

Material Safety Data Sheet

Magnesium Chloride Hexahydrate

An electronic version of this MSDS is available at the following web address:
<http://www.compassminerals.com>



Section 1. Product and Company Identification

Common Name	: Magnesium Chloride Hexahydrate	Code	: Not available.
Supplier	: Compass Minerals Group 8300 College Boulevard Overland Park, KS 66210, USA	MSDS#	: Not available.
Synonyms	: Magnesium chloride salt, Mag chloride, magnesium dichloride, bischofite.	Preparation Date	: 10/30/2002.
Trade name	: Not available.	Print Date	: 10/30/2002.
Material Uses	: Dust suppression, deicing, aqua-culture, general industrial and specialty uses.		
Manufacturer	: Great Salt Lake Minerals Corporation 8300 College Boulevard Overland Park, KS 66210, USA (913) 344-9100	In Case of Emergency	: Canada: CANUTEC-1-613-996-6666 US: CHEMTREC-1-800-424-9300

Section 2. Composition, Information on Ingredients

Name	CAS #	Exposure Limits
Magnesium Chloride Hexahydrate	7791-18-6	<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 TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.</p>

Section 3. Hazards Identification

Emergency Overview	: White crystalline solid. MAY CAUSE EYE IRRITATION.
Routes of Entry	: Absorbed through skin. Eye contact.
Potential Acute Health Effects	<p>Eyes : Slightly hazardous in case of eye contact (irritant).</p> <p>Skin : Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p> <p>Inhalation : Slightly hazardous in case of inhalation (lung irritant).</p> <p>Ingestion : Not available.</p>
Potential Chronic Health Effects	: Carcinogenic Effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. Mutagenic Effects: Not available. Teratogenic Effects: Not available.
Medical Conditions Aggravated by Overexposure:	: Repeated or prolonged exposure is not known to aggravate medical condition.
Potential Environmental Effects	: May be harmful to freshwater aquatic species and to plants that are not saline tolerant.

[See Toxicological Information \(section 11\)](#)

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Section 4. First Aid Measures

- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Obtain medical attention if irritation persists.
- Skin Contact** : Wash with soap and water. Cold water may be used. Obtain medical attention if irritation persists.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Obtain medical attention if irritation persists.
- Ingestion** : Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention.
- Notes to Physician** : Not available.

Section 5. Fire Fighting Measures

- Flammability of the Product** : Non-flammable.
- Autoignition Temperature** : Not applicable.
- Flash Points** : Not applicable.
- Flammable Limits** : Not applicable.
- Products of Combustion** : Not applicable.
- Fire Hazards in Presence of Various Substances** : Not applicable.
- Explosion Hazards in Presence of Various Substances** : Risks of explosion of the product in presence of mechanical impact: Not applicable.
Risks of explosion of the product in presence of static discharge: Not applicable.
- Fire Fighting Media and Instructions** : Use an extinguishing agent suitable for surrounding fires.
- Protective Clothing (Fire)** : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Special Remarks on Fire Hazards** : Not available.
- Special Remarks on Explosion Hazards** : Not available.

Section 6. Accidental Release Measures

- Small Spill and Leak** : Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
- Large Spill and Leak** : Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

- Handling** : Avoid breathing dust. Avoid contact with incompatibles.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls, Personal Protection

- Engineering Controls** : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

- Eyes** : Safety glasses.
- Body** : Protective clothing may be worn in dusty area, but is generally not required.
- Respiratory** : NIOSH approved filtering facepiece may be necessary.

Section 9. Physical and Chemical Properties

- Physical State and Appearance** : White crystalline solid.
- Color** : White.
- Odor** : Odorless.
- Molecular Weight** : 203.3 g/mole
- Molecular Formula** : $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$
- pH (5% Soln/Water)** : 9 to 10 [Basic.]
- Boiling/Condensation Point** : Not applicable.

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Melting/Freezing Point	: Begins losing water of hydration at 118°C (244.4°F)
Critical Temperature	: Not available.
Specific Gravity	: 1.569 (Water = 1)
Vapor Pressure	: 0.09 kPa (0.7 mmHg) (at 68°C)
Vapor Density	: Not available.
Volatility	: Not available.
Odor Threshold	: Not available.
Evaporation Rate	: Not available.
VOC	: Not available.
Viscosity	: Not available.
LogK_{ow}	: Not available.
Solubility	: Easily soluble in hot water. Soluble in cold water.

Section 10. Stability and Reactivity

Stability and Reactivity	: The product is stable.
Conditions of Instability	: Not available.
Incompatibility with Various Substances	: Reactive with oxidizing agents, acids, metals in presence of moisture.
Hazardous Decomposition Products	: These products are halogenated compounds, hydrogen chloride.
Hazardous Polymerization	: Will not occur.

Section 11. Toxicological Information

Toxicity to Animals	: Acute oral toxicity (LD50): 2800 mg/kg [Rat].
Chronic Effects on Humans	: Carcinogenic Effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. May cause damage to the following organs: eyes.
Other Toxic Effects on Humans	: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).
Special Remarks on Toxicity to Animals	: Not available.
Special Remarks on Chronic Effects on Humans	: Not available.
Special Remarks on Other Toxic Effects on Humans	: Not available.

Section 12. Ecological Information

Ecotoxicity	: May be harmful to freshwater aquatic species and to plants that are not saline tolerant.
BOD and COD	: Not available.
Biodegradable/OECD	: Not available.
Mobility	: Not available.
Products of Degradation	: These products are halogenated compounds. Some metallic oxides.
Toxicity of the Products of Biodegradation	: The product itself and its products of degradation are not toxic.
Special Remarks	: Not available.

Section 13. Disposal Considerations

Waste Information	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	: Not available.

Consult your local or regional authorities.

Section 14. Transport Information

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label
DOT Classification	Not applicable.	Not applicable.	Not a DOT controlled material (United States).	Not applicable.	
TDG Classification	Not applicable.	Not applicable.	Not a TDG controlled material.	Not applicable.	
ADR/RID Class	Not available.	Not available.	Not available.		
IMDG Class	Not available.	Not available.	Not available.		
IATA-DGR Class	Not available.	Not available.	Not available.		

Section 15. Regulatory Information

HCS Classification : Not an HCS controlled material in USA.

U.S. Federal Regulations : TSCA 8(b) Inventory: Magnesium chloride 7786-30-3 (as anhydrous)
Not listed under SARA 302, 304 or 313.
Not listed under SARA 311, 312.

Not listed under CWA.

Not listed under CAA.

Not listed under CERCLA.

State Regulations : No products were found under New Jersey, New York and Pennsylvania RTK.

California Prop. 65: No ingredient was found.

Canadian Regulations : Not controlled under WHMIS (Canada).

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	0
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)



References : Not available.

Other Special Considerations : Not available.

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