

SAFETY DATA SHEET – Magnesium Chloride Solution

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Section I – Product and Company Identification



INTREPID

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EMERGENCIES: Call (800) 424-9300 (CHEMTREC)

HEALTH EMERGENCIES: CONTACT YOUR LOCAL POSION CENTER

Common Name: Magnesium Chloride Solution, Intrepid Road Guard	Formula: MgCl ₂ ·H ₂ O	Synonym: Mag Chloride	Use: Industrial
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Section II – Hazard Identification

GHS07	Not Applicable	Not Applicable
Lab Elements:		
Prevention:	Not Applicable	
Response:	Not Applicable	Not Applicable
Storage:	Not Applicable	Not Applicable
Disposal:	Not Applicable	Not Applicable

Section III – Composition/Information on Ingredients

Chemical Name(s)	CAS No.	Exposure Limits								% by Weight
		OSHA PEL		TLV - TWA		STEL		CEIL		
		mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
Magnesium Chloride	7786-30-3									25 - 30
Water	7732-18-5									65 - 75

Section IV – First Aid Measures

Eyes:	Rinse cautiously with water for several minutes. Flush with water, including under upper & lower lids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention/advice if pain and irritation persists.
Skin:	Wash thoroughly with water. Obtain medical advice/attention if irritation persists.
Ingestion:	Administer water if patient is conscious. Ingesting MgCl ₂ brine will usually cause purging of the stomach by vomiting. Get Medical attention.
Inhalation:	If individual is experiencing respiratory discomfort or irritation remove to fresh air. If discomfort or irritation persists, get medical attention/advice.

Section V – Fire Fighting Measures

Flash Point: None **Auto-ignition Temperature:** Not Applicable **Lower Explosive Limit:** Not Applicable
Upper Explosive Limit: Not Applicable

Extinguishing Media: As required for surrounding fire. MgCl₂ is non-flammable and does not support combustion.

Special Firefighting Procedures and Equipment:	Full structural firefighting (bunker) gear is the minimum acceptable attire. The need for proximity, entry, flashover and/or special chemical protective clothing (see Section 8) needs to be determined for each incident by a competent firefighting safety professional. Water used for fire suppression and cooling may become exposed to soluble fertilizer. Discharge to sewer system(s) or environment may be restricted, requiring containment and proper disposal of water.
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Section VI – Accidental Release Measures

Small Spill:	Sweep up and use as dust suppressant if non-contaminated by foreign materials.
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Large Spill:	Collect with appropriate equipment. If on a hard surface, absorb with spill control materials and dispose of soaked materials appropriately. If on soil, remove and collect any soil dampened by the spill.
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Release Notes:	MgCl ₂ is highly soluble and can be quickly diluted below the toxic level by relatively large amounts of water. MgCl ₂ which has entered a small non-permanent pond should be removed by pumping the pond dry. If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number, 800-424-8802. In case of accident or road spill notify: CHEMTREC IN USA AT 800-424-9300; CANUTEC in Canada at 613-996-6666 CHEMTREC in other countries at (International code)+1-703-527-3887.
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Comments:	See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.
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Section VII – Handling and Storage

Ventilation:	Optional
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Handling:	Avoid prolonged contact to skin where possible. Clean spillage on floors and walkways immediately to prevent injuries.
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Storage:	Avoid contact with aluminum or carbon steel to minimize corrosion.
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Section VIII – Exposure Controls/Personal Protection

Engineering Controls:	May be necessary to minimize small leaks.
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Personal Protection:

Eye Protection:	Use tight-fitting safety goggles in areas of high concentration.
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Protective Clothing:	Gloves, long sleeve shirts and long pants. Launder work clothing regularly.
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Respiratory Protection:	Optional
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Other Protective Clothing or Equipment:	Optional
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Section IX – Physical and Chemical Properties

Appearance/Color/Odor: Clear liquid with a slight amber color at times.

Melting Point/Range: -13°F	Boiling Point: 245°F
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Solubility in Water: 38% at 120°F; 49°C, 45% at 290°F; 143°C	Boiling Point/Range: 245°F
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Specific Gravity: 1.3	Vapor Pressure (mmHg): 0.5 psia @ 100°F
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Vapor Density: Not Applicable	% Volatiles: <0.5
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Bulk Density: See Specific Gravity	Evaporation Rate: Not applicable
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pH: 6.0-8.0	Viscosity: Not applicable
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Section X – Stability and Reactivity

Stability:	Stable.
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Solutions can be aggressively corrosive
Materials to Avoid (Incompatibilities):	Metals will experience slight corrosion over time. Incompatible with sulfuric and nitric acids, caustics, ammonia, and cyanides. A hazardous reaction involving magnesium chloride and 2-furan carboxylic acid has been reported.
Hazardous Decomposition Products:	Slow heating may release free chlorine gas above 320°F;160°C. Avoid contact with strong acids, as chlorine gas may evolve. Under normal applications, decomposition should not occur.

Section XI Toxicological Information

Significant Routes of Exposure:	Eyes, skin, inhalation, ingestion
Substance:	Magnesium Chloride
Acute Oral Toxicity:	LD50 (mouse, rat): 2800 mg/kg
Acute Inhalation Toxicity:	No data available
Acute Dermal Toxicity:	No data available
Eye & Skin Irritation:	No data available

Section XII – Ecological Information

Ecotoxicology:	Acute Toxicity to Fish:	Not Established. Breakdown of MgCl ₂ forms ions commonly found in nature.
	Chronic Toxicity to Fish:	No data available
	Acute Toxicity to Aquatic Invertebrates:	No data available
	Chronic Toxicity to Aquatic Invertebrates:	No data available
	Toxicity to Aquatic Plants:	No data available
	Toxicity to Bacteria: (activated sludge):	No data available
	Toxicity to Soil Dwelling Organisms:	No data available
	Toxicity to Terrestrial Plants:	No data available
Environmental Fate:	Stability in Water:	Miscible in water and disassociates into Mg and Cl ions. Ions may be absorbed by plants or by animals ingesting water containing salt.
	Stability in Soil:	Binds to clay particles
Toxicity:	Non-toxic to aquatic organisms as defined by USEPA	
Degradation	Chloride and Magnesium Ions	

Section XIII – Disposal Considerations

Product Disposal:	This material, if discarded as produced, is not a RCRA “listed” or “characteristic” hazardous waste. Contamination may subject it to hazardous waste regulations. Properly characterize all waste materials. Consult State and local regulations regarding the proper disposal of this material.
General Comments:	Because of its miscibility, Magnesium Brines should not be disposed of in a location where run-off will escape.

Section XIV – Transportation Information

Proper Shipping Name:	Not Applicable
Hazard Class:	Not Applicable
Identification Number:	Not Applicable
Packing Group (Technical Name)	Not Applicable

Section XV – Regulatory Information

UNITED STATES:

SARA Hazard Category: This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire: No **Pressure Generating:** No **Reactivity:** No **Acute:** No **Chronic:** No

SARA Title III Information: This product contains the following substances subject to the reporting requirements of Title III(EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical	CAS No.	Percent by Weight	CERCLA RQ (lbs.)
Magnesium Chloride	7789-30-3	25-30	NA
Water	7732-18-5	65-75	NA

TSCA: Listed in the TSCA Inventory.

CANADA: DSL: Yes NSDL: Not Listed

WHMIS Hazard Symbol and Classification: Not controlled

Ingredient Disclosure List: This product does not contain ingredient(s) on this list

Environmental Protection: All intentional ingredients are listed on the DSL (Domestic Substance List).

Section XVI – Other Information				
NFPA Hazard Rating:	Health: <u>1</u>	Flammability: <u>0</u>	Instability: <u>0</u>	Special Hazard: <u>N/A</u>
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme				
HMIS Hazard Rating:	Health: 1	Flammability: 0	Physical Hazard: 0	PP: E
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme				
E = safety glasses, gloves and dust respirator				
Comments:	None			

Section(s) changed since last revision: SDS is designed to comply with U.S. DOL: OSHA and MSHA HazCom standards in effect on the revision date.
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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief as of the revision date noted below. This information is not a warranty or quality specification. The user of the product is solely responsible for determining the suitability of use in each particular situation. This information relates only to the specific material designated and may not be valid for the material used in combination with any other materials or in any process. The user of the product assumes all risks and responsibilities in connection with the use of the product, and Intrepid will not be responsible for any damages relating to the use of the product.

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