

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Magnesium Nitrate Hexahydrate
<b>Product code</b>	134-00255
<b>CAS No</b>	13446-18-9
<b>Formula</b>	Mg(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O
<b>Manufacturer</b>	Wako Pure Chemical Industries, Ltd. 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81 (0)6-6203-3741 Fax: +81 (0)6-6201-5964
<b>Supplier</b>	Wako Pure Chemical Industries, Ltd. 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81 (0)6-6203-3741 Fax: +81 (0)6-6201-5964
<b>Emergency telephone number</b>	+81-6-6203-3741 / +81-3-3270-8571
<b>Recommended uses and restrictions on use</b>	For research purposes

## Section 2: HAZARDS IDENTIFICATION

**GHS classification**

**Classification of the substance or mixture**

<b>Oxidizing solids</b>	Category 3
<b>Serious eye damage/eye irritation</b>	Category 2B
<b>Specific target organ toxicity (single exposure)</b>	Category 1
Category 1 blood	
<b>Specific target organ toxicity (repeated exposure)</b>	Category 1
Category 1 blood	

**Pictograms**



**Signal word** Danger

**Hazard statements**

- H272 - May intensify fire; oxidizer
- H320 - Causes eye irritation
- H370 - Causes damage to the following organs: blood
- H372 - Causes damage to the following organs through prolonged or repeated exposure: blood

**Precautionary statements-(Prevention)**

- Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep/Store away from clothing/combustible materials

- Take any precaution to avoid mixing with combustibles
- Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary statements-(Response)**

- IF exposed: Call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary statements-(Storage)**

- Store locked up.

**Precautionary statements-(Disposal)**

- Dispose of contents/container to an approved waste disposal plant

**Others**

**Other hazards** Not available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture** Substance

**Formula** Mg(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS No.
Magnesium nitrate hexahydrate	99.0	256.41	(1)-464	N/A	13446-18-9

**Impurities and/or Additives :** Not applicable

### Section 4: FIRST AID MEASURES

**Inhalation**

Remove to fresh air. Immediate medical attention is required.

**Skin contact**

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

**Eye contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

**Ingestion**

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

**Protection of first-aiders**

Use personal protective equipment as required.

### Section 5: FIRE FIGHTING MEASURES

**Suitable extinguishing media**

Flood with water

**Unsuitable extinguishing media**

Powder, Foam

**Special extinguishing method**

No information available

**Specific hazards arising from the chemical product**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Protection of fire-fighters**

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

### Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated. See Section 12 for additional ecological information.

### Methods and materials for containment and methods and materials for cleaning up

Sweep up and gather scattered particles, and collect it in an empty airtight container.

### Recovery, neutralization

No information available

### Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 7: HANDLING AND STORAGE

### Handling

#### Technical measures

Avoid contact with reducing agents and combustible materials. Be careful to hygroscopic. Use with local exhaust ventilation.

#### Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

#### Safety handling precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

### Storage

#### Safe storage conditions

##### Storage conditions

Store away from sunlight in well-ventilated place at room temperature (under 25 °C). Keep container tightly closed.

##### Safe packaging material

Polyethylene, Polypropylene

#### Incompatible substances

Organic substance, Combustible materials

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Personal protective equipment

#### Respiratory protection

Dust mask

#### Hand protection

Protection gloves

#### Eye protection

protective eyeglasses or chemical safety goggles

#### Skin and body protection

Long-sleeved work clothes

### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	
<b>Color</b>	white
<b>Appearance</b>	crystals
<b>Odor</b>	No data available
<b>pH</b>	5.0 - 7.0 (50 g/L, at 25 degree C)
<b>Melting point/freezing point</b>	89 °C
<b>Boiling point, initial boiling point and boiling range</b>	330 °C
<b>Flash point</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	
<b>Upper :</b>	No data available
<b>Lower :</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Specific Gravity / Relative density</b>	1.636
<b>Solubilities</b>	water : Very soluble. Ethanol : soluble .
<b>n-Octanol/water partition coefficient:(log Pow)</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity (coefficient of viscosity)</b>	No data available
<b>Dynamic viscosity</b>	No data available

## Section 10: STABILITY AND REACTIVITY

### Stability

**Stability** This material is deliquescent. It is a powerful oxidizing agent, and reacts with combustible and reducing materials.

**Reactivity** No data available

### Hazardous reactions

None under normal processing

### Conditions to avoid

Extremes of temperature and direct sunlight, Moisture

### Incompatible materials

Organic substance, Combustible materials

### Hazardous decomposition products

Nitrogen oxides (NOx), Metal oxides

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium nitrate hexahydrate	5440 mg/kg ( Rat )	N/A	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Magnesium nitrate hexahydrate	LD50 (orl,rat) : 5440 mg/kg(as anhydrate)(IUCRID (2000))	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust-source information	Acute toxicity -inhalation mist-source information
Magnesium nitrate hexahydrate	Based on the NITE GHS	Based on the NITE GHS	Based on the NITE GHS

	classification results.	classification results.	classification results.
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**Skin irritation/corrosion**

Chemical Name	Skin corrosion irritation source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**Serious eye damage/ irritation**

Chemical Name	Serious eye damage source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**Respiratory or skin sensitization**

Chemical Name	Respiratory, Skin sensitization source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**Reproductive cell mutagenicity**

Chemical Name	Mutagenic source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Magnesium nitrate hexahydrate 13446-18-9		Group 2A		

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity** No information available

**Other data**

Chemical Name	Aquatic toxicity -Acute- source information	Aquatic toxicity -Chronic- source information
Magnesium nitrate hexahydrate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

**Persistence and degradability** No information available

**Bioaccumulative potential** No information available

**Mobility in soil** No information available

**Hazard to the ozone layer** No information available

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated container and contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14: TRANSPORT INFORMATION

### ADR/RID

<b>UN number</b>	UN1474
<b>Proper shipping name:</b>	Magnesium nitrate
<b>UN classification</b>	5.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	III
<b>Marine pollutant</b>	Not applicable

### IMDG

<b>UN number</b>	UN1474
<b>Proper shipping name:</b>	Magnesium nitrate
<b>UN classification</b>	5.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	III
<b>Marine pollutant (Sea)</b>	Not applicable
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

### IATA

<b>UN number</b>	UN1474
<b>Proper shipping name:</b>	Magnesium nitrate
<b>UN classification</b>	5.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	III
<b>Environmentally Hazardous Substance</b>	Not applicable

## Section 15: REGULATORY INFORMATION

### International Inventories

<b>EINECS/ELINCS</b>	-
<b>TSCA</b>	-

### Japanese regulations

<b>Fire Service Act</b>	Not applicable
<b>Poisonous and Deleterious Substances Control Law</b>	Not applicable
<b>Industrial Safety and Health Act</b>	Dangerous Substances - Oxidizing Substance (Enforcement Order Attached Table 1 Item 3)
<b>Regulations for the carriage and storage of dangerous goods in ship</b>	Oxidizing Agents - Oxidizing Agents (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
<b>Civil Aeronautics Law</b>	Oxidizing Agents - Oxidizing Agents (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
<b>Marine Pollution Prevention Law</b>	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Z
<b>Pollutant Release and Transfer Register Law</b>	Not applicable
<b>Water Pollution Control Act</b>	Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1)
<b>Export Trade Control Order</b>	Not applicable

## Section 16: OTHER INFORMATION

**Key literature references and sources for data etc.**

NITE: National Institute of Technology and Evaluation (JAPAN)  
<http://www.safe.nite.go.jp/japan/db.html>  
IATA dangerous Goods Regulations  
RTECS:Registry of Toxic Effects of Chemical Substances  
Japan Industrial Safety and Health Association GHS Model SDS  
Dictionary of Synthetic Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.  
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.  
etc

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.  
GHS Classification is according to JIS Z7252(2014). \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**