Sand and Gravel

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Revision Date: 04/14/2015 Date of issue: 04/14/2015 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Name: Sand and Gravel

Synonyms: Natural Sand, River Sand Screenings, Aggregates, Bank Sand and Gravel, Crushed Gravel, Round Gravel, Concrete Sand, Asphalt Sand, Mason Sand, Fill Sand, Golf Course Sand, Base Material, Dense Graded Aggregate, Quartz, Gravel, Crushed Rock, Crushed Stone

Note: This SDS covers many types of sand and gravel. Individual composition of hazardous constituents will vary between sand and gravel types.

1.2. Intended Use of the Product

Sand and gravel are aggregates used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction applications. Sand and gravel are distributed in bags, totes and bulk shipment.

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

Company

Lafarge North America Inc.
8700 West Bryn Mawr Avenue, Suite 300
Chicago, IL 60631
Information: 773-372-1000 (9am to 5pm CST)
email: SDSinfo@Lafarge.com
Website: www.lafarge-na.com

1.4. Emergency Telephone Number

Emergency Number : 1-800-451-8346 (3E Hotline)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

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) : H335 - May cause respiratory irritation.
H350 - May cause cancer (Inhalation).
H372 - Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260+P270- Do not breathe dust. Do not eat, drink or smoke when using this product.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, face protection, eye protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.

P403+P233+P405- Store in a well-ventilated place. Keep container tightly closed. Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Dust may cause mechanical irritation to eyes, nose, throat, and lungs. Direct contact may result in corneal injury. Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Quartz	(CAS No) 14808-60-7	50 - 60, 60 - 99	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372

Multiple WHMIS ranges have been utilized to account for varying concentration.
Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of 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).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Keep at rest and in a position comfortable for breathing. If you feel unwell, seek medical advice.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Do not rub. Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions.

Ingestion: Rinse mouth. Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Irritation to eyes, skin and respiratory tract.

Inhalation: Breathing dust may cause nose, throat, or lung irritation, including choking, depending on the degree of exposure. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. Some studies show that exposure to respirable crystalline silica may be associated with increased incidences of autoimmune disorders such as scleroderma, systemic lupus erythematosus, rheumatoid arthritis, and diseases affecting the kidneys. The extent and severity of lung injury depends on duration and level of exposure.

Skin Contact: Sand and gravel may cause dry skin, abrasions, discomfort, and irritation.

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Ingestion: Do not ingest sand or gravel. Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: If dust is generated, repeated exposure through inhalation may cause cancer or lung disease.

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

If exposed or concerned, get medical advice and attention.

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: Sand and gravel dissolve in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

5.3. Advice for Firefighters

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

Firefighting Instructions: Do not get water inside containers. Do not apply water stream directly at source of leak.

Protection During Firefighting: Sand and gravel poses no fire-related hazard. Wear respiratory protection to limit exposure to combustion products when fighting any fire.

Hazardous Combustion Products: None.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

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

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 Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Place spilled material into a container. Avoid actions that cause the sand or gravel to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment as described in Section 8. Do not wash sand or gravel down sewage and drainage systems or into bodies of water (e.g. streams).

Methods for Cleaning Up: Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Cutting, crushing or grinding hardened cement, concrete or other crystalline silica bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

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 again when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Materials: Hydrofluoric Acid. Strong oxidizers.

7.3. Specific End Use(s)

Sand and gravel are aggregates used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction applications. Sand and gravel are distributed in bags, totes and bulk shipment.

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), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m³)	0.1 mg/m³ (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
USA OSHA	OSHA PEL (STEL) (mg/m³)	250 mppcf/%SiO_2+5, 10mg/m^3/%SiO_2+2
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)

USA IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)
Alberta	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate)
British Columbia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable)
Manitoba	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
New Brunswick	OEL TWA (mg/m³)	0.1 mg/m³ (respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Nunavut	OEL TWA (mg/m³)	0.1 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	0.1 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	0.10 mg/m³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA (mg/m³)	0.025 mg/m³ (respirable fraction)
Québec	VEMP (mg/m³)	0.1 mg/m³ (respirable dust)
Saskatchewan	OEL TWA (mg/m³)	0.05 mg/m³ (respirable fraction)
Yukon	OEL TWA (mg/m³)	300 particle/mL
Particulates not otherwise classified (PNOC) (RR-00072-6)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m^3 Respirable fraction 10 mg/m^3 Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m^3 Respirable fraction 15 mg/m^3 Total Dust
Alberta	OEL TWA (mg/m³)	10 mg/m³ (total)
British Columbia	OEL TWA (mg/m³)	10 mg/m³ (total dust)
Manitoba	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
New Brunswick	OEL TWA (mg/m³)	3 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	10 mg/m³ (inhalable)
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Québec	VEMP (mg/m³)	10 mg/m³ (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (insoluble or poorly insoluble-inhalable fraction)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (insoluble or poorly soluble-inhalable fraction)

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices.

Personal Protective Equipment: Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear gloves in situations where abrasion from sand or gravel may occur.

Eye Protection: Wear safety goggles or glasses when handling dust to prevent contact with eyes. Wearing contact lenses when using sand or gravel, under dusty conditions, is not recommended.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	White or light gray/brown granular solid
Odor	:	None
Odor Threshold	:	Not available
pH	:	Neutral
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	None, solid
Boiling Point	:	> 1000 °C (> 1832 °F)
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Specific Gravity	:	2.7
Solubility	:	Insoluble in water
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	None, solid
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Sand and gravel dissolve in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride.

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: Extremely high or low temperatures. Incompatible materials.

10.5. Incompatible Materials: Hydrofluoric acid. Strong oxidizers.

10.6. Hazardous Decomposition Products: None.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

pH: Neutral

Serious Eye Damage/Irritation: Not classified

pH: Neutral

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: May cause cancer (Inhalation)

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation)
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Breathing dust may cause nose, throat, or lung irritation, including choking, depending on the degree of exposure. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. Some studies show that exposure to respirable crystalline silica may be associated with increased incidences of autoimmune disorders such as scleroderma, systemic lupus erythematosus, rheumatoid arthritis, and diseases affecting the kidneys. The extent and severity of lung injury depends on duration and level of exposure
Symptoms/Injuries After Skin Contact: Sand and gravel may cause dry skin, abrasions, discomfort, and irritation
Symptoms/Injuries After Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye
Symptoms/Injuries After Ingestion: Do not ingest sand or gravel. Ingestion is likely to be harmful or have adverse effects
Chronic Symptoms: If dust is generated, repeated exposure through inhalation may cause cancer or lung disease

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg

Quartz (14808-60-7)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available

12.2. Persistence and Degradability Not available

12.3. Bioaccumulative Potential Not available

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, state, national, provincial, territorial and international regulations.

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

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Sand and Gravel	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	This product may contain constituents listed under SARA (Title III) Section 313, but not in amounts requiring supplier notification under 40 CFR Part 372 Subpart C.

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

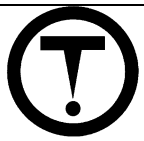
15.2. US State Regulations

Quartz (14808-60-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Quartz (14808-60-7)
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

15.3. Canadian Regulations

Sand and Gravel	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects



Quartz (14808-60-7)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

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

Revision Date : 04/14/2015

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
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

Party Responsible for the Preparation of This Document

Lafarge North America Inc.
+1 773-372-1000 (9am to 5pm CST)

An electronic version of this SDS is available at: www.lafarge-na.com under the Sustainability and Products sections. Please direct any inquiries regarding the content of this SDS to SDSinfo@Lafarge.com.

Lafarge North America Inc. (LNA) believes the information contained herein is accurate; however, LNA makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any party using this product should review all such laws, rules, or regulations prior to use, including but not limited to US and Canada Federal, Provincial and State regulations.NO

WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE.

North America GHS US 2012 & WHMIS 2