

## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

### \*\*\* Section 1 - Identification \*\*\*

**Chemical Name:** Magnesium Chloride Hexahydrate;

**Product Use:** For Commercial Use

#### RESTRICTIONS on USE

**NOT TO BE USED AS A PESTICIDE.** THIS PRODUCT IS NOT TO BE USED IN VIOLATION OF ANY PATENTS. SUPPLIER DISCLAIMS ANY AND ALL WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR APPLICATION. IN NO EVENT SHALL SUPPLIER OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER INCLUDING DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, LOSS OF BUSINESS PROFITS OR SPECIAL DAMAGES, EVEN IF SUPPLIER OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OF LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SO THE FOREGOING LIMITATION MAY NOT APPLY.

#### Supplier Information

Level 7 Chemical

Phone: (855) 927-1777

255 Sturgis Rd, Conway, AR 72034

**Emergency # (800) 424-9300 or +1 (703) 527-3887**

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

### \*\*\* Section 2 - Hazard(s) Identification \*\*\*

## GHS HAZARD

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

**Classification of the substance or mixture:** Not a hazardous substance or mixture.

**Label elements, including precautionary statements:** Not a hazardous substance or mixture.

**Hazards not otherwise classified (HNOC):** No data available

### \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component	Percent
7791-18-6	Magnesium Chloride Hexahydrate	> 98-100

**Synonyms:** Magnesium Dichloride Hexahydrate

### \*\*\* Section 4 - First Aid Measures \*\*\*

#### Emergency Overview

Magnesium Chloride Hexahydrate is a deliquescent, white solid, in prilled form. Dusts of this product may cause irritation to the eyes, skin, nose and throat. Magnesium Chloride Hexahydrate is not combustible. Use extinguishing media appropriate for surrounding fire. Thermal decomposition of this product produces irritating vapors and toxic gases (e.g. hydrogen chloride, chlorine). Emergency responders should wear proper personal protective equipment for the releases to which they are responding.

#### Description of first aid measures:

**In case of eye contact:** In case of contact with eyes, rinse immediately with plenty of water for at least 20 minutes. Seek immediate medical attention if any adverse effect occurs.

**In case of skin contact:** Remove all contaminated clothing. For skin contact, wash thoroughly with soap and water for at least 20 minutes. Seek immediate medical attention if irritation develops or persists.

## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

**In case of ingestion:** DO NOT INDUCE VOMITING, unless directed by medical personnel. Have victim rinse mouth thoroughly with water, if conscious. Never give anything by mouth to a victim who is unconscious or having convulsions. Contact a physician or poison control center immediately.

**If inhaled:** Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Get immediate medical attention.

### Symptoms and potential health effects:

**Eyes:** Exposure to particulates or solution of this product may cause irritation of the eyes with symptoms such as stinging, tearing, redness and pain.

**Skin:** Magnesium Chloride Hexahydrate can cause irritation of the skin, especially after prolonged exposures. Repeated skin contact may lead to dermatitis (red, cracked skin). Symptoms are generally alleviated when exposure ends.

**Ingestion:** Ingestion of Magnesium Chloride Hexahydrate (especially in large volumes) can irritate the tissues of the mouth, esophagus, and other tissues of the digestive system. Symptoms of exposure can include vomiting, diarrhea, and nausea.

**Inhalation:** Breathing dusts or particulates generated by Magnesium Chloride Hexahydrate can lead to irritation of the nose, throat or respiratory system. Symptoms of such exposure could include coughing, sneezing, and chest discomfort. Symptoms are generally alleviated when exposure ends. Inhalation of fumes from decomposition of Magnesium Chloride Hexahydrate can cause metal fume fever. Symptoms of metal fume fever include chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

### Notes to Physician and Special Treatment:

Provide general supportive measures and treat symptomatically.

**NFPA Ratings: Health Hazard: 1 Fire Hazard: 0 Physical Hazard: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## \* \* \* Section 5 - Fire Fighting Measures \* \* \*

### General Fire Hazards

Magnesium Chloride Hexahydrate is not combustible, and does not contribute to the intensity of a fire; however, water should be used to fight fire involving this material in flooding quantities, as reaction with water can produce sufficient heat to ignite other combustible materials. Closed containers exposed to heat may explode. When involved in a fire, this material may decompose and produce irritating vapors, acrid smoke and toxic gases.

### Hazardous Combustion Products

Chlorine and hydrogen chloride.

### Extinguishing Media

Use methods for surrounding fire. Water should be used in flooding quantities.

### Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self-contained breathing apparatus. If possible control runoff from fire control or dilution water to prevent environmental contamination.



## Safety Data Sheet

Material Name: Magnesium Chloride Hexahydrate

ID: CI-201

### \*\*\* Section 6 - Accidental Release Measures \*\*\*

#### Personal precautions

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep materials that burn away from spilled material. In case of large spills, follow all facility emergency response procedures. Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Avoid inhalation of dusts. Wear adequate personal protective equipment. Have emergency equipment readily available.

#### Methods and materials for containment and clean-up

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product (see Section 10 for incompatibility information). Keep spilled material dry and away from moisture. Put material in suitable, covered, labeled containers.

#### Environmental precautions

Prevent spill rinsate from contamination of storm drains, sewers, soil or groundwater.

#### Containment Procedures

Stop the flow of material, if this can be done without risk. Contain the discharged material. . If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product (see Section 10 for incompatibility information).

### \*\*\* Section 7 - Handling and Storage \*\*\*

#### Handling Procedures

All employees who handle this material should be trained to handle it safely. Do not breathe dust. Avoid all contact with skin and eyes. Use this product only with adequate ventilation. Wash thoroughly after handling. Avoid contact with water or moisture.

#### Storage Procedures

Keep container tightly closed when not in use. Store containers in a cool, dry location, away from water, direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Storage areas should be made of corrosion- and fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Use corrosion-resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (i.e., sprinkler system, portable fire extinguishers).

Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Do not cut, grind, weld, or drill near this container. Do not store this material in open or unlabeled containers. Limit quantity of material stored.

### \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

#### Exposure Guidelines

##### Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Component	CAS #	Value	Type/Regulation
Particulates Not Otherwise Classified	N/A	10 mg/m <sup>3</sup>	ACGIH – TWA (inhalable fraction)
		3 mg/m <sup>3</sup>	ACGIH – TWA (respirable fraction)
		15 mg/m <sup>3</sup>	OSHA – TWA (total dust)
		5 mg/m <sup>3</sup>	OSHA – TWA (respirable fraction)
		4 mg/m <sup>3</sup>	DFG MAKs – TWA (inhalable fraction)
		1.5 mg/m <sup>3</sup>	DFG MAKs – TWA (respirable fraction)

#### Engineering Controls

Use mechanical ventilation such as dilution and local exhaust. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Supply ample air replacement.

# Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

## PERSONAL PROTECTIVE EQUIPMENT

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132). Please reference applicable regulations and standards for relevant details.

### Personal Protective Equipment: Eyes/Face

Wear safety glasses (or goggles). If necessary, refer to U.S. OSHA 29 CFR 1910.133.

### Personal Protective Equipment: Skin

Wear impervious gloves, boots and coveralls to avoid skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

### Personal Protective Equipment: Respiratory

No specific guidelines are available. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. An approved dust and mist air-purifying respirator may be adequate. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

### Personal Protective Equipment: General

Have an eyewash fountain and safety shower available in the work area. Use good hygiene practices when handling this material including changing and laundering work clothing after use. Wash hands thoroughly after handling material. Do not eat, drink, or smoke in work areas.

### Protective Clothing Pictograms:



## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

### Physical Properties:

Physical State:	Solid
Appearance:	White prilled
Odor:	Odorless
Odor Threshold:	Not determined
pH:	7.0 (aqueous solution)
Melting Point/Range:	118 °C (244.4 °F)
Boiling Point/Range:	1412 °C (2574 °F), anhydrous
Flash Point:	Not applicable
Evaporation Rate:	Not applicable
Flammability:	Not flammable
Flammability/Explosive Limits:	Not applicable
Vapor Pressure:	Nil
Vapor Density:	Not applicable
Specific Gravity:	1.56
Solubility in Water:	235 g/100 mL (20 °C)
Partition Coefficient:	Not determined
Autoignition Temperature:	Not applicable
Decomposition Temperature:	> 300 °C (> 572 °F)
Viscosity:	Not applicable
Chemical Formula:	MgCl • 6(H <sub>2</sub> O)
Molecular Weight:	203.30
Softening Point:	Not determined



## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

**Particle Size:** Not determined  
**Bulk Density:** Not determined  
**Heat of Combustion:** Not determined

### Additional Information

The data provided in this section are to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

### \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

#### Chemical Stability

Product is normally stable.

#### Conditions to Avoid

Avoid high temperatures, exposure to moisture and incompatible materials.

#### Incompatibility

This material is incompatible with strong oxidizers. Magnesium Chloride Hexahydrate can react explosively when combined with 2-furan percarboxylic acid. When dissolved in water, Magnesium Chloride Hexahydrate gives off considerable heat.

#### Hazardous Decomposition

Hydrogen chloride, chlorine.

#### Hazardous Polymerization

Will not occur.

### \*\*\* Section 11 - Toxicological Information \*\*\*

#### Acute and Chronic Toxicity

##### A: General Product Information

Poisonous by intravenous route. Moderately toxic by intraperitoneal routes. Mildly toxic by ingestion. Ingestion can result in gastrointestinal absorption and pain. Irritating by contact with skin, eyes and by inhalation. Inhalation of fumes of decomposition may result in metal fume fever.

Chronic: Long term skin overexposure to this product may lead to dermatitis (red, itchy skin).

##### B: Component Analysis

###### Magnesium Chloride Hexahydrate:

Route of Exposure	Test Type and Value
<b>Oral:</b>	LD <sub>50</sub> (Rat) = 8100 mg/kg LD <sub>50</sub> (Mouse) = 7600 mg/kg
<b>Inhalation:</b>	Not determined
<b>Dermal:</b>	Not determined
<b>Intraperitoneal:</b>	LD <sub>50</sub> (Mouse) = 775 mg/kg
<b>Intravenous:</b>	LD <sub>L0</sub> (Rat) = 176 mg/kg; Behavioral: convulsions or effect on seizure threshold; coma; Lungs, Thorax, or Respiration: other changes LD <sub>L0</sub> (Guinea pig) = 250 mg/kg
<b>Intraarterial:</b>	LD <sub>L0</sub> (Guinea pig) = 250 mg/kg

#### Carcinogenicity

##### A: General Product Information

Magnesium Chloride Hexahydrate is not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

##### B: Component Carcinogenicity

No information available.

## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

### Mutagenicity

Cytogenetic Analysis (Hamster-lung) 12 g/L

### Teratogenicity

No information available.

### Other Toxicological Information

No information available.

## \* \* \* Section 12 - Ecological Information \* \* \*

### Ecotoxicity

#### A: General Product Information

This compound may be harmful to aquatic life in high concentrations, as it will generate excessive heat upon contact with water.

#### B: Ecotoxicity

No information available.

### Environmental Fate

No potential for food chain concentration.

## \* \* \* Section 13 - Disposal Considerations \* \* \*

### US EPA Waste Number & Descriptions

#### A: General Product Information

As shipped, this product is not considered a hazardous waste.

#### B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

### Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations or with regulations of Canada and its Provinces. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

## \* \* \* Section 14 - Transportation Information \* \* \*

NOTE: The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

#### US DOT Information

**Shipping Name:** Not applicable.

**Hazard Class:** Not applicable

**UN/NA #:** Not applicable

**Packing Group:** Not applicable

**Required Label(s):** Not applicable

**RQ Quantity:** Not applicable

#### 55<sup>th</sup> Edition International Air Transport Association (IATA):

For Shipments by Air transport not considered hazardous.

#### International Maritime Organization (I.M.O.) Classification

**I.M.O. Classification:** Not considered hazardous under IMDG/ I.M.O. regulations



## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

**\*\*\* Section 15 - Regulatory Information \*\*\***

**US Federal Regulations**

**A: General Product Information**

Magnesium Chloride Hexahydrate (CAS # 7791-18-6) is not on the TSCA inventory. As a hydrate of a listed compound, Magnesium Chloride Hexahydrate is accepted from TSCA Inventory requirements (per 40 CFR 720.3 (u) (2)).

**B: Component Analysis**

This material does not have requirements under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**Magnesium Chloride Hexahydrate (10124-56-8)**

SARA 302 There are no specific Threshold Planning Quantities for Magnesium Chloride Hexahydrate. The default Federal (EHS TPQ) MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

**C: Sara 311/312 Tier II Hazard Ratings:**

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Magnesium Chloride Hexahydrate	7791-18-6	No	No	No	Yes	No

**State Regulations**

**A: General Product Information**

**California Proposition 65**

Magnesium Chloride Hexahydrate is not on the California Proposition 65 chemical lists.

**B: Component Analysis - State**

The following components appear on one or more of the following state hazardous substance lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Magnesium Chloride Hexahydrate	7791-18-6	No	No	No	No	No	Yes

**Other Regulations**

Magnesium Chloride Hexahydrate is not listed on the TSCA inventory; as a hydrate of a listed compound, it is exempt from listing.

Component	CAS #	TSCA
Manganese Chloride Hexahydrate	598-62-9	Exempted

**\*\*\* Section 16 - Other Information \*\*\***

**Other Information**

The supplier shall not be responsible for the use of any information, product, method, or apparatus herein presented ("Information"), and you must make your own determination as to its suitability and completeness for your own use, for the protection of the environment, and for health and safety purposes. You assume the entire risk of relying on this Information. In no event shall supplier be responsible for damages of any nature whatsoever resulting from the use of this product or products, or reliance upon this Information. By providing this Information, supplier neither can nor intends to control the method or manner by which you use, handle, store, or transport supplier products. If any materials are mentioned that are not supplier products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Supplier makes no representations or warranties, either express or implied of merchantability, fitness for a particular purpose or of any other nature regarding this information, and nothing herein waives any of supplier conditions of sale. This information could include technical inaccuracies or typographical errors. Supplier may make improvements and/or changes in the product (s) and/or the program (s) described in this information at any time.

**Key/Legend**

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration

## Safety Data Sheet

**Material Name: Magnesium Chloride Hexahydrate**

**ID: CI-201**

### Revision log

08/04/00 3:59 PM SEP Changed company name, Sect 1 and 16, from Corporation to Ltd.  
05/14/01 9:31 AM HDF Checked exposure limits; made changes to Sect 9; overall review, add SARA 311/312 Haz Ratings.  
08/20/01 12:50 PM CLJ Add Shipments by Air information to Section 14, Changed contact to Sue, non-800 Chemtrec Num.  
06/03/03: 8:45 PM HDF General review and up-date of entire MSDS. Up-date of HMIS categories. Up-date of Section 8. Up-date of Section 14.  
06/22/05 3:08pm SEP Update IATA Section 14  
10/17/07 4:42 PM SEP Update IATA Section 14

12/03/2010 3:48 PM SEP Update IATA  
06/12/2015 GHS Revision all sections  
This is the end of MSDS # CL-201

### Revised By:

SJC Compliance Education, Inc.,  
16516 El Camino Real Suite 417  
Houston TX 77062

09/26/2018 Melanie Koch Added NFPA ratings back to SDS. Nothing else was changed during this revision.  
06/10/2019 Revised Sections 2, 4 and 9, removed ANSI Labeling.  
11/03/2021 Revised Section 15 information. Modified format.