Safety Data Sheet

Ground Granulated blast furnace slag

1. Identification

Product identifier:	Ground Granulated blast furnace slag
Other means of identification:	GGBFS, Slag cement
Recommended use:	Ground product produced by burning slag at high temperatures.
Restrictions on use:	For the construction industry
Supplier:	Ciment Québec Inc. 145 Boulevard du Centenaire Saint-Basile, Quebec, Canada, G0A 3G0
Phone:	418 329-2100
Emergency telephone number:	418 329-2100
Hours of operation:	24/7

2. Identification of hazards

Warning statement: DANGER

Product classification

Serious eye damage - Category 1.
Carcinogenicity - Category 1A.
Specific target organ toxicity - repeated exposure - Category 1. Skin irritation - Category 2.
Specific target organ toxicity - single exposure - Category 3 Respiratory tract irritation.

Hazard statements

H318 - Causes serious eye damage.

H350 - May cause cancer.

H372 - Causes damage to organs (lungs) through prolonged or repeated exposure.

H315 - Causes skin irritation. H335 - May cause respiratory irritation.

Precautionary statements

Prevention: Obtain instructions before use. Do not handle until you have read and understood all safety precautions. Do not breathe dust. Wash hands thoroughly after handling and any other part of the body that may have been exposed to the product. Do not eat, drink, or smoke while handling this product. Use only outdoors or in a well-ventilated area. Wear gloves and protective clothing, as well as eye and face protection.

Action: IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash immediately with water for several minutes. IF SKIN IRRITATION OCCURS: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Immediately rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Consult a doctor if you feel unwell.

Storage: Keep container tightly closed. Store in a well-ventilated place. Keep locked up.

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Disposal: Dispose of contents/container in accordance with local, regional, national, and/or international regulations.

Other hazards: No other effects demonstrated. See toxicological information, section 11

3. Composition/information on ingredients

No	CAS No.:	Common name and synonyms	Concentration % (w/w)
1	65996-69-2	Granulated blast furnace slag	>95
2	7778-18-9	Anhydrous gypsum	0.1-5
	Slag may contain the following ingredients in varying concentrations:*		
3	1305-78-8	Calcium oxide	40.00 - 50.00
4	69012-64-2	Amorphous silica	30.00 - 40.00
5	1344-28-1	Aluminum oxide	10.00 - 20.00
6	1309-48-4	Magnesium oxide	5.00 – 10.00
7	13463-67-7	Titanium dioxide	0.00 - 2.00
8	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	0.10 – 1.00

* The actual concentration is presented as a range as it is considered a trade secret.

4. First aid

In case of ingestion, irritation, any form of overexposure, or symptoms of overexposure occurring during use of the product or persisting after use, immediately contact a POISON CONTROL CENTER, EMERGENCY ROOM, or DOCTOR; ensure that the product's safety data sheet is available.

Eye contact: Check if the victim is wearing contact lenses and, if so, remove them. IMMEDIATELY rinse eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention as soon as possible.

Skin contact: Immediately remove contaminated clothing. Wash skin with soap and water. Wet contaminated clothing thoroughly. If irritation persists, seek medical attention.

Inhalation: Move the exposed person to a well-ventilated area. Keep the person warm and lying down. Loosen tight clothing such as collars, ties, or belts. If breathing has stopped, is irregular, or is absent, qualified personnel should administer artificial respiration or oxygen. Get medical attention immediately.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep the person warm and lying down. Do not induce vomiting unless instructed to do so by medical personnel.

Symptoms: This product is irritating to the skin and corrosive to the eyes, respiratory tract, and digestive tract. The severity of symptoms may vary depending on exposure conditions (duration of contact, product concentration, etc.).

Acute and delayed effects: May cause skin irritation. When mixed with water, the product may also become corrosive to the skin. Potential for permanent corneal damage. Contains crystalline silica. Prolonged exposure to respirable crystalline silica may aggravate respiratory and lung diseases and cause silicosis. The effects of silicosis on a person's health may continue to worsen even after exposure has ceased, and they are irreversible. In addition, pulmonary fibrosis may develop into lung cancer.

Note to treating physician: No specific treatment. Symptomatic treatment required. Damage to the mucous membranes may contraindicate the use of gastric lavage. Danger: risk of gastric perforation.

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5. Firefighting measures

Suitable extinguishing agents: Use dry chemical powders CO_2, water spray (mist) or foam.

Unsuitable extinguishing agents: Water jets may spread the fire.

Specific hazards of the hazardous product: No specific hazards.

Hazardous combustion products: Calcium oxides.

Special protective equipment and special precautions for firefighters: Firefighters must wear appropriate protective equipment and a self-contained breathing apparatus (SCBA) equipped with a positive pressure full-face mask.

6. Measures to be taken in case of accidental spillage

Personal precautions: Do not take any action that involves personal risk or if you do not have adequate training and protection. Evacuate the surrounding area. Do not touch or walk on spilled product. Turn off all sources of heat and ignition. Avoid breathing mist. Ensure adequate ventilation. Wear appropriate respiratory protection when ventilation is inadequate. Wear appropriate personal protective equipment (see Section 8).

Protective equipment and emergency measures: Prevent spilled material from dispersing, flowing, and coming into contact with soil, drains, sewers, and waterways. Notify the appropriate authorities if the product has been released into the environment. Use inert absorbent material or containment booms for large spills.

Methods and material for containment and cleaning up: Stop the leak if it is safe to do so. Remove containers from the spill area. Contain spills and collect them using non-combustible absorbent materials such as sand, earth, or vermiculite. Then place in a container for disposal in accordance with local regulations. Dispose of through a licensed specialist company.

7. Handling and storage

Safety precautions for handling: Wear appropriate personal protective equipment (see Section 8). Do not eat, drink, or smoke in areas where this product is handled, stored, or processed. Persons working with this product should wash hands and face before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid contact with eyes, skin, and clothing. Do not swallow. Avoid breathing mists. Use only in a well-ventilated area. Wear appropriate respiratory protection when ventilation is inadequate. Do not enter storage areas or enclosed spaces unless adequately ventilated. Keep in original container or in another suitable container made of compatible material and kept tightly closed when not in use. Empty containers contain product residue and may present a hazard. Do not reuse this container.

Storage safety conditions: Store in accordance with local regulations, in a suitable and authorized location. Store in the original container in a dry, cool, well-ventilated place, away from direct light, incompatible materials (see Section 10), and food. Keep container tightly closed when not in use. Opened containers should be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use an appropriate container to avoid contamination of the environment.

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8. Exposure controls/personal protection

Control parameters:

Occupational exposure limits:

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
USA OSHA	OSHA PEL (TWA) (mg/m³)	50 µg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)
United States IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)
Alberta	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particles)
British Columbia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable)
Manitoba	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
New Brunswick	OEL TWA (mg/m³)	0.1 mg/m³ (respirable fraction)
Newfoundland and Labrador	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
Nova Scotia	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
Nunavut	OEL TWA (mg/m³)	0.05 mg/m³ (respirable fraction)
Northwest Territories	OEL TWA (mg/m³)	0.05 mg/m³ (respirable fraction)
Ontario	OEL TWA (mg/m³)	0.1 mg/m³ (regulated designated substance - respirable)
Prince Edward Island	OEL TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
Quebec	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 particles/ml
Calcium oxide (1305-78-8)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	2 mg/m³
US IDLH	US IDLH (mg/m³)	25 mg/m³
Alberta	OEL TWA (mg/m³)	2 mg/m³
British Columbia	OEL TWA (mg/m³)	2 mg/m³
Manitoba	OEL TWA (mg/m³)	2 mg/m³
New Brunswick	OEL TWA (mg/m³)	2 mg/m³
Newfoundland and Labrador	OEL TWA (mg/m³)	2 mg/m³
Nova Scotia	OEL TWA (mg/m³)	2 mg/m³
Nunavut	SEL OEL (mg/m³)	4 mg/m³
Nunavut	OEL TWA (mg/m³)	2 mg/m³
Northwest Territories	SEL OEL (mg/m³)	4 mg/m³
Northwest Territories	OEL TWA (mg/m³)	2 mg/m³
Ontario	OEL TWA (mg/m³)	2 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	2 mg/m³
Quebec	VEMP (mg/m³)	2 mg/m³
Saskatchewan	SEL OEL (mg/m³)	4 mg/m³
Saskatchewan	OEL TWA (mg/m³)	2 mg/m³
Yukon	SEL OEL (mg/m³)	4 mg/m³
Yukon	OEL TWA (mg/m³)	2 mg/m³
Amorphous silica (69012-64-2)		

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US OSHA	OSHA PEL (TWA) (mg/m³)	6 mg/m³
Alberta	OEL TWA (mg/m³)	2 mg/m³
British Columbia	OEL TWA (mg/m³)	2 mg/m³
Manitoba	OEL TWA (mg/m³)	2 mg/m³
New Brunswick	OEL TWA (mg/m³)	2 mg/m³
Newfoundland and Labrador	OEL TWA (mg/m³)	2 mg/m³
Nova Scotia	OEL TWA (mg/m³)	2 mg/m³
Nunavut	SEL OEL (mg/m³)	4 mg/m³
Nunavut	OEL TWA (mg/m³)	2 mg/m³
Northwest Territories	SEL OEL (mg/m³)	4 mg/m³
Northwest Territories	OEL TWA (mg/m³)	2 mg/m³
Ontario	OEL TWA (mg/m³)	2 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	2 mg/m³
Quebec	VEMP (mg/m³)	2 mg/m³
Saskatchewan	SEL OEL (mg/m³)	4 mg/m³
Saskatchewan	OEL TWA (mg/m³)	2 mg/m³
Yukon	SEL OEL (mg/m³)	4 mg/m³
Yukon	OEL TWA (mg/m³)	2 mg/m³

NIOSH: National Institute for Occupational Safety and Health OSHA:
Occupational Safety and Health Administration
PEL: Permissible Exposure Limits
REL: Recommended Exposure Limits ACGIH ®: American Conference of Governmental Industrial Hygienists
TLV ®: Threshold Limit Values SEL: Short Term Exposure Limit
OEL: Occupational Exposure Limit
IDLH: Immediate Danger to Life or Health

Appropriate engineering controls: When a worker is exposed to a substance identified as having a proven or suspected carcinogenic, mutagenic, and/or reprotoxic effect in humans, exposure must be minimized, even when it remains within the prescribed standards regardless of the duration of exposure. Recirculation must also be prohibited. Use only in a well-ventilated environment. Use enclosed enclosures, source extraction ventilation, or other integrated automatic control systems to maintain exposure levels below the values mentioned.

Personal protection measures: After handling chemicals, wash hands, forearms, and face thoroughly before eating, smoking, using the toilet, and after work. Use appropriate techniques to remove contaminated clothing. Wash contaminated clothing before reuse. Ensure that eye wash stations and decontamination showers are installed near workstations.

Eyes: DO NOT WEAR CONTACT LENSES. Wear splash-proof safety glasses.

Hands: When handling chemicals, always wear impervious, chemical-resistant gloves that comply with an approved standard. Taking into account the parameters specified by the glove manufacturer, check that the gloves retain their protective properties during use. In the case of mixtures consisting of several substances, the protective life of the gloves cannot be accurately assessed.

Respiratory: Workers exposed to contaminants must wear a respirator appropriate to the type of hazard and based on expected or known exposure levels, taking into account the safe use limits of the selected respirator. Wear a properly fitted self-contained breathing apparatus or air-purifying respirator that complies with an approved standard if a risk assessment recommends it.

Other: Wear long-sleeved protective clothing and appropriate safety shoes at all times.

9. Physical and chemical properties

Physical state: Powder (dust).

Color: Yellowish white

Odor: Odorless

Melting/freezing point: 1426 °C (2600 °F)

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Initial boiling point/boiling range: Not applicable
Flammability: Not applicable
Lower flammability or explosive limits: Not applicable **Upper flammability or explosive limits:** Not applicable **Flash point:** Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: Not available **pH:** 11.0
(Approx. In aqueous suspension)
Kinematic viscosity: Not applicable
Solubility (in water): Insoluble
Partition coefficient n-octanol/water (Log K_{ow}): Not applicable
Vapor pressure: Not applicable
Density and relative density: 2-3 kg/L at 20°C (water = 1)
Relative vapor density: Not applicable
Particle characteristics: < 75 microns

10. Stability and reactivity

Reactivity: Stable under recommended storage and handling conditions.

Chemical stability: The product is chemically stable under normal conditions of use.

Risk of hazardous reactions: No polymerization or hazardous reactions occur under normal conditions of use.

Conditions to avoid: Keep away from incompatible products (see below). Avoid operations that produce clouds of inorganic powders or dust. In areas where the formation of powders or dust cannot be avoided, prevent accumulation, ground all equipment, and use non-sparking tools.

Incompatible materials: None known at room temperature.

Incompatibilities: Strong oxidizing agents. Acids.

Hazardous decomposition products: Calcium oxides.

11. Toxicological data

	Oral	Skin	Inhalation Gas	Inhalation Vapors	Inhalation dust/mists
ETAproduct	15527.95 mg/kg	> 5,000 mg/kg	N/A	N/A	> 5 mg/l

No	CAS No.:	Common name and synonyms	LD_{50} oral mg/kg	LD_{50} dermal mg/kg	LC_{50} ppm V for 4 hours - gas	LC_{50} mg/L for 4 hours - vapors	LC_{50} mg/l for 4 hours - dust mists
1	1305-78-8	Calcium oxide	> 5000	> 5000	N/A	N/A	> 5.00
2	69012-64-2	Amorphous silica	> 5000	> 5000	N/A	N/A	> 5.00
3	1344-28-1	Aluminum oxide	> 5000	> 5000	N/A	N/A	> 5.00
4	1309-48-4	Magnesium oxide	> 5000	> 5000	N/A	N/A	> 5.00
5	13463-67-7	Titanium dioxide	> 5000	> 5000	N/A	N/A	> 5.00

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6	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	> 5000	> 5000	N/A	N.A.	> 5.00

Probable routes of exposure: This product is absorbed through the respiratory and digestive tracts.

Symptoms: This product is irritating to the skin and corrosive to the eyes, respiratory tract, and digestive tract. The severity of symptoms may vary depending on exposure conditions (duration of contact, product concentration, etc.).

Immediate and delayed effects, as well as chronic effects caused by short-term and long-term exposure: May cause skin irritation. When mixed with water, the product may also become corrosive to the skin. Potential for permanent corneal damage. Contains crystalline silica. Prolonged exposure to respirable crystalline silica can aggravate respiratory and lung diseases and cause silicosis. The effects of silicosis on a person's health can continue to worsen even after exposure has ceased, and they are irreversible. In addition, pulmonary fibrosis can develop into lung cancer.

Aspiration hazard	N/A
Skin corrosion - Skin irritation	Yes
Serious eye damage - Eye irritation	Yes
Skin sensitization	N/A
Respiratory sensitization	N/A
Specific target organ toxicity - single exposure	N/A
Specific target organ toxicity - single exposure Category 3 Narcotic effects	N/A
Specific target organ toxicity - single exposure Category 3 Respiratory tract irritation	Yes
Specific target organ toxicity - repeated exposure	Yes

No	CAS No.:	Common name and synonyms	IARC	ACGIH	Mutagenicity	Reproductive effects
1	13463-67-7	Titanium dioxide	2B	A3	No effect demonstrated.	No effect demonstrated.
2	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	1	A1	No effect demonstrated.	No effect demonstrated.

Classification of carcinogenicity according to IARC (International Agency for Research on Cancer)

Group 1: carcinogenic agent (sometimes called proven carcinogen or definite carcinogen). Group 2B: agent may be carcinogenic (sometimes called possible carcinogen).

Carcinogenicity classification according to ACGIH (American Conference of Governmental Industrial Hygienists)

Group A1: confirmed human carcinogen.
Group A3: confirmed carcinogen in animals with unknown relevance to humans.

12. Ecological data

Ecotoxicity

No	CAS No.:	Common name and synonyms	Ecotoxicity aquatic short-term	Ecotoxicity aquatic long term	Aquatic ecotoxicity terrestrial
1	1305-78-8	Calcium oxide	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No Known adverse effects on the environment.

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2	69012-64-2	Amorphous silica	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No known adverse effects on the environment
3	1344-28-1	Aluminum oxide	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No known adverse effects on the environment
4	1309-48-4	Magnesium oxide	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No known adverse effects on the environment
5	13463-67-7	Titanium dioxide	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No known adverse effects on the environment
6	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	No known adverse effects on aquatic organisms	No known adverse effects on aquatic organisms	No known adverse effects on the environment

Persistence, bioaccumulation potential, and other harmful effects

No	CAS No.:	Common name and synonyms	Persistent	Bioaccumulation	Toxicity
1	1305-78-8	Calcium oxide	Yes	No	No
2	69012-64-2	Amorphous silica	Yes	No	No
3	1344-28-1	Aluminum oxide	Yes	No	No
4	1309-48-4	Magnesium oxide	Yes	No	No
5	13463-67-7	Titanium dioxide	Yes	No	No
6	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	Yes	No	No

Degradation: N.A.

Mobility in soil: N/A

13. Disposal data

Disposal method: It is important to minimize or avoid waste generation whenever possible. Dispose of in accordance with federal, provincial, and municipal regulations. Dispose of surplus and non-recyclable products through a licensed specialized company. Care should be taken when handling empty containers that have not been cleaned or rinsed.

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14. Transport information

	TMD	DOT	IMDG	IATA
UN number				
Official transport designation	Non-regulated	Not regulated	Not regulated	Not regulated
Transport hazard class(es)				
Packaging Group				

Canada - PIU

Not applicable

United States - Reportable quantity (RQ)

Not applicable

Bulk transport (under Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978 (MARPOL 73/78 Convention) and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)): N/A

Marine pollutant: No

Limited quantity exemptions: Not applicable

Other exemptions: Not applicable

Special precautions: Not applicable

15. Regulatory information

Canada

No	CAS No.:	Common name and synonyms	LIS	LES
1	1305-78-8	Calcium oxide	X	
2	69012-64-2	Amorphous silica	X	
3	1344-28-1	Aluminum oxide	X	
4	1309-48-4	Magnesium oxide	X	
5	13463-67-7	Titanium dioxide	X	
6	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	X	

United States

No	CAS No:	Common name and synonyms	TSCA	PROP-65	RTK
1	1305-78-8	Calcium oxide	X		X
2	69012-64-2	Amorphous silica	X		X
3	1344-28-1	Aluminum oxide	X		X

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4	1309-48-4	Magnesium oxide	X		X
5	13463-67-7	Titanium dioxide	X	X	X
6	14808-60-7	Crystalline silica. Crystalline silicon dioxide. Quartz	X	X	X

The product classification and SDS have been prepared in accordance with RPD and HazCom 2012.

16. Other information

Date: October 30, 2025

Version: 1

Notice to the reader: The manufacturer declares that the information contained in this sheet has been prepared from data, information, and warnings obtained from government websites and/or raw material suppliers. The manufacturer has no control over the content of this information and reports all the information it has on the product's components at the time of manufacture. The manufacturer assumes no responsibility for the accuracy of the information provided. Although certain warnings are contained in this sheet, we do not guarantee that these are the only hazards that may exist and advise the user accordingly. It is the user's responsibility to verify that the product used is compliant and suitable for its intended use. The manufacturer assumes no responsibility for any damage, loss, or injury to persons, property, or of any other kind that may occur or result from the incorrect, negligent, inappropriate, or abusive use or handling of the product, or from failure to read the information contained in this sheet.

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