CALCIUM CARBONATE

SECTION 1. IDENTIFICATION

Product Identifier CALCIUM CARBONATE

Other Means of Identification Limestone

Product Family Lost Circulation Material / Weight Material

Recommended Use Drilling Fluid Additive.

Supplier Bri-Chem Supply Ltd., Bay 4, 5510 - 3rd Street SE, Calgary, Alberta, T2H 1J9, Bri-Chem Supply, 403-252-5904, www.brichemsupply.com

Emergency Phone No. ChemTrec, (800) 424-9300, 24/7

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2B; Specific target organ toxicity (single exposure) - Category 3

GHS Label Elements

Signal Word:
Warning
Causes skin irritation.
Causes eye irritation.
May cause respiratory irritation.
Contains small amount of crystalline silica which may cause delayed respiratory disease if inhaled over a long period of time.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Calcium carbonate	471-34-1	60-100	
Silica, quartz	14808-60-7	0.1-1.0 **	

Notes

Cyrstalline silica, quartz (% w/w): 0.1-1.0 & 0.01**

** Concentration of crystalline silica in a series of lime products will vary from source to source. It was not detected on some samples (<0.1% w/w).
ACGIH-TLV - 0.025 mg/m³ respirable

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move source of dust or move victim to fresh air. If breathing has stopped, trained personnel should begin rescue breathing. Call a Poison Centre or doctor if you feel unwell or are concerned.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Discard contaminated clothing and shoes or thoroughly launder before re-use. If irritation develops or persists, seek medical attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. In case of an imbedded particle or if irritation develops or persists, seek medical attention.

Ingestion

If conscious wash out mouth with water and drink several glasses of water to dilute. Never induce vomiting or give anything by mouth to an unconscious or convulsing victim. Get immediate medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing agent suitable for surrounding fire.

Specific Hazards Arising from the Chemical

Does not burn.
Calcium carbonate is generally non-flammable but ignites on contact with fluorine.

Special Protective Equipment and Precautions for Fire-fighters

Firefighters exposed to products of combustion should wear a full-body encapsulating chemical protective suit with positive-pressure self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Limit access to trained personnel. Use appropriate safety equipment. Stop or reduce leak if safe to do so. Avoid generating dust. Collect by mechanical means (shovel, sweep, vacuum, etc.). Recover the product for re-use, if possible, or for elimination.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Avoid generating dusts. Avoid breathing any dust from this material. Wear personal protective equipment to avoid direct contact with this chemical. An eyewash station should be readily available where this product is used.
It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

Conditions for Safe Storage

Keep in a cool, dry place, in tightly closed containers away from acids. Empty packages contain residual hazardous materials and must be handled with the same care and attention as if full.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

(calcium carbonate)
OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average (8/40h) 5 mg/m³ (respirable dust) 15 mg/m³ (total dust)

(crystalline silica, quartz)

OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average (8/40h) 30/(%SiO2)+2 mg/m³ (total dust); 10/(%SiO2)+2 mg/m³ (respirable). ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average (8/40h) 0.025 mg/m³ (respirable dust).

Appropriate Engineering Controls

Enclose dust sources. Use local exhaust ventilation, process enclosure or other engineering controls to maintain concentration of airborne dust below TLV.

Individual Protection Measures

Eye/Face Protection

Safety glasses with side shields. Do not wear contact lenses without tight-fitting goggles when handling this chemical.

Skin Protection

Ensure a long-sleeved shirt, buttoned at the neck, full-length pant over safety boots and clean, dry gloves. Ensure emergency shower and eyewash available.

Respiratory Protection

Use a NIOSH-approved dust mask. Use appropriate cartridges when airborne exposures exceed established guidelines.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White - grey powder. Particle Size: Not available
Odour	Odourless
Odour Threshold	Not available
pH	8.0 - 9.2
Melting Point/Freezing Point	Not applicable (melting); Not applicable (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	2.68 - 2.76
Solubility	Practically insoluble (less than 0.1%) in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not applicable
Decomposition Temperature	870 ºC (Calcium carbonate)
Viscosity	Not applicable (kinematic)

Other Information

Physical State	Solid
Molecular Formula	CaCO3
Molecular Weight	Not available
Bulk Density	900 - 1900 kg/m3
Surface Tension	Not applicable
Critical Temperature	Not applicable
Vapour Pressure at 50 deg C	Not applicable
Saturated Vapour Concentration	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Very stable chemical substance.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Reacts with acids to liberate carbon dioxide. Ignites on contact with fluorine. May have explosive reaction with magnesium.

Incompatible Materials

Fluorine, magneaium, aluminum, silicon, hydrogen, mercury, aluminum sulfate, ammonium salt, acids.

Hazardous Decomposition Products

Decomposition produces calcium oxide and carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

This product may contain trace amounts of crystalline silica.

Acute Toxicity

LD50 Oral Rat: 6450 mg/kg

Skin Corrosion/Irritation

Repeated or prolonged contact with the dry powder may have a drying effect on the skin.
May cause dryness and irritation.. Moderate skin irritation (Rabbit): 500 mg/24-hr.

Serious Eye Damage/Irritation

Dust particles may cause mechanical irratation.
May cause eye irritation with discomfort or pain, local redness and swelling of the conjuctiva. Severe eye irritation (Rabbit): 750 microgram/24hr.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Dust may cause respiratory tract irritation. Contains small amount of crystalline silica which may cause delayed respiratory disease if inhaled over a long period of time.
Exposure may cause coughing and sneezing. Large amounts may cause chemical pneumonitis.

Ingestion

May cause gastrointestinal irritation.
If ingested in large quantities, constipation and hypercalcemia, hemorrhage.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No signs or symptoms of chronic exposure have been reported. Long-term exposure to products containing crystalline silica may cause silicosis, a progressive, disabling and sometimes fatal lung disease. Avoid inhalation. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects and auto-immune disease.
Excessive inhalation of respirable cryatalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis, and pulmonary fibrosis.

Carcinogenicity

Not listed as carcinogenic by IARD, NTP, OSHA or ACGIH. However, these products could contain crystalline silica which when inhaled in the form of quartz from occupational sources is carcenogenic to humans.
IARC (Group !): carcenogenic to humans
ACGIH (A2): suspected as a human carcinogen
NTP: as a known carcinogen.
Calcium Carbonate:
Not listed by IARC, NTP, OSHA or ACGIH.
Crystalline Silica Quartz:
IARC (Group 1): carcinogenic to humans
ACGIH (A2): suspected as a human carcinogen
NTP: known human carcinogen

No information was located for: Respiratory and/or Skin Sensitization, Development of Offspring, Sexual Function and Fertility, Germ Cell Mutagenicity, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

No ecotoxicity or environmental fate data available.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. This product is inert and can be landfilled in most locations; check with local operator.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG Regulations.

Special Precautions for User Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

WHMIS Classification

Class D2A

D2A - Very Toxic

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Limestone is specified on the NDSL. Calcium Carbonate is specified on the public portion of the DSL.

SECTION 16. OTHER INFORMATION

NFPA Rating	**Health - 1 Flammability - 0 Instability - 0**
SDS Prepared By	Bri-Chem Supply Ltd
Phone No.	(403) 252-5904
Date of Preparation	January 14, 2016
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