



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product Name</b>	<b>Magnesium Chloride Aqueous Solution</b>
<b>CAS #</b>	Mixture
<b>Product use</b>	Dust suppression, deicing, general industrial, and speciality uses.
<b>Manufacturer</b>	North American Salt Company A Compass Minerals Company 9900 West 109th Street, Suite 100 Overland Park, KS 66210 US Phone: 913-344-9200
<b>CHEMTREC</b>	1-800-424-9300
<b>CANUTEC</b>	1-613-996-6666

## 2. Hazards Identification

<b>Emergency overview</b>	Contact may cause eye irritation.
<b>Potential short term health effects</b>	
<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Eyes</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>Target organs</b>	Eyes. Respiratory system.
<b>Chronic effects</b>	None known.
<b>Signs and symptoms</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>OSHA Regulatory Status</b>	This product is NOT known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>Potential environmental effects</b>	See section 12.

## 3. Composition / Information on Ingredients

<b>Ingredient(s)</b>	<b>CAS #</b>	<b>Percent</b>
Magnesium chloride	7786-30-3	15 - 40

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
<b>Skin contact</b>	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>General advice</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children.

## 5. Fire Fighting Measures

<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

## 6. Accidental Release Measures

<b>Personal precautions</b>	Avoid inhalation of vapors or mists. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material.
<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for containment</b>	Stop leak if you can do so without risk.
<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.

## 7. Handling and Storage

<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.

## 8. Exposure Controls / Personal Protection

<b>Exposure limits</b>	
<b>Ingredient(s)</b>	<b>Exposure Limits</b>
Magnesium chloride	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
<b>Engineering controls</b>	<p>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.</p> <p>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.</p> <p>Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.</p>
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Safety glasses
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.
<b>Skin and body protection</b>	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator or NIOSH-approved filtering facepiece.
<b>General hygiene considerations</b>	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 and Chemical Properties

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

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## 10. Stability and Reactivity

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<b>Reactivity</b>	None known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Oxidizing agents. Acids.
<b>Hazardous decomposition products</b>	May include and are not limited to: Halogenated compounds. Hydrogen chloride.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Magnesium chloride	Not available

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### Component analysis - Oral LD50

Ingredient(s)	LD50
Magnesium chloride	2800 mg/kg rat

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### 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>	Non-hazardous by WHMIS/OSHA criteria.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	Not classified or listed by IARC, NTP, OSHA and ACGIH.
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS/OSHA criteria.

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**Teratogenicity** Non-hazardous by WHMIS/OSHA criteria.  
**Name of Toxicologically Synergistic Products** Not available

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## 12. Ecological Information

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**Ecotoxicity** May be harmful to freshwater aquatic species and to plants that are not saline tolerant.

**Ecotoxicity - Freshwater Algae - Acute Toxicity Data**

Magnesium chloride 7786-30-3 72 Hr EC50 *Desmodesmus subspicatus*: 2200 mg/L

**Ecotoxicity - Freshwater Fish - Acute Toxicity Data**

Magnesium chloride 7786-30-3 96 Hr LC50 *Gambusia affinis*: 4210 mg/L [static]; 96 Hr LC50 *Pimephales promelas*: 1970-3880 mg/L [static]

**Ecotoxicity - Water Flea - Acute Toxicity Data**

Magnesium chloride 7786-30-3 24 Hr EC50 *Daphnia magna*: 1400 mg/L; 48 Hr EC50 *Daphnia magna*: 140 mg/L [Static]

**Persistence / degradability** Not available  
**Bioaccumulation / accumulation** Not available  
**Mobility in environmental media** Not available  
**Environmental effects** Not available  
**Aquatic toxicity** Not available  
**Partition coefficient** Not available  
**Chemical fate information** Not available  
**Other adverse effects** Not available

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## 13. Disposal Considerations

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**Disposal instructions** Review federal, state/provincial, and local government requirements prior to disposal.  
**Waste from residues / unused products** Not available  
**Contaminated packaging** Not available

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## 14. Transport Information

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**U.S. Department of Transportation (DOT)**

Not regulated as dangerous goods.

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.

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## 15. Regulatory Information

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**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.

**WHMIS status** Not Controlled

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** No

**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 (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

**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**

Canada

Canada

United States &amp; Puerto Rico

**Inventory name**

Domestic Substances List (DSL)

Non-Domestic Substances List (NDSL)

Toxic Substances Control Act (TSCA) Inventory

**On inventory (yes/no)\***

Yes

No

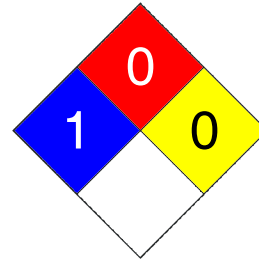
Yes

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

**16. Other Information**

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

Health	/ 1
Flammability	0
Physical Hazard	0
Personal Protection	B

**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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15-Jan-2012

**Expiry date**

15-Jan-2015

**Prepared by**

Dell Tech Laboratories Ltd. (519) 858-5021

**Other information**

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.