

**1. Identification of the substance/preparation and of the company/undertaking****1.1 Identification of the product****Product code:** M1014**Product name:** Magnesium chloride hexahydrate**CAS No.:** 7791-18-6**1.2 Recommended use and restriction on use**

General use : for experimental, research and industrial use

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

**1.3 Manufacturer / Supplier / Distributor information****Importer/distributors identification**

Company : ASIA CHEMIE (THAILAND) CO., LTD.

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**2. Hazards identification****2.1 GHS Classification**

Specific target organ toxicity (Single exposure): Category3 (Respiratory tract irritation)

Specific target organ toxicity (Repeated exposure): Category1

Chronic aquatic toxicity: Category4

**2.2 GHS label elements****Hazard symbols****Signal words:** Danger**Hazard statements**

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)

H413 May cause long lasting harmful effects to aquatic life

**Precautionary statements**

P260 Do not breathe dust/fume.

P261 Avoid breathing dust/fume.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation

**2.3 Other hazards which do not result in classification : (NFPA Classification)****NFPA grade (0 ~ 4 level)**

- Health : 2 , Flammability : 0, Reactivity : 0

**3. Composition/information on ingredients**

Chemical Name	Synonyms	CAS No.	Concentration (%)
Magnesium chloride, hexahydrate	-	7791-18-6	100

**4. First aid measures****4.1 Eye contact**

- Do not rub your eyes. Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

- Get medical attention immediately.

**4.2 Skin contact**

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.

**4.3 Inhalation contact**

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

**4.4 Ingestion contact**

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

**4.5 Delayed and immediate effects and also chronic effects from short and long term exposure**

- Not available

**4.6 Notes to physician**

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

**5. Fire-fighting measures****5.1 Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray.
- Avoid use of water jet for extinguishing.

**5.2 Specific hazards arising from the chemical**

- Not available

**5.3 Special protective actions for firefighters**

- Cool containers with water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local fire station and inform the location of the fire and characteristics hazard.
- In case of conflagration, use automatic fire sprinkler.
- Major fire may require withdrawal, allowing the object itself to burn.
- Avoid inhalation of materials or combustion by-products.
- Keep containers cool with water spray.

**6. Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.
- Keep unauthorized people away, isolate hazard area and deny entry.

**6.2 Environmental precautions:**

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

**6.3 Methods and materials for containment and cleaning up**

- Large spill : Stay upwind and keep out of low areas.
- Dike for later disposal.
- Notification to central government, local government.
- When emissions at least of the standard amount.
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area.
- Prevent the influx to waterways, sewers, basements or confined spaces.

**7. Handling and storage****7.1 Precautions for safe handling**

- Wash thoroughly after handling.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Get the manual before use.
- Operators should wear antistatic footwear and clothing.

**7.2 Conditions for safe storage, including any incompatibilities**

- Check regularly for leaks. Do not apply direct heat.
- Do not apply any physical shock to container.
- Avoid direct sunlight.
- No open fire.
- Collected them in sealed containers.
- Store away from water and sewer.

## 8. Exposure controls/personal protection

### 8.1 Exposure limits

#### ACGIH TLV

- [Magnesium chloride, hexahydrate] : Not available

#### OSHA PEL

- [Magnesium chloride, hexahydrate] : Not applicable

### 8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

### 8.3 Individual protection measures, such as personal protective equipment

#### Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- Air-purifying respirator with high-efficiency particulate filtering
- Any respiratory protection with a electromotion fan (for dust, mist, fume-purifying)
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.

#### Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

#### Hand protection

- Wear appropriate glove.

#### Skin protection

- Wear appropriate clothing.

#### Others

- Not available

## 9. Physical and chemical properties

A. Appearance	
- Appearance	Solid (Other)
- Color	colorless to white
B. Odor	odorless
C. Odor threshold	Not available
D. pH	6.0 ~ 7.5
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity (Relative density)	1.569g/cm3
O. Partition coefficient of n-octanol/water	Not available

P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	203.31
T. Molecular formula	MgCl2.6H2O

## 10. Stability and reactivity

### 10.1 Chemical Stability

- This material is stable under recommended storage and handling conditions.

### 10.2 Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

### 10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid: Accumulation of electrostatic charges, Heating, Flames and hot surfaces

### 10.4 Incompatible materials

- Not available

### 10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

## 11. Toxicological information

### 11.1 Information on the likely routes of exposure

#### Respiratory tracts

- May cause respiratory irritation.

#### Oral

- Not available

#### Eye/Skin

- Not available

### 11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

#### Acute toxicity

##### \* Oral

- [Magnesium chloride, hexahydrate] : LD50 = 7333.3 mg/kg Rat

##### \* Dermal

- [Magnesium chloride, hexahydrate] : Not available

##### \* Inhalation

- [Magnesium chloride, hexahydrate] : Not available

#### Skin corrosion/irritation

- Not available

#### Serious eye damage/irritation

- Not available

#### Respiratory sensitization

- Not available

#### Skin sensitization

- Not available

#### Carcinogenicity

##### \* IARC

- [Magnesium chloride, hexahydrate] : Not available

##### \* OSHA

- [Magnesium chloride, hexahydrate] : Not available

##### \* ACGIH

- [Magnesium chloride, hexahydrate] : Not available

##### \* NTP

- [Magnesium chloride, hexahydrate] : Not available

##### \* EU CLP

- [Magnesium chloride, hexahydrate] : Not available

#### Germ cell mutagenicity

- Not available

#### Reproductive toxicity

- Not available

#### STOT-single exposure

- May cause respiratory irritation.

**STOT-repeated exposure**

- Causes damage to organs through prolonged or repeated exposure

**Aspiration hazard**

- Not available

**12. Ecological information****12.1 Ecotoxicity****Fish**

- [Magnesium chloride, hexahydrate] : Not available

**Crustaceans**

- [Magnesium chloride, hexahydrate] : Not available

**Algae**

- [Magnesium chloride, hexahydrate] : Not available

**12.2 Persistence and degradability****Persistence**

- [Magnesium chloride, hexahydrate] : Not available

**Degradability**

- [Magnesium chloride, hexahydrate] : Not available

**12.3 Bioaccumulative potential****Bioaccumulative potential**

- [Magnesium chloride, hexahydrate] : Not available

**Biodegradation**

- [Magnesium chloride, hexahydrate] : (Since there is no useful data for readily biodegradable, it is considered to be non-biodegradable)

**12.4 Mobility in soil**

- [Magnesium chloride, hexahydrate] : Not available

**12.5 Other adverse effects**

Not available

**13. Disposal considerations****13.1 Disposal methods**

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with water separation process.
- Dispose by incineration.

**13.2 Special precautions for disposal**

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

**14. Transport information****14.1 UN No. (IMDG CODE/IATA DGR)**

- Not applicable

**14.2 Proper shipping name**

- Not applicable

**14.3 Hazard Class**

- Not applicable

**14.4 IMDG CODE/IATA DGR Packing group**

- Not applicable

**14.5 Marine pollutant**

- Not applicable.

**14.6 Special precautions for user related to transport or transportation measures**

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport (IATA): Not subject to IATA regulations.

## 15. Regulatory information

### 15.1 National and/or international regulatory information:

#### POPs Management Law

- [Magnesium chloride, hexahydrate] : Not applicable

#### Information of EU Classification

##### \* Classification

- [Magnesium chloride, hexahydrate] : Not applicable

#### U.S. Federal regulations

##### \* OSHA PROCESS SAFETY (29CFR1910.119)

- [Magnesium chloride, hexahydrate] : Not applicable

##### \* CERCLA Section 103 (40CFR302.4)

- [Magnesium chloride, hexahydrate] : Not applicable

##### \* EPCRA Section 302 (40CFR355.30)

- [Magnesium chloride, hexahydrate] : Not applicable

##### \* EPCRA Section 304 (40CFR355.40)

- [Magnesium chloride, hexahydrate] : Not applicable

##### \* EPCRA Section 313 (40CFR372.65)

- [Magnesium chloride, hexahydrate] : Not applicable

#### Rotterdam Convention listed ingredients

- [Magnesium chloride, hexahydrate] : Not applicable

#### Stockholm Convention listed ingredients

- [Magnesium chloride, hexahydrate] : Not applicable

#### Montreal Protocol listed ingredients

- [Magnesium chloride, hexahydrate] : Not applicable

## 16. Other information

**Reason for the revision:** General update.

Date: 28/5/2014

### Revision 3

Date: 17/01/2024

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