



# Safety Data Sheet

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## Section 01 - Product And Company Identification

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<b>Product Identifier</b>	Calcium Chloride 83%
<b>Other Means of Identification</b>	Calcium chloride flake
<b>Product Use and Restrictions on Use</b>	Industrial uses, drilling mud additives, workover fluids, completion fluids, ice melt, dust control, refrigeration.
<b>Initial Supplier Identifier</b>	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
<b>Prepared By</b>	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
<b>24-Hour Emergency Phone</b>	Phone: 1 (306) 664 – 2522

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## Section 02 - Hazard Identification

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### GHS-Classification

<b>Acute Toxicity-Oral</b>	Category 4
<b>Eye Corrosion/Irritation</b>	Category 2

### Physical Hazards

No known physical hazards

### **Warning**

### **Hazard Statements**

H302 – Harmful if swallowed.  
H319 – Causes serious eye irritation.

### **Pictograms**



### **Precautionary Statements**

P264 – Wash hands thoroughly after handling.  
P270 – Do not eat, drink or smoke when using this product.  
P301 + P312 – Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 – Rinse mouth.  
P280 – Wear eye protection and face protection.  
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 – If eye irritation persists: Get medical advice/attention.

P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

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## Section 03 - Composition / Information on Ingredients

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Chemical Name	CAS Number	Weight %	Unique Identifiers
Calcium chloride	10043-52-4	83-87%	
Sodium chloride	7647-14-5	1-2%	
Potassium chloride	7447-40-7	2-3%	
Water	7732-18-5	8-14%	

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## Section 04 - First Aid Measures

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<b>Inhalation</b>	If symptoms are experienced, remove victim to fresh air. Seek medical attention.
<b>Skin Contact / Absorption</b>	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
<b>Eye Contact</b>	Contact lenses should never be worn when working with this product. Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. If irritation persists, seek medical attention.
<b>Ingestion</b>	NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim rinse mouth with water again. Seek medical attention.
<b>Additional Information</b>	Treatment based on judgment of the physician in response to reactions of the patient.

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## Section 05 - Fire Fighting Measures

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<b>Suitable Extinguishing Media</b>	Product does not burn. Use appropriate extinguishing media for material that is supplying the fuel to the fire.
<b>Unsuitable Extinguishing Media</b>	Not Available
<b>Specific Hazards Arising From the Chemical</b>	Well-sealed containers may rupture violently when exposed to fire or excessive heat for sufficient time.
<b>Special Protective Equipment and Precautions for Fire-Fighters</b>	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
<b>Further Information</b>	Not Available

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## Section 06 - Accidental Release Measures

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<b>Personal Precautions / Protective Equipment / Emergency Procedures</b>	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.
<b>Environmental Precautions</b>	Prevent material from entering sewers, soils, waterways and groundwater.
<b>Methods and Materials for Containment and Cleaning Up</b>	Sweep up spilled material and place in container for disposal. Flush with water to remove any residue.

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## Section 07 - Handling and Storage

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<b>Precautions for Safe Handling</b>	This material is an EYE IRRITANT. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid formation of dust and aerosols.
<b>Conditions for Safe Storage</b>	Store in a cool, dry, well-ventilated area, out of direct sunlight and away from sources of heat. Prolonged storage may cause product to cake and become wet. Protect product from moisture.
<b>Incompatibilities</b>	Reactive metals, hot water, bromine trifluoride, methyl vinyl ether, furan-2-peroxycarboxylic acid, boric and calcium oxide.

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## Section 08 - Exposure Controls and Personal Protection

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### Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Calcium Chloride	Not Available		

### Engineering Control(s)

**Ventilation Requirements** Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Other** Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

### Protective Equipment

**Eyes/Face** Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

**Hand Protection** Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

**Skin and Body Protection** Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.  
Guidelines for calcium chloride, 30-70%:  
RECOMMENDED (resistance to breakthrough longer than 4 hours): Tychem(TM) Responder(TM).

Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.

**Respiratory Protection** NIOSH/MSHA approved respirator for dust should be worn if the potential to exceed exposure limit requirements or if workplace regulations mandate protection is needed.

**Thermal Hazards** Not Available

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## Section 09 - Physical and Chemical Properties

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### Appearance

**Physical State** Solid flakes

**Colour** White

<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not Applicable
<b><u>Property</u></b>	
<b>pH</b>	>7 for an aqueous solution
<b>Melting Point/Freezing Point</b>	260°C
<b>Initial Boiling Point and Boiling Range</b>	Not Applicable
<b>Flash Point</b>	Not Applicable
<b>Evaporation Rate</b>	Not Available
<b>Flammability</b>	Non-Flammable
<b>Upper Flammable Limit</b>	Not Applicable
<b>Lower Flammable Limit</b>	Not Applicable
<b>Vapour Pressure (mm Hg, 20°C)</b>	Not Available
<b>Vapour Density (Air=1)</b>	Not Available
<b>Relative Density</b>	45-54 lb/ft <sup>3</sup>
<b>Solubility(ies)</b>	Very soluble in water
<b>Partition Coefficient: n-octanol/water</b>	Log P <sub>ow</sub> = 0.05
<b>Auto-ignition Temperature</b>	Not Applicable
<b>Decomposition Temperature</b>	Not Applicable
<b>Viscosity</b>	Not Available
<b>Explosive Properties</b>	Not Available
<b>Specific Gravity (Water=1)</b>	2.16
<b>% Volatiles by Volume</b>	Not Available
<b>Formula</b>	CaCl <sub>2</sub>
<b>Molecular Weight</b>	110.98

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## **Section 10 - Stability and Reactivity**

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<b>Reactivity</b>	The anhydrous, monohydrate and dehydrate forms of calcium chloride generate large amounts of heat when dissolved in water or during water absorption.
<b>Stability</b>	Product is stable. Hygroscopic.
<b>Possibility of Hazardous Reactions</b>	Polymerization will not occur.

<b>Conditions to Avoid</b>	Exposure to moist air or water, addition to hot water.
<b>Incompatible Materials</b>	Reactive metals, hot water, bromine trifluoride, methyl vinyl ether, furan-2-peroxycarboxylic acid, boric and calcium oxide.
<b>Hazardous Decomposition Products</b>	None known.

## Section 11 - Toxicological Information

### Acute Toxicity Estimate

Component	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Calcium Chloride 83%	562 mg/kg	2935 mg/kg	180 mg/m <sup>3</sup>

This product has been classified in accordance with the Hazardous Products Regulations using ATE formula documented in the GHS standard.

### Chronic Toxicity – Carcinogenicity

Component	IARC
Calcium Chloride 83%	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

<b>Skin Corrosion/Irritation</b>	Cause no to slight irritation.
<b>Ingestion</b>	May irritate the mouth and throat. Large doses are expected to cause nausea and vomiting.
<b>Inhalation</b>	Dust or mist inhalation may irritate nose, throat, and lungs.
<b>Serious Eye Damage/Irritation</b>	Calcium chloride can cause serious eye damage based on animal information.
<b>Respiratory or Skin Sensitization</b>	Not Available
<b>Germ Cell Mutagenicity</b>	The available information does not suggest that calcium chloride is a mutagen.
<b>Reproductive Toxicity</b>	The available information does not suggest that calcium chloride is a developmental toxin.
<b>STOT-Single Exposure</b>	Not Available
<b>STOT-Repeated Exposure</b>	Repeated or prolonged contact to calcium chloride powder or solutions has caused inflammation and tissue death.
<b>Aspiration Hazard</b>	Not Available
<b>Synergistic Materials</b>	In animal studies, calcium chloride has decreased chromosome aberrations caused by cobaltous chloride, decreased the tumor promoting activity of sodium chloride and decreased pre-cancerous lesions caused by a known carcinogen

## Section 12 – Ecological Information

### Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Calcium Chloride	EC <sub>50</sub> (Diatom, 96hr): 3130mg/L	LC <sub>50</sub> (Pimephales promelas, 96hr): 4630mg/L	LC <sub>50</sub> (Daphnia magna, 64hr): 920mg/L
Potassium Chloride	EC <sub>50</sub> (Diatom, 96hr): 1337mg/L	LC <sub>50</sub> (Gambusia affinis, 96hr): 435mg/L	LC <sub>50</sub> (Daphnia magna, 96hr): 29mg/L
Sodium Chloride	EC <sub>50</sub> (Duckweed, 7d): 4880mg/L	LC <sub>50</sub> (Lepomis macrochirus, 96hr): 5840mg/L	LC <sub>50</sub> (Daphnia magna, 48hr): 402.6mg/L

<b>Biodegradability</b>	Calcium chloride does not biodegrade.
<b>Bioaccumulation</b>	Calcium chloride does not bioaccumulate.
<b>Mobility</b>	Calcium chloride is readily dissociated into calcium and chloride ions in water. These physico-chemical properties indicate that calcium chloride released into the environment is distributed into the water compartment in the form of calcium and chloride ions.
<b>Other Adverse Effects</b>	Not Available

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## Section 13 – Disposal Considerations

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<b>Waste From Residues/Unused Products</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
<b>Contaminated Packaging</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

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## Section 14 – Transport Information

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<b>UN Number</b>	Not Regulated
<b>UN Proper Shipping Name</b>	Not Regulated
<b>Transport Hazard Class(es)</b>	Not Regulated
<b>Packaging Group</b>	Not Regulated
<b>Environmental Hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
<b>Special Precautions</b>	Not Available
<b>Transport in Bulk</b>	Not Available

### TDG

**Other** Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

**TDG PRODUCT CLASSIFICATION:** This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

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## Section 15 – Regulatory Information

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**NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

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## Section 16 – Other Information

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**Preparation Date** August 18, 2015

**Note:** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

**Attention: Receiver of the chemical goods / SDS coordinator**

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution<sup>®</sup> initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

**References:**

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA
- 7) PAN

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