



# Safety Data Sheet

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## Section 01 - Product And Company Identification

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|--|---|
| <b>Product Identifier</b>                  | Calcium Chloride 35% Solution   |
| <b>Other Means of Identification</b>       | Calcium chloride  |
| <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.<br>1500 Quebec Avenue<br>Saskatoon, SK. Canada<br>S7K 1V7                                 |
| <b>Prepared By</b>                         | ClearTech Industries Inc. Technical Writer<br>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

**Serious Eye Damage/Irritation**      Category 2

### Physical Hazards

No known physical hazards.

### **Warning**

### **Hazard Statements**

H319 – Causes serious eye irritation.

### **Pictograms**



### **Precautionary Statements**

P264 – Wash hands thoroughly after handling.

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.

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## Section 03 - Composition / Information on Ingredients

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**Chemical Name**  
Calcium Chloride

**CAS Number**  
10043-52-4

**Weight %**  
15-40%

**Unique Identifiers**

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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>               | 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. Flush with water to remove any residue.                                       |
| <b>Environmental Precautions</b>  | Prevent material from entering sewers, soils, waterways and groundwater.  |
| <b>Methods and Materials for Containment and Cleaning Up</b>              | Contain spilled solutions with earth, sand, or absorbent material which does not react with spilled material. Remove liquid by pumps or vacuum equipment and place in suitable, covered, labelled containers. |

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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.  |

**Incompatibilities**

Reactive metals, hot water, bromine trifluoride, methyl vinyl ether, furan-2-peroxycarboxylic acid, boric and calcium oxide.

## **Section 08 - Exposure Controls and Personal Protection**

**Exposure Limit(s)**

| <b>Component</b> | <b>Regulation</b> | <b>Type of Listing</b> | <b>Value</b> |
|------------------|-------------------|------------------------|--------------|
| 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

## **Section 09 - Physical and Chemical Properties**

**Appearance****Physical State**

Liquid

**Colour**

Colourless

**Odour**

Odourless

**Odour Threshold**

Not Applicable

**Property****pH**

8-9

**Melting Point/Freezing Point**

-20°C

|  |  |
|--|--|
| <b>Initial Boiling Point and Boiling Range</b> | 105-125°C  |
| <b>Flash Point</b>                             | Not Applicable   |
| <b>Evaporation Rate</b>                        | Not Applicable   |
| <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 Applicable   |
| <b>Vapour Density (Air=1)</b>                  | Not Applicable   |
| <b>Relative Density</b>                        | 1.35 g/cm <sup>3</sup>   |
| <b>Solubility(ies)</b>                         | Miscible in water.<br>Soluble in ethanol, acetone and acetic acid. |
| <b>Partition Coefficient: n-octanol/water</b>  | Not Available  |
| <b>Auto-ignition Temperature</b>               | Not Applicable   |
| <b>Decomposition Temperature</b>               | Not Available  |
| <b>Viscosity</b>                               | Not Applicable   |
| <b>Explosive Properties</b>                    | Not Available  |
| <b>Specific Gravity (Water=1)</b>              | 1.35   |
| <b>% Volatiles by Volume</b>                   | Not Available  |
| <b>Formula</b>                                 | CaCl <sub>2</sub>  |
| <b>Molecular Weight</b>                        | 147.02   |

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## Section 10 - Stability and Reactivity

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|---|--|
| <b>Reactivity</b>                         | Does not react readily with most products, can be corrosive to some metals.  |
| <b>Stability</b>                          | Product is stable. Hygroscopic.  |
| <b>Possibility of Hazardous Reactions</b> | Polymerization does not occur.   |
| <b>Conditions to Avoid</b>                | Avoid exposure to very high or low temperatures  |
| <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.  |

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## Section 11 - Toxicological Information

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### Acute Toxicity

| Component                 | Oral LD <sub>50</sub> | Dermal LD <sub>50</sub> | Inhalation LC <sub>50</sub>       |
|---------------------------|-----------------------|-------------------------|-----------------------------------|
| Calcium Chloride Solution | 1400 mg/kg (rabbit)   | >5000 mg/kg (rabbit)    | >400 mg/m <sup>3</sup> (rat, 4hr) |

### Chronic Toxicity – Carcinogenicity

| Component        | IARC   |
|------------------|--|
| Calcium Chloride | The carcinogenicity of this chemical has not been evaluated. |

|  |   |
|--|---|
| <b>Skin Corrosion/Irritation</b>         | May cause slight skin 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 |

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## Section 12 – Ecological Information

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### Ecotoxicity

| Component                    | Toxicity to Algae   | Toxicity to Fish  | Toxicity to Daphnia and Other Aquatic Invertebrates |
|------------------------------|---|---|---|
| Calcium Chloride Solution    | EC <sub>50</sub> (Diatom, 96hr): >5000mg/L  | LC <sub>50</sub> (Pimephales promelas, 96hr): >5000mg/L | EC <sub>50</sub> (Daphnia magna, 24hr):1600mg/L     |
| <b>Biodegradability</b>      | Product will not biodegrade.  |   |   |
| <b>Bioaccumulation</b>       | Calcium chloride does not bioaccumulate.  |   |   |
| <b>Mobility</b>              | Product will readily dissociate 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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|                            |  |
|----------------------------|--|
| UN Number                  | Not Regulated  |
| UN Proper Shipping Name    | Not Regulated  |
| Transport Hazard Class(es) | Not Regulated  |
| Packaging Group            | Not Regulated  |
| Environmental Hazards      | Not listed as a marine pollutant under Canadian TDG Regulations, schedule III. |
| Special Precautions        | Not Available  |
| Transport in Bulk          | 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** November 27, 2017

**Revision Date** July 25, 2019

**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