



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

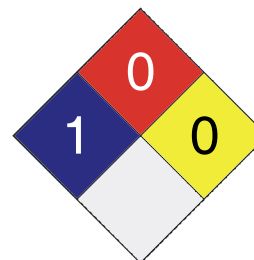
**Product Name** Magnesium Chloride Aqueous Solution  
**CAS #** Mixture  
**Product use** Dust suppression, deicing, general industrial, and speciality uses.  
**Manufacturer** Great Salt Lake Minerals Corporation  
 9900 West 109th Street, Suite 600  
 Overland Park, KS 66210 US  
 Phone: 913-344-9200

**Supplier** Compass Minerals International  
 9900 West 109th Street, Suite 600  
 Overland Park, KS 66210 US  
 Phone: 913-344-9200  
 Website: www.compassminerals.com

**CHEMTREC** 1-800-424-9300  
**CANUTEC** 1-613-996-6666

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

Health	/ 1
Flammability	0
Physical Hazard	0
Personal Protection	G



## 2. Hazards Identification

**Emergency overview** CAUTION  
MAY CAUSE EYE IRRITATION.

**Potential short term health effects**

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

**Eyes** May cause irritation.

**Skin** Non-irritating to the skin.

**Inhalation** May cause respiratory tract irritation.

**Ingestion** May cause stomach distress, nausea or vomiting.

**Target organs** Not available

**Chronic effects** None known.

**Signs and symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Water	7732-18-5	40 - 70
Magnesium chloride, hexahydrate	7791-18-6	15 - 40

## 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 develops.

**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.

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## 5. Fire Fighting Measures

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<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Halogenated compounds. Hydrogen chloride.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

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## 6. Accidental Release Measures

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<b>Personal precautions</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Finish cleaning by spreading water on the affected surface and dispose of according to local and regional authority requirements.
<b>Methods for containment</b>	None necessary.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Finish cleaning by spreading water on the affected surface and dispose of according to local and regional authority requirements.

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## 7. Handling and Storage

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<b>Handling</b>	Use good industrial hygiene practices in handling this material. Avoid breathing vapors or mists of this product.
<b>Storage</b>	Keep out of reach of children. Store in a closed container away from incompatible materials.

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## 8. Exposure Controls / Personal Protection

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### Exposure limits

Ingredient(s)	Exposure Limits
Magnesium chloride, hexahydrate	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
Water	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established

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## 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.

## Personal protective equipment

### Eye / face protection

Safety glasses or goggles.

### 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.

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## 9. Physical & Chemical Properties

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Appearance	Liquid.
Color	Colourless to light amber.
Form	Liquid
Odor	Odorless.
Odor threshold	Not available
Physical state	Liquid
pH	7 - 9 (5% solution)
Melting point	Not available
Freezing point	-18.33 °C (-1 °F) (30% solution, periodically mixed to ensure homogeneity)
Boiling point	107.22 °C (224.99 °F)
Flash point	None
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.24 - 1.34 (H <sub>2</sub> O = 1)
Octanol/water coefficient	Not available
Solubility (H <sub>2</sub> O)	Easily soluble in cold water, hot water, methanol, acetone.
Auto-ignition temperature	Not available
Percent volatile	Not available

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## 10. Chemical Stability & Reactivity Information

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Chemical stability	Stable.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Oxidizing agents. Acids.
Hazardous decomposition products	May include and are not limited to: Halogenated compounds. Hydrogen chloride.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Magnesium chloride, hexahydrate	Not available
Water	Not available

### Component analysis - Oral LD50

Ingredient(s)	LD50
Magnesium chloride, hexahydrate	8100 mg/kg rat; 7600 mg/kg mouse
Water	14500 mg/kg rat

### Effects of acute exposure

<b>Eye</b>	May cause irritation.
<b>Skin</b>	Non-irritating to the skin.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Sensitization</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Chronic effects</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Carcinogenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Mutagenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Reproductive effects</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Teratogenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.

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## 12. Ecological Information

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

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## 13. Disposal Considerations

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

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## 14. Transport Information

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### Department of Transportation (DOT)

Not regulated as dangerous goods.

### Transportation of Dangerous Goods (TDG)

Not regulated as dangerous goods.

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## 15. Regulatory Information

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<b>Canadian federal regulations</b>	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.
<b>US Federal regulations</b>	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.

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**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)

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**16. Other Information**

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**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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