



# Safety Data Sheet

---

## Section 01 Identification

---

**Product Identifier** Magnesium Chloride Flake  
**Other Means of Identification** Magnesium chloride hexahydrate  
**Product Use and Restrictions on Use** For commercial use  
**Initial Supplier Identifier** ClearTech Industries Inc  
1500 Quebec Avenue  
Saskatoon, SK. Canada  
S7K 1V7  
  
Phone: 800.387.7503  
Fax: 888.281.8109  
[www.cleartech.ca](http://www.cleartech.ca)  
**Prepared By** ClearTech Industries Inc. technical writer  
**24-Hour Emergency Phone** 306.664.2522

---

## Section 02 Hazard Identification

---

### GHS-Classification

This product has been assessed in accordance with the Hazardous Products Regulations and is not classified as a hazardous substance or mixture.

### Hazards Not Otherwise Classified

Not available

### Supplemental Information

Not available

---

## Section 03 Composition / Information on Ingredients

---

### Ingredients:

Chemical name	Common name(s)	CAS number	Concentration (w/w%)
Magnesium Chloride Hexahydrate	Magnesium chloride	7791-18-6	>98.0%
Magnesium Chloride Anhydrous	MgCl <sub>2</sub>	7786-30-3	46.5-48.0%

---

## Section 04 First-Aid Measures

---

### Description of necessary first-aid measures

**Inhalation** Get medical advice / attention if you feel unwell or are concerned.  
**Ingestion** Get medical advice / attention if you feel unwell or are concerned.  
**Skin contact** If skin irritation occurs or if you feel unwell: Get medical advice / attention.

**Eye contact** Gently brush product off face. Do not rub eyes. Let the eyes water naturally for a few minutes. Look right and left, then up and down. If particle / dust does not come out, cautiously rinse eye with lukewarm gently flowing water for 5 minutes or until particle / dust is removed, while holding the eyelids open. If eye irritation persists: Get medical advice / attention. Do not attempt to manually remove anything from the eyes.

## **Most important symptoms and effects, both acute and delayed**

**Inhalation** May cause respiratory irritation.  
**Ingestion** May cause discomfort or nausea.  
**Skin contact** May cause transient irritation, dryness or redness.  
**Eye contact** May cause eye irritation and redness.  
**Further information** For further information see Section 11 Toxicological Information.

## **Section 05 Fire Fighting Measures**

**Suitable extinguishing media** Extinguish fire using extinguishing agents suitable for the surrounding fire.  
**Unsuitable extinguishing media** Not available  
**Specific hazards arising from the chemical** In the event of a fire irritating fumes of chlorine or hydrogen chloride may be formed.  
**Special protective equipment for fire-fighters** Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

## **Section 06 Accidental Release Measures**

**Personal Precautions / Protective Equipment / Emergency Procedures** Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area.  
**Environmental Precautions** Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.  
**Methods and Materials for Containment and Cleaning Up** Dry sweeping is not recommended. Pre-dampening the material or use of a vacuum is preferred. Shovel into clean, dry, labeled containers and cover. Flush area with water.

## **Section 07 Handling and Storage**

**Precautions for Safe Handling** 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.  
Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available.  
**Conditions for Safe Storage** Store in a cool, dry, well-ventilated area, out of direct sunlight, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Protect label and keep it visible.  
**Incompatibilities** Moisture, product is hygroscopic.

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

### **Exposure limits**

There are no known exposure limits for this product.

### **Engineering controls**

**Ventilation Requirements** Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should 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** No specific recommendations beyond the required hygiene facilities at the place of work.

## Protective equipment

The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.

**Eye and face protection** Where there is potential eye or face exposure, safety glasses are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.

**Hand and body protection** Where handling this product it is recommended that skin contact is avoided.

**Respiratory protection** In case of insufficient ventilation wear suitable respiratory equipment.

**Thermal hazards** Not available

## Section 09 Physical and Chemical Properties

### Appearance

**Physical state** Flake  
**Colour** White  
**Odour** Not available  
**Odour threshold** Not available

### Property

**pH** 6.0-10.0 @ 10%  
**Melting point / freezing point** 712 °C  
**Initial boiling point and boiling range** Not available  
**Flash point** Not applicable  
**Evaporation rate** Not available  
**Flammability** Non-flammable  
**Upper flammable limit** Not available  
**Lower flammable limit** Not available  
**Vapour pressure** Not available  
**Vapour density** Not available  
**Relative density** 1.56 g/cm<sup>3</sup>  
**Solubility** Soluble in water  
**Partition coefficient: n-octanol/water** Not available  
**Auto-ignition temperature** Not available  
**Decomposition temperature** Not available  
**Viscosity** Not applicable  
**Specific gravity** Not applicable  
**Formula** MgCl<sub>2</sub>·6H<sub>2</sub>O  
**Molecular weight** 203.31 g/mol (hexahydrate), 95.211 g/mol (anhydrous)

## Section 10 Stability and Reactivity

<b>Reactivity</b>	Reacts with water to generate heat.
<b>Stability</b>	This product is stable if stored according to the recommendations in Section 07.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization is not known to occur.
<b>Conditions to avoid</b>	Avoid contact with incompatible materials. Do not heat.
<b>Incompatible materials</b>	Moisture, product is hygroscopic.
<b>Hazardous decomposition products</b>	In the event of a fire irritating fumes of chlorine or hydrogen chloride may be formed.

## Section 11 Toxicological Information

### Acute Toxicity (LD50 values)

Component	Route	Species	Value	Exposure time
Magnesium chloride anhydrous	Oral	Rat	>2,330 mg/kg bw	
	Dermal	Rat	>2,000 mg/kg bw	

### Toxic Health Effect Summary

<b>Chemical characteristics</b>	No known effects
<b>Skin</b>	May cause transient irritation, dryness or redness.
<b>Ingestion</b>	May cause discomfort or nausea.
<b>Inhalation</b>	May cause respiratory irritation.
<b>Eye contact</b>	May cause eye irritation and redness.
<b>Sensitization</b>	This product and its components at their listed concentration have no known sensitizing effects.
<b>Mutagenicity</b>	This product and its components at their listed concentration have no known mutagenic effects.
<b>Carcinogenicity</b>	This product and its components at their listed concentration have no known carcinogenic effects.
<b>Reproductive toxicity</b>	This product and its components at their listed concentration have no known reproductive effects.
<b>Specific organ toxicity</b>	This product and its components at their listed concentration have no known effects on specific organs.
<b>Aspiration hazard</b>	Not available
<b>Synergistic materials</b>	Not available

## Section 12 Ecological Information

### Ecotoxicity

Component	Type	Species	Value	Exposure Time
Magnesium chloride anhydrous	LC50	Fathead minnow	2,120 mg/L	96 hours
	EC50	Water flea	548.8 mg/L	48 hours
	NOEC	Freshwater green alga	100 mg/L	72 hours

**Biodegradability** The domestic substance list categorizes magnesium chloride as persistent.

<b>Bioaccumulation</b>	The domestic substance list categorizes magnesium chloride as non-bioaccumulative.
<b>Mobility</b>	This product is water soluble, is not predicted to adsorb to soil and may contaminate ground water.
<b>Other adverse effects</b>	Not available

---

## Section 13 Disposal Considerations

---

<b>Waste From Residues / Unused Products</b>	Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.
<b>Contaminated Packaging</b>	Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility.

---

## Section 14 Transport Information

---

<b>UN number</b>	Not available
<b>UN proper shipping name and description</b>	Not available
<b>Transport hazard class(es)</b>	Not available
<b>Packing group</b>	Not available
<b>Excepted quantities</b>	Not available
<b>Environmental hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
<b>Special precautions</b>	No special provisions
<b>Transport in bulk</b>	ERAP index: not available
<b>Additional information</b>	MARPOL 73/78 and IBC Code: This product is not listed in Chapter 17 of the IBC Code. Secure containers (full or empty) 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 16 of this SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and published test data regarding the classification of this product are listed in the references at section 16 of this SDS.

---

## Section 15 Regulatory Information.

---

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

All components of this product appear on the domestic substance list.

---

## Section 16 Other Information

---

**Date of latest revision: March 23, 2020**

**Note:** The responsibility to provide a safe workplace remains with the buyer / user. The buyer / 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 buyer / user to comply with all applicable laws and regulations regarding handling, using, reselling and shipping this product.

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

As part of our commitment to the RDC Responsible Distribution® 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) TOXNET
- 3) eChemPortal
- 4) ECHA
- 5) Transportation of Dangerous Goods Canada
- 6) HSDB
- 7) PAN