



# Slag

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 01/01/2022

Date of Issue: 02/01/2022

Version: 3.2

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Lafarge Slag

**Synonyms:** NewCem<sup>®</sup>, Litex<sup>™</sup> Lightweight Aggregate, True Lite Lightweight Aggregate<sup>™</sup>, Vitrex<sup>™</sup> Pelletized Slag, Ground Granulated Blast Furnace Slag (GGBFS), Blast Furnace Slag, Steel Slag, Granulated Slag, Pelletized Slag, Metallic Slag, Air Cooled Slag, Nonmetallic Slag, Slag Cement, Hydraulic Slag Cement

**Note:** This SDS covers many types of slag. Individual composition of hazardous constituents will vary between slag types.

### 1.2. Intended Use of the Product

Slag is used as a supplementary cementitious material for cement, concrete and concrete products. It is also used in soil stabilization and as filler in asphalt and other products that are widely used in construction.

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

**Company** – Lafarge Canada

Western Canada  
#300 115 Quarry Park Road SE  
Calgary, AB T2C 5G9  
Phone: (403) 225-5400

Eastern Canada  
6509 Airport Road  
Mississauga, ON L4V 157  
Phone: (905) 738-7070

Website: [www.lafarge.ca](http://www.lafarge.ca)

### 1.4. Emergency Telephone Number

**Emergency Number** : Chemtel 1-800-255-3924 (24 hours)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US/CA Classification

Skin Irrit. 2	H315
Eye Dam. 1	H318
Carc. 1A	H350
STOT SE 3	H335
Aquatic Acute 3	H402

Full text of hazard classes and H-statements : see Section 16.

### 2.2. Label Elements

#### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :



**Signal Word (GHS-US/CA)** :

Danger

**Hazard Statements (GHS-US/CA)** :

H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H335 - May cause respiratory irritation.  
H350 - May cause cancer (Inhalation).  
H402 - Harmful to aquatic life.

**Precautionary Statements (GHS-US/CA)** :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust.  
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.

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P273 - Avoid release to the environment.  
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 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.  
P310 - Immediately call a POISON CENTER or doctor.  
P321 - Specific treatment (see Section 4 on this SDS).  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### 2.3. Other Hazards

Contains sulfur, may release small amounts of hydrogen sulfide. Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Inhalation can cause serious and potentially irreversible lung/respiratory tract tissue damage due to chemical (caustic) burns, including third degree burns. Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) or sensitivity to hexavalent chromium can be aggravated by exposure.

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

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Slags, ferrous metal, blast furnace	(CAS-No.) 65996-69-2	100	Not classified
<b>Contains</b>			
Name	Product Identifier	% (w/w)	Classification (GHS-US)
Calcium oxide	(CAS-No.) 1305-78-8	30 - 50	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402
Magnesium oxide (MgO)	(CAS-No.) 1309-48-4	< 20	Not classified
Quartz	(CAS-No.) 14808-60-7	< 1	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372

Full text of H-phrases: see Section 16.

Slag is a nonmetallic byproduct from the production of iron. Trace amounts of chemicals may be detected during chemical analysis. For example, slag may contain trace amounts of manganese oxide, titanium oxide, chromium compounds, sulfur compounds, and other trace compounds.

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

## 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. Immediately flush skin with plenty of water for at least 30 minutes and continue flushing throughout emergency transport, if needed. Immediately call a poison center or physician. Wash contaminated clothing before reuse.

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**Eye Contact:** Get medical attention immediately and begin flushing eyes with plenty of water for at least 30 minutes and continue flushing eyes throughout emergency transport. Immediately call a poison center or physician. Occasionally lift the upper and lower eyelids during flushing. Remove any contact lenses, if possible. Chemical burns should be treated promptly by a physician.

**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 skin and respiratory tract. Causes serious eye damage. May cause cancer.

**Inhalation:** The three types of silicosis include: 1) Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD); 2) Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years); 3) Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels. Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures. Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis. Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica. Corrosive to the respiratory tract.

**Skin Contact:** Slag may cause dry skin, discomfort, irritation, and dermatitis. Slag is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as, redness, itching, rash, scaling, and cracking. Irritant dermatitis is caused by the physical properties of slag including moisture and abrasion. Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) potentially present in slag. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with slag. Others may develop allergic dermatitis after years of repeated contact with slag.

**Eye Contact:** Potentially causes permanent damage to the cornea, iris, or conjunctiva. Airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with large amounts of dry powder or with wet slag can cause moderate eye irritation. Eye exposures require immediate first aid to prevent significant damage to the eye.

**Ingestion:** 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:** 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:** Do not get water inside containers. Do not apply water stream directly at source of leak.

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

**Hazardous Combustion Products:** Silicon oxides.

### 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. Do not get in eyes, on skin, or on clothing.

#### 6.1.1. For Non-Emergency Personnel

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

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**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 Materials for Containment and Cleaning Up

**For Containment:** Contain solid spills with appropriate barriers and prevent migration and entry into sewers or 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 Section 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 crystalline silica-bearing materials may release respirable crystalline silica, a known carcinogen. Use all appropriate measures of dust control or suppression and Personal Protective.

**Precautions for Safe Handling:** Do not handle until all safety precautions have been read and understood.

**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

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

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

**Incompatible Materials:** Dissolves 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.

**Storage Temperature:** Unlimited.

### 7.3. Specific End Use(s)

Slag is used as a supplementary cementitious material for cement, concrete and concrete products. It is also used in soil stabilization and as filler in asphalt and other products that are widely used in 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), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 µg/m <sup>3</sup>
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)
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate)
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable fraction)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable fraction)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (designated substances regulation-respirable)

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<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (respirable dust)
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable fraction)
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	300 particle/mL
<b>Calcium oxide (1305-78-8)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Magnesium oxide (MgO) (1309-48-4)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>USA ACGIH</b>	ACGIH chemical category	Not Classifiable as a Human Carcinogen
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (fume, total particulate)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	750 mg/m <sup>3</sup> (fume)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)
<b>British Columbia</b>	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (respirable dust and fume)
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume, inhalable) 3 mg/m <sup>3</sup> (respirable dust and fume)
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable)
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume)

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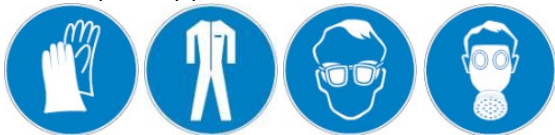
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Particulates not otherwise classified (PNOC) (Not applicable)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> Respirable fraction 10 mg/m <sup>3</sup> Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> Respirable fraction 15 mg/m <sup>3</sup> Total Dust
Alberta	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total) 3 mg/m <sup>3</sup> (respirable)
British Columbia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (nuisance dust-total dust) 3 mg/m <sup>3</sup> (nuisance dust-respirable fraction)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended) 3 mg/m <sup>3</sup> (respirable particles, recommended)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction) 10 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica, inhalable fraction)
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended) 3 mg/m <sup>3</sup> (respirable particles, recommended)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended) 3 mg/m <sup>3</sup> (respirable particles, recommended)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 6 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 3 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 6 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 3 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)
Ontario	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable) 3 mg/m <sup>3</sup> (respirable)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable particles, recommended) 3 mg/m <sup>3</sup> (respirable particles, recommended)
Québec	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (including dust, inert or nuisance particulates-total dust)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 6 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction) 3 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable 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 clothing. Protective goggles. Insufficient ventilation and/or dust generation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear gloves impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves.

**Eye and Face Protection:** Wear ANSI approved glasses or safety goggles when handling dust to prevent contact with eyes. Wearing contact lenses when using Limestone and Dolomite, under dusty conditions, is not recommended.

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**Skin and Body Protection:** Wear gloves, boot covers and protective clothing impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves.

**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	: Gray/Black or Brown/Tan Powder
Odor	: None
Odor Threshold	: Not available
pH	: 8 - 11 (In Water)
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
Relative Density	: Not available
Specific Gravity	: 2 – 3 (Water = 1)
Solubility	: Negligible
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: None, solid

## 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:** Dissolves 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.
- 10.6. Hazardous Decomposition Products:** None expected under normal conditions of use.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

**LD50 and LC50 Data:** Not available

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

**pH:** 8 - 11 (In Water)

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

**pH:** 8 - 11 (In Water)

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

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**Carcinogenicity:** May cause cancer (Inhalation).

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

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

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** The three types of silicosis include: 1) Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD); 2) Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years); 3) Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels. Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures. Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis. Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica. Corrosive to the respiratory tract.

**Symptoms/Injuries After Skin Contact:** Slag may cause dry skin, discomfort, irritation, and dermatitis. Slag is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as, redness, itching, rash, scaling, and cracking. Irritant dermatitis is caused by the physical properties of slag including moisture and abrasion. Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) potentially present in slag. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with slag. Others may develop allergic dermatitis after years of repeated contact with slag.

**Symptoms/Injuries After Eye Contact:** Potentially causes permanent damage to the cornea, iris, or conjunctiva. Airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with large amounts of dry powder or with wet slag can cause moderate eye irritation. Eye exposures require immediate first aid to prevent significant damage to the eye.

**Symptoms/Injuries After Ingestion:** 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:

<b>Quartz (14808-60-7)</b>	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg
<b>Calcium oxide (1305-78-8)</b>	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rabbit	> 2500 mg/kg
<b>Magnesium oxide (MgO) (1309-48-4)</b>	
LD50 Oral Rat	3870 mg/kg
<b>Slags, ferrous metal, blast furnace (65996-69-2)</b>	
LD50 Oral Rat	> 2000 mg/kg
LD50 Dermal Rat	> 4000 mg/kg
LC50 Inhalation Rat	> 230.1 mg/m <sup>3</sup> (Exposure Time: 6 h; Species: Wistar)
<b>Quartz (14808-60-7)</b>	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General:** Harmful to aquatic life.



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<b>Calcium oxide (1305-78-8)</b>	
<b>LC50 Fish 1</b>	50.6 mg/l

### 12.2. Persistence and Degradability

Not available

### 12.3. Bioaccumulative Potential

<b>Calcium oxide (1305-78-8)</b>	
<b>BCF Fish 1</b>	(no bioaccumulation)

### 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, national, provincial, territorial and international regulations.

**Additional Information:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

**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

<b>Slag, NewCem<sup>®</sup>, Litex<sup>TM</sup> Lightweight Aggregate, True Lite Lightweight Aggregate<sup>TM</sup>, Vitrex<sup>TM</sup> Pelletized Slag</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Skin corrosion or Irritation Health hazard - Carcinogenicity

#### Quartz (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Calcium oxide (1305-78-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Magnesium oxide (MgO) (1309-48-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Slags, ferrous metal, blast furnace (65996-69-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. US State Regulations

#### Quartz (14808-60-7)

<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
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#### 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

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### Calcium oxide (1305-78-8)

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

### Magnesium oxide (MgO) (1309-48-4)

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

### Quartz (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

### Calcium oxide (1305-78-8)

Listed on the Canadian DSL (Domestic Substances List)

### Magnesium oxide (MgO) (1309-48-4)

Listed on the Canadian DSL (Domestic Substances List)

### Slags, ferrous metal, blast furnace (65996-69-2)

Listed on the Canadian DSL (Domestic Substances List)

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

**Date of Preparation or Latest Revision** : January 1, 2022

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

### GHS Full Text Phrases:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
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
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life

An electronic version of this SDS is available on [www.lafarge.ca](http://www.lafarge.ca) under the Health and Safety Section. Please direct any inquiries regarding the content of this SDS to [SDSinfo@Lafarge.com](mailto:SDSinfo@Lafarge.com).

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