REAGENTS DUKSAN

# SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200

## Magnesium Chloride hexahydrate

**Date of issue: 2019-07-16** **Revision date: 2026-07-23** **Version: R0003.0001**

## 1. IDENTIFICATION

### A. Product name

- Magnesium Chloride hexahydrate

### B. 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.

### C. Manufacturer / Supplier / Distributor information

○ **Manufacturer information**

- Company name : DUKSAN PURE CHEMICALS
- Address : 53,SINWONRO 133BEONGIL, DANWONGU, ANSANSHI, GYUNGGIDO, REPUBLIC OF KOREA
- Emergency telephone number : 82-31-495-4055

○ **Supplier/Distributer information**

- Company name : DUKSAN PURE CHEMICALS
- Address : 53,SINWONRO 133BEONGIL, DANWONGU, ANSANSHI, GYUNGGIDO, REPUBLIC OF KOREA
- Telephone number : 82-31-495-4055
- Emergency telephone number : 82-31-495-4055
- Fax number : 82-31-495-4058

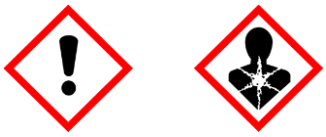
## 2. HAZARD IDENTIFICATION

### A. GHS Classification

- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- Specific target organ toxicity(Repeated exposure) : Category1
- Chronic aquatic toxicity : Category4

### B. 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**

**1) Prevention**

- 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.

**2) Response**

- 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.

**3) Storage**

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

**4) Disposal**

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

### C. 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 | Trade names and Synonyms | CAS No. | Content(%) |
|---|---|---|---|
| Magnesium chloride, hexahydrate | Magnesium Chloride hexahydrate | 7791-18-6 | 100 |

## 4. FIRST AID MEASURES

### A. 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.

### B. 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.

### C. Inhalation contact

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

### D. 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.

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

- Not available

### F. Notes to physician

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

## 5. FIREFIGHTING MEASURES

### A. Suitable (Unsuitable) extinguishing media

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

### B. Specific hazards arising from the chemical

- Not available

### C. 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 firestation 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

### A. 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.

### B. Environmental precautions

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

### C. 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

### A. 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.

### B. 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

### A. Exposure limits

○ **ACGIH TLV**

- [Magnesium chloride, hexahydrate] : Not available

○ **OSHA PEL**

- [Magnesium chloride, hexahydrate] : Not applicable

### B. Engineering controls

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

### C. 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 facepiece 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 facepiece.

○ **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 | 203.3 |

## 10. STABILITY AND REACTIVITY

### A. Chemical Stability

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

### B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

### C. Conditions to avoid

- Avoid contact with incompatible materials and condition.

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

### D. Incompatible materials

- Not available

### E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

## 11. TOXICOLOGICAL INFORMATION

### A. Information on the likely routes of exposure

○ **(Respiratory tracts)**

- May cause respiratory irritation.

○ **(Oral)**

- Not available

○ **(Eye·Skin)**

- Not available

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

○ **Acute toxicity**

*** Oral**

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

### A. Ecotoxicity

○ **Fish**

- [Magnesium chloride, hexahydrate] : Not available

○ **Crustaceans**

- [Magnesium chloride, hexahydrate] : Not available

○ **Algae**

- [Magnesium chloride, hexahydrate] : Not available

### B. Persistence and degradability

○ **Persistence**

- [Magnesium chloride, hexahydrate] : Not available

○ **Degradability**

- [Magnesium chloride, hexahydrate] : Not available

### C. Bioaccumulative potential

○ **Bioaccumulative potential**

- [Magnesium chloride, hexahydrate] : Not available

○ **Biodegration**

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

### D. Mobility in soil

- [Magnesium chloride, hexahydrate] : Not available

### E. Other adverse effects

- Not available

## 13. DISPOSAL CONSIDERATIONS

### A. 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.

### B. 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

### A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

### B. Proper shipping name

- Not applicable

### C. Hazard Class

- Not applicable

### D. IMDG CODE/IATA DGR Packing group

- Not applicable

### E. Marine pollutant

- Not applicable

### F. 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

### A. 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

### A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

### B. Issue date

- 2019-07-16

### C. Revision number and Last date revised

- 2 times, 2026-07-23

### D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).