



## Material Safety Data Sheet

Creation Date 09-Feb-2010

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Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Magnesium chloride hexahydrate
<b>Cat No.</b>	BP214-500; BP2638; M33-3; M33-500; M35-12; M35-212; M35-500; M35SAM-1; M35SAM-2; M35SAM-3; M36-12; M36-212; M36SAM-1; M36SAM-2; M36SAM-3
<b>Synonyms</b>	Magnesium dichloride hexahydrate (Crystalline/USP/FCC/EP/BP/Certified ACS)
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b> Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	<b>Emergency Telephone Number</b> CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### WARNING!

#### Emergency Overview

Irritating to eyes and respiratory system. May cause central nervous system effects. Hygroscopic.

**Appearance** White

**Physical State** Powder

**odor** odorless

**Target Organs** Respiratory system, Eyes, Central nervous system (CNS), Kidney

#### Potential Health Effects

#### Acute Effects

#### Principle Routes of Exposure

**Eyes**

Irritating to eyes.

**Skin**

May cause irritation. May be harmful in contact with skin.

**Inhalation**

Irritating to respiratory system. May be harmful if inhaled.

**Ingestion**

May be harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### **Chronic Effects**

May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Haz/Non-haz**

Component	CAS-No	Weight %
Magnesium chloride, hexahydrate	7791-18-6	100
Magnesium chloride	7786-30-3	-

### 4. FIRST AID MEASURES

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

**Ingestion** Do not induce vomiting. Obtain medical attention.

**Notes to Physician** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point** Not applicable  
**Method** No information available.

**Autoignition Temperature** No information available.

**Explosion Limits**  
**Upper** No data available  
**Lower** No data available

**Suitable Extinguishing Media** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

**Unsuitable Extinguishing Media** No information available.

**Hazardous Combustion Products** No information available.

**Sensitivity to mechanical impact** No information available.  
**Sensitivity to static discharge** No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA** Health 2 Flammability 0 Instability 1 Physical hazards N/A

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

*NIOSH IDLH: Immediately Dangerous to Life or Health*

### **Personal Protective Equipment**

#### **Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

#### **Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Powder
<b>Appearance</b>	White
<b>odor</b>	odorless
<b>Odor Threshold</b>	No information available.
<b>pH</b>	5-6.5 5% aq. solution
<b>Vapor Pressure</b>	No information available.
<b>Vapor Density</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Boiling Point/Range</b>	No information available.
<b>Melting Point/Range</b>	117°C / 242.6°F
<b>Decomposition temperature °C</b>	> 106°C
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	1.56
<b>Solubility</b>	Soluble in water

## 9. PHYSICAL AND CHEMICAL PROPERTIES

log Pow	No data available
Molecular Weight	203.31
Molecular Formula	Cl2 Mg . 6 H2 O

## 10. STABILITY AND REACTIVITY

Stability	Hygroscopic.
Conditions to Avoid	Avoid dust formation. Excess heat. Exposure to moisture.
Incompatible Materials	Metals
Hazardous Decomposition Products	Hydrogen chloride gas, Chlorine, Magnesium oxides
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Magnesium chloride, hexahydrate	8100 mg/kg ( Rat )	Not listed	Not listed
Magnesium chloride	2800 mg/kg ( Rat )	Not listed	Not listed

Irritation	Irritating to eyes and respiratory system
Toxicologically Synergistic Products	No information available.
Chronic Toxicity	
Carcinogenicity	There are no known carcinogenic chemicals in this product
Sensitization	No information available.
Mutagenic Effects	Mutagenic effects have occurred in experimental animals.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
Other Adverse Effects	See actual entry in RTECS for complete information.

**Endocrine Disruptor Information** No information available

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Magnesium chloride	EC50: 2200 mg/L/72h	Pimephales promelas: EC50: 2.12 g/L:96H	EC50 Pseudomonas putida: EC50:26,14 g/L/h Photobacterium phosphoreum: EC50: 36,3 mg/L/30 min Photobacterium phosphoreum: EC50: 77,2 mg/L/24 h	EC50 : 1400 mg/L/24h

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. REGULATORY INFORMATION

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**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Magnesium chloride, hexahydrate	-	-	-	-	-		X	X	X	X	-
Magnesium chloride	X	X	-	232-094-6	-		X	X	X	X	KE-22691 X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313**

Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

Not applicable

**Clean Air Act**

Not applicable

**OSHA**

Not applicable

**CERCLA**

Not Applicable

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.**

**WHMIS Hazard Class**

Non-controlled

**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Tel: (412) 490-8929

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**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

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**End of MSDS**