An examination of the components of this product should be conducted by a qualified environmental professional to determine if such identification or reporting is required by federal law.

- Components: Silica (Crystalline), Silica dioxide (Amorphous), Aluminum oxide, Calcium oxide, Ferrous (iron) oxide

### State

This product contains one or more chemical components or ingredients that are included or listed on the hazardous substances lists for one or more of the following states: California, Maine, Minnesota, New Jersey, Pennsylvania and Rhode Island. An examination of the components of this product should be conducted by a qualified environmental or safety and health professional to determine the specific requirements for those states.

- Components: Silica (Crystalline), Silica dioxide (Amorphous), Aluminum oxide, Calcium oxide, Ferrous (iron) oxide

The state of California requires the following statement (Proposition 65) in regards to this material:

- WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

## Section 16 – Other Information

Date of last revision: May 28, 2015

Prepared and reviewed by: Holcim (US) Inc. Occupational Safety & Health

### Additional information regarding crystalline silica:

The major concern is silicosis, caused by the inhalation and retention of respirable (extremely small) crystalline silica dust particles. Silicosis can exist in several forms. Chronic or ordinary silicosis (often referred to as simple silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low concentrations of airborne respirable crystalline silica dust. Complicated silicosis or progressive massive fibrosis (PMF) may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease. Acute silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis can be fatal.

IARC: 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 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."

NTP: The National Toxicology Program (NTP), in its Thirteenth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known human carcinogen.

OSHA: Crystalline silica (quartz) is not regulated as a human carcinogen by the Occupational Safety and Health Administration.

**Other important information:**

While the information provided in the safety data sheet is believed to provide a useful summary of the hazards of granitic aggregate, the information in this document cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

The data furnished in this sheet do not address hazards that may be posed by other materials when mixed with granitic aggregate. Users should review other relevant material safety data sheets before working with this product.

The information presented in the Safety Data Sheet is based on current knowledge and publications and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be interpreted as guaranteeing any specific property of the product.

**SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY AGGREGATE INDUSTRIES, EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.**

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