

Safety Data Sheet

Section 1: Identification

Product Name: Magnesium Chloride Hexahydrate

Product Type: Solid

Recommended Uses: Dust suppression, deicing, aqua-culture, general industrial and specialty uses.

Synonyms: Magnesium Dichloride

Company Identification:

Orination Inc.
1300 McKnight Road North
Maplewood, MN 55119

For information, call: 1-800-625-6079

Emergency Number: 1-800-625-6079

For CHEMTREC assistance, call: 1-800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2: Hazard(s) Identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Hazard symbol: None.

Signal word: None.

Hazard statement: The substance does not meet the criteria for classification.

Precautionary statement

Prevention: Observe good industrial hygiene practices.

Response: Wash hands after handling.

Storage: Store away from incompatible materials.

Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: Not applicable.

Section 3: Composition / Information on Ingredients

Substance Composition comments: The criteria for listing components in this section are: Carcinogens, Respiratory Sensitizers, Mutagens, Teratogens and Reproductive toxins are listed when present at 0.1% or greater; components which are otherwise hazardous according to WHMIS/OSHA are listed when present at 1.0% or greater. Non-hazardous components are not listed. The products pertaining to this SDS have various proportions of components which do not meet the listing criteria.

Section 4: First Aid Measures

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact: Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed: Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5: Fire Fighting Measures

Suitable extinguishing media: Treat for surrounding material.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions: Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods: Cool containers exposed to flames with water until well after the fire is out.

General fire hazards: No unusual fire or explosion hazards noted.

Hazardous combustion products: May include and are not limited to: Hydrogen chloride. Chlorine gas. Oxides of magnesium.

Explosion data

Sensitivity to mechanical impact: Not available.

Sensitivity to static discharge: Not available.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up: This product is miscible in water. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for safe handling: Use care in handling/storage. Avoid breathing dust.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a cool, dry and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

Section 8: Exposure Controls, Personal Protection

Occupational exposure limits: No exposure limits noted for ingredient(s).

Biological limit values: No biological exposure limits noted for the ingredient(s).

Appropriate 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.

Individual protection measures, such as personal protective equipment

Eye/face protection: Safety glasses

Skin protection

Hand protection: Rubber gloves. Confirm with a reputable supplier first.

Other: As required by employer code.

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

Thermal hazards: Not applicable.

General hygiene Considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: Physical and Chemical Properties

Appearance: Crystalline.

Physical state: Solid.

Form: Crystalline.

Color: White

Odor: Odorless

Odor threshold: Not available.

pH: 9 - 10 (Basic)

Melting point/freezing point: Not available.

Initial boiling point and boiling range: Not applicable

Pour point: Not available.

Specific gravity: 1.57 (H₂O = 1)

Partition coefficient

(n-octanol/water): Not available.

Flash point: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits:

Flammability limit – lower (%): Not available.

Flammability limit - upper (%): Not available.

Explosive limit - lower (%): Not available.

Explosive limit - upper (%): Not available.

Vapor pressure: 0.09 kPa (0.7 mmHg) @ 68°C
< 0 kPa at 25 °C

Vapor density: Not available.

Relative density: Not available.

Solubility(ies): Soluble

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

Section 10: Stability and Reactivity

Reactivity: Reactive with oxidizing agents, acids, metals in presence of moisture.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Chemical stability: Material is stable under normal conditions.

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Conditions to avoid: Contact with incompatible materials.

Incompatible materials: Acids. Strong oxidizing agents. Metals.

Hazardous decomposition products: May include and are not limited to: Hydrogen chloride. Chlorine gas. Oxides of magnesium.

Section 11: Toxicological Information

Information on likely routes of exposure Ingestion: Expected to be a low ingestion hazard.

Inhalation: No adverse effects due to inhalation are expected.

Skin contact: No adverse effects due to skin contact are expected.

Eye contact: Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity: Not classified.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.

Exposure minutes: Not available.

Erythema value: Not available.

Oedema value: Not available.

Serious eye damage/eye irritation:

Direct contact with eyes may cause temporary irritation.

Corneal opacity value: Not available.

Iris lesion value: Not available.

Conjunctival reddening value: Not available.

Conjunctival oedema value: Not available.

Recover days: Not available.

Respiratory or skin sensitization

Respiratory sensitization: Not classified.

Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Teratogenicity: Not classified.

Specific target organ toxicity - single exposure: Not classified.

Specific target organ toxicity - repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic effects: Not classified.

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Further information: This product has no known adverse effect on human health.

Name of Toxicologically Synergistic Products: Not available.

Section 12: Ecological Information

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Magnesium Chloride Hexahydrate		
Aquatic		
Crustacea	EC50	Calanoid copepod (<i>Eudiaptomus padanus padanus</i>) 95 - 342 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 1580 - 2740 mg/l, 96 hours

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Mobility in general: Not available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13: Disposal Considerations (non-mandatory)

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

U.S. Department of Transportation (DOT): Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada): Not regulated as dangerous goods.

Section 15: Regulatory Information

Canadian federal regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS status: Not Controlled

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.

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

SARA 302 Extremely hazardous substance: No

SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting): Not regulated.

Other federal regulations Safe Drinking Water Act (SDWA): Not regulated.

Food and Drug Administration (FDA):

Total food additive

Direct food additive

GRAS food additive

US state regulations: California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance: Not listed.

US. Massachusetts RTK - Substance List: Not regulated.

US. Pennsylvania RTK - Hazardous Substances: Not regulated.

US. Rhode Island RTK: Not regulated.

Inventory status

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)

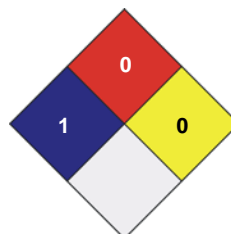
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Section 16: Additional Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	1
FLAMMABILITY	0
PHYSICAL	/ 0
PERSONAL PROTECTION	E



Prepared by: Origination, Inc.

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