

# CALCIUM CARBONATE

## SECTION 1. IDENTIFICATION

|                                      |  |
|--------------------------------------|--|
| <b>Product Identifier</b>            | CALCIUM CARBONATE  |
| <b>Other Means of Identification</b> | Limestone  |
| <b>Product Family</b>                | Lost Circulation Material / Weight Material  |
| <b>Recommended Use</b>               | Drilling Fluid Additive.   |
| <b>Supplier Identifier</b>           | Bri-Chem Supply Ltd., Bay 4, 5510 - 3rd Street SE, Calgary, Alberta, T2H 1J9, Bri-Chem Supply, 403-252-5904, www.brichemsupply.com |
| <b>Emergency Phone No.</b>           | ChemTrec, (800) 424-9300, 24/7   |

## SECTION 2. HAZARD IDENTIFICATION

### Classification

Skin irritation - Category 2; Eye irritation - Category 2B; Specific target organ toxicity (single exposure) - Category 3

### Label Elements



Signal Word:

Warning

Causes skin irritation.

Causes eye irritation.

May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash hands and skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If skin irritation occurs: Get medical advice or attention.

If eye irritation persists: Get medical advice or attention.

Take off contaminated clothing and wash it before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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

### Notes

Crystalline 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/m<sup>3</sup> 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.

#### 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

### Extinguishing Media

#### Suitable Extinguishing Media

Use extinguishing agent suitable for surrounding fire.

### Specific Hazards Arising from the Product

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.

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## 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/m<sup>3</sup> (respirable dust) 15 mg/m<sup>3</sup> (total dust)

(crystalline silica, quartz)

OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. TWA = Time-Weighted Average (8/40h) 30/(%SiO<sub>2</sub>)+2 mg/m<sup>3</sup> (total dust); 10/(%SiO<sub>2</sub>)+2 mg/m<sup>3</sup> (respirable).

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average (8/40h) 0.025 mg/m<sup>3</sup> (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

|                                     |   |
|-------------------------------------|---|
| <b>Appearance</b>                   | White - grey powder. Particle Size: Not available                                 |
| <b>Odour</b>                        | Odourless   |
| <b>Odour Threshold</b>              | Not available   |
| <b>pH</b>                           | 8.0 - 9.2   |
| <b>Melting Point/Freezing Point</b> | Not applicable (melting); Not applicable (freezing)                               |
| <b>Initial Boiling Point/Range</b>  | Not applicable  |
| <b>Flash Point</b>                  | Not applicable  |
| <b>Evaporation Rate</b>             | Not applicable  |
| <b>Vapour Pressure</b>              | Not applicable  |
| <b>Vapour Density (air = 1)</b>     | Not applicable  |
| <b>Relative Density (water = 1)</b> | 2.68 - 2.76   |
| <b>Solubility</b>                   | Practically insoluble (less than 0.1%) in water; Not available (in other liquids) |

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|   |                              |
|---|------------------------------|
| <b>Partition Coefficient, n-Octanol/Water (Log Kow)</b> | Not applicable               |
| <b>Decomposition Temperature</b>                        | 870 °C (Calcium carbonate)   |
| <b>Viscosity</b>  | Not applicable (kinematic)   |
| <b>Other Information</b>                                |                              |
| <b>Physical State</b>                                   | Solid                        |
| <b>Molecular Formula</b>                                | CaCO <sub>3</sub>            |
| <b>Molecular Weight</b>                                 | Not available                |
| <b>Bulk Density</b>                                     | 900 - 1900 kg/m <sup>3</sup> |
| <b>Surface Tension</b>                                  | Not applicable               |
| <b>Critical Temperature</b>                             | Not applicable               |
| <b>Vapour Pressure at 50 deg C</b>                      | Not applicable               |
| <b>Saturated Vapour Concentration</b>                   | 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 irritation. May cause eye irritation with discomfort or pain, local redness and swelling of the conjunctiva. 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 crystalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis, and pulmonary fibrosis.

### **Carcinogenicity**

Not listed as carcinogenic by IARC, NTP, OSHA or ACGIH. However, these products could contain crystalline silica which when inhaled in the form of quartz from occupational sources is carcinogenic to humans.

IARC (Group 1): carcinogenic 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** 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 1988 Classification**



Class D2A

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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**

|                            |   |                         |                        |
|----------------------------|---|-------------------------|------------------------|
| <b>NFPA Rating</b>         | <b>Health - 1</b>   | <b>Flammability - 0</b> | <b>Instability - 0</b> |
| <b>SDS Prepared By</b>     | Bri-Chem Supply Ltd   |                         |                        |
| <b>Phone No.</b>           | (403) 252-5904  |                         |                        |
| <b>Date of Preparation</b> | December 29, 2020   |                         |                        |
| <b>Disclaimer</b>          | This Health and Safety information is correct to the best of our knowledge and belief at the date of its publication, but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as guidance for safe handling, storage, and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet. |                         |                        |

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