Deicing Agent

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: 3.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Deicing Agent, Calcium Sand, Calcium Sand M1000

Synonyms: Deicing Agent

1.2. Intended Use of the Product

Calcium sand products are used for deicing and traction. DO NOT use this product for abrasive blasting. This material safety data sheet and the information contained herein were not developed for abrasive blasting.

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

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

Eye Irrit. 2A	H319
Carc. 1A	H350
STOT SE 3	H335
STOT RE 1	H372

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

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS07 GHS08

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H319 - Causes serious eye irritation.
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/CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection.
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.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention.
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

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

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

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Quartz	(CAS-No.) 14808-60-7	80 - 99	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372
Calcium chloride	(CAS-No.) 10043-52-4	10 - 15	Eye Irrit. 2A, H319
Magnesium hydroxide	(CAS-No.) 1309-42-8	10 - 15	Not classified
Magnesium chloride	(CAS-No.) 7786-30-3	1 - 5	Not classified
Potassium chloride	(CAS-No.) 7447-40-7	1 - 5	Aquatic Acute 3, H402
Sodium chloride	(CAS-No.) 7647-14-5	1 - 5	Not classified

Full text of H-phrases: see Section 16.

*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 where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

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: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May cause cancer. Causes damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes serious eye irritation.

Inhalation: Irritation of the respiratory tract and the other mucous membranes. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

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 considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

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

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

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

Hazardous Combustion Products: Calcium oxides. Chlorides. Magnesium oxides. Potassium oxides. Silicon oxides. Sodium 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. Do not handle until all safety precautions have been read and understood.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective 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. Ventilate area.

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: Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store away from incompatible materials.

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.

7.3. Specific End Use(s)

Calcium sand products are used for deicing and traction. DO NOT use this product for abrasive blasting. This material safety data

sheet and the information contained herein were not developed for abrasive blasting.

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	0.1 mg/m³ (respirable fraction)
USA ACGIH	ACGIH TWA	0.025 mg/m³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA OSHA	OSHA PEL (TWA) [1]	50 µg/m³ (Respirable crystalline silica)
USA OSHA	OSHA PEL (TWA) [2]	(250)/(%SiO_2+5) mppcf TWA (respirable fraction) (10)/(%SiO_2+2) mg/m_3 TWA (respirable fraction) (For any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or otherwise not in effect, See 20 CFR 1910.1000 TABLE Z-3)
USA NIOSH	NIOSH REL (TWA)	0.05 mg/m³ (respirable dust)
USA IDLH	US IDLH	50 mg/m³ (respirable dust)
Alberta	OEL TWA	0.025 mg/m³ (respirable particulate)
British Columbia	OEL TWA	0.025 mg/m³ (respirable)
Manitoba	OEL TWA	0.025 mg/m³ (respirable particulate matter)
New Brunswick	OEL TWA	0.1 mg/m³ (respirable fraction)
Newfoundland & Labrador	OEL TWA	0.025 mg/m³ (respirable particulate matter)
Nova Scotia	OEL TWA	0.025 mg/m³ (respirable particulate matter)
Nunavut	OEL TWA	0.05 mg/m³ (respirable fraction)
Northwest Territories	OEL TWA	0.05 mg/m³ (respirable fraction)
Ontario	OEL TWA	0.1 mg/m³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA	0.025 mg/m³ (respirable particulate matter)
Québec	VEMP	0.1 mg/m³ (respirable dust)
Saskatchewan	OEL TWA	0.05 mg/m³ (respirable fraction (Silica - crystalline (Trydimite removed))
Yukon	OEL TWA	300 particle/mL (Silica - Quartz, crystalline)

Calcium chloride (10043-52-4)		
Ontario	OEL TWA	5 mg/m³

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. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

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

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear NIOSH-approved respiratory protection.

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 Sand
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	7 (in water)
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
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	:	2.7 (Water = 1)
Solubility	:	Insoluble
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available

SECTION 10: STABILITY AND REACTIVITY

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

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

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

10.4. Conditions to Avoid: Incompatible materials.

10.5. Incompatible Materials: Aggregate 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: Thermal decomposition may produce: Calcium oxides. Chrloride fumes. Oxides of magnesium. Potassium oxides. Silicon oxides. Sodium oxides.

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: Not classified

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: 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: Irritation of the respiratory tract and the other mucous membranes. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

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

Calcium chloride (10043-52-4)	
LD50 Oral Rat	2301 (1455 - 2781) mg/kg
LD50 Dermal Rabbit	> 5000 mg/kg

Magnesium hydroxide (1309-42-8)	
LD50 Oral Rat	8500 mg/kg

Magnesium chloride (7786-30-3)	
LD50 Oral Rat	2800 mg/kg
LD50 Dermal Rat	> 2000 mg/kg

Potassium chloride (7447-40-7)	
LD50 Oral Rat	2600 mg/kg

Sodium chloride (7647-14-5)	
LD50 Oral Rat	3 g/kg
LD50 Dermal Rabbit	> 10000 mg/kg (Species: New Zealand White)
LC50 Inhalation Rat	> 42 g/m³ (Exposure time: 1 h)

Quartz (14808-60-7)	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

Calcium chloride (10043-52-4)	
LC50 Fish 1	10650 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2280000 - 3948000 µg/l (Exposure time: 48 h - Species: Daphnia magna)

Magnesium chloride (7786-30-3)	
LC50 Fish 1	1970 - 3880 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	140 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Potassium chloride (7447-40-7)	
LC50 Fish 1	1060 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	825 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	750 (750 - 1020) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Sodium chloride (7647-14-5)	
LC50 Fish 1	5560 (5560 - 6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

EC50 Daphnia 2	340.7 (340.7 - 469.2) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Fish	252 mg/l (Species: Pimephales promelas)

12.2. Persistence and Degradability

Deicing Agent	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Deicing Agent	
Bioaccumulative Potential	Not established.
Calcium chloride (10043-52-4)	
BCF Fish 1	(no bioaccumulation)
Sodium chloride (7647-14-5)	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

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

Deicing Agent	
SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Carcinogenicity Health hazard - Serious eye damage or eye irritation

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

Calcium chloride (10043-52-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium hydroxide (1309-42-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium chloride (7786-30-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium chloride (7447-40-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium chloride (7647-14-5)
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 can expose you to Quartz, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

Quartz (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List)

Calcium chloride (10043-52-4)
Listed on the Canadian DSL (Domestic Substances List)

Magnesium hydroxide (1309-42-8)
Listed on the Canadian DSL (Domestic Substances List)

Magnesium chloride (7786-30-3)
Listed on the Canadian DSL (Domestic Substances List)

Potassium chloride (7447-40-7)
Listed on the Canadian DSL (Domestic Substances List)

Sodium chloride (7647-14-5)
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 : 01/01/2022

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:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1A	Carcinogenicity Category 1A
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

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