

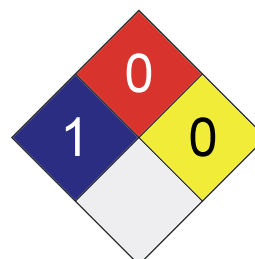


1. Product and Company Identification

Product Name Magnesium Chloride Hexahydrate
CAS # 7791-18-6
Product use Dust supression, deicing, aqua-culture, general industrial and specialty uses.
Manufacturer Great Salt Lake Minerals Corporation
 9900 West 109th Street, Suite 600
 Overland Park, KS 66210 US
 Phone: 913-344-9200
Supplier Compass Minerals International
 9900 West 109th Street, Suite 600
 Overland Park, KS 66210 US
 Phone: 913-344-9200
 Website: www.compassminerals.com

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 1
Flammability	0
Physical Hazard	0
Personal Protection	E



2. Hazards Identification

Emergency overview CAUTION
EYE AND SKIN IRRITANT.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes May cause irritation.

Skin May cause irritation.

Inhalation Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

Ingestion May cause stomach distress, nausea or vomiting.

Target organs Eyes. Skin. Respiratory system.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Magnesium chloride, hexahydrate	7791-18-6	60 - 100

4. First Aid Measures

First aid procedures

Eye contact Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Skin contact Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

Notes to physician Symptoms may be delayed.

General advice None Available.

5. Fire Fighting Measures

Flammable properties Not flammable by WHMIS/OSHA criteria.

Extinguishing media**Suitable extinguishing media** Treat for surrounding material.**Unsuitable extinguishing media** Not available**Protection of firefighters****Specific hazards arising from the chemical** Not available**Protective equipment for firefighters** Firefighters should wear full protective clothing including self contained breathing apparatus.

6. Accidental Release Measures

Personal precautions

Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Methods for containment

None necessary.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

7. Handling and Storage

Handling

Avoid breathing dusts from this material.

Storage

Keep out of reach of children. Keep containers tightly closed in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Exposure limits**Ingredient(s)****Exposure Limits**

Magnesium chloride, hexahydrate

ACGIH-TLV

Not established

OSHA-PEL

Not established

Engineering controls

TWA PEL: No specific limits have been established for magnesium chloride (a soluble substance). As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 5mg/cu.m. Respirable Dust 8-Hour TWA PEL, 15mg/cu.m. Total Dust 8-Hour TWA PEL.

TWA TLV: No specific limits have been established for magnesium chloride (a soluble substance). As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): 10mg/cu.m. Inhalable Particulate 8-Hours TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protective equipment**Eye / face protection**

Safety glasses.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator or NIOSH-approved filtering facepiece.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance

Crystalline.

Color

White

Form

Crystalline.

Odor

Odorless.

Odor threshold	Not available
Physical state	Solid
pH	9 - 10 Basic
Melting point	Not available
Freezing point	Not available
Boiling point	Not applicable
Flash point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	0.09 kPa (0.7 mmHg) @ 68°C
Vapor density	Not available
Specific gravity	1.57 (H ₂ O = 1)
Octanol/water coefficient	Not available
Solubility (H ₂ O)	Soluble
Auto-ignition temperature	Not available
Percent volatile	Not available
Molecular weight	203.3000 g/mole
Molecular formula	MgCl ₂ ·6H ₂ O

10. Chemical Stability & Reactivity Information

Chemical stability	Stable.
Conditions to avoid	Do not mix with incompatible materials.
Incompatible materials	Reactive with oxidizing agents, acids, metals in presence of moisture.
Hazardous decomposition products	May include and are not limited to: Halogenated compounds. Hydrogen chloride.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Magnesium chloride, hexahydrate	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Magnesium chloride, hexahydrate	8100 mg/kg rat; 7600 mg/kg mouse

Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Chronic effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Carcinogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Mutagenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Reproductive effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Teratogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.

12. Ecological Information

Ecotoxicity	Maybe harmful to freshwater aquatic species and to plants that are not saline tolerant.
Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.	
US Federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. CERCLA/SARA Hazardous Substances - Not applicable.	
Occupational Safety and Health Administration (OSHA)		
29 CFR 1910.1200 hazardous chemical	No	
CERCLA (Superfund) reportable quantity	None	
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No	
Section 302 extremely hazardous substance	No	
Section 311 hazardous chemical	No	
Clean Air Act (CAA)	Not available	
Clean Water Act (CWA)	Not available	
Safe Drinking Water Act (SDWA)	Not available	
Drug Enforcement Agency (DEA)	Not available	
Food and Drug Administration (FDA)	Not available	
WHMIS status	Not Controlled	
State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.	
Inventory name		
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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