

## SAFETY DATA SHEET

According to JIS Z 7253:2012  
 Revision Date 28-Jan-2020  
 Version 4.02

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Magnesium Perchlorate
<b>Product code</b>	139-07983,133-07981
<b>CAS RN</b>	10034-81-8
<b>Formula</b>	Mg(ClO <sub>4</sub> ) <sub>2</sub>
<b>Manufacturer</b>	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-5964
<b>Supplier</b>	FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-2029
<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

Oxidizing solids

Category 2

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 2A

## Pictograms



Signal word

Danger

## Hazard statements

- H272 - May intensify fire; oxidizer
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation

## Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- 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

## Precautionary statements-(Response)

- 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.

- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation occurs: Get medical advice/attention
- Take off contaminated clothing and wash before reuse

**Precautionary statements-(Storage)**

- Not applicable

**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(ClO<sub>4</sub>)<sub>2</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Magnesium Perchlorate	83.0	223.21	(1)-234	公表	10034-81-8

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

### Section 4: FIRST AID MEASURES

**Inhalation**

Remove to fresh air. If symptoms persist, call a physician.

**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**

No information available

**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**

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.

#### **Methods and materials for contaminant 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**

Flammable. Do not give shock. Avoid contact with reducing agents and combustible materials. Avoid contact with organic substance 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**

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

### Storage

#### **Safe storage conditions**

##### **Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool).  
Keep container tightly closed.

##### **Safe packaging material**

Glass

#### **Incompatible substances**

Organic substance, Combustible materials, Reducing agent

## **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**

### **Form**

#### **Color**

white

#### **Appearance**

crystals or pillar or small granules

### **Odor**

Odorless

### **pH**

No data available

### **Melting point/freezing point**

250 °C (dec.)

### **Boiling point, initial boiling point and boiling range**

No data available

### **Flash point**

No data available

### **Evaporation rate:**

No data available

### **Flammability (solid, gas):**

No data available

### **Upper/lower flammability or explosive limits**

Upper :	No data available
Lower :	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific Gravity / Relative density	2.21
Solubilities	water : Very soluble. Alcohols : freely soluble .
n-Octanol/water partition coefficient:(log Pow)	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	> 250 °C
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

## Section 10: STABILITY AND REACTIVITY

### Stability

Stability	Hygroscopic.
Reactivity	No data available

### Hazardous reactions

None under normal processing

### Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark, Shock

### Incompatible materials

Organic substance, Combustible materials, Reducing agent

### Hazardous decomposition products

Metal oxides, Halides

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Magnesium Perchlorate	Based on the NITE GHS classification results.	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 Perchlorate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

### Skin irritation/corrosion

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

### Serious eye damage/ irritation

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

### Respiratory or skin sensitization

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

### Reproductive cell mutagenicity

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

### Carcinogenicity

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

### Reproductive toxicity

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

### STOT-single exposure

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

**STOT-repeated exposure**

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

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Magnesium Perchlorate	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 Perchlorate	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

**UN number** UN1475  
**Proper shipping name:** Magnesium perchlorate  
**UN classification** 5.1  
**Subsidiary hazard class**  
**Packing group** II  
**Marine pollutant** Not applicable

### IMDG

**UN number** UN1475  
**Proper shipping name:** Magnesium perchlorate  
**UN classification** 5.1  
**Subsidiary hazard class**  
**Packing group** II  
**Marine pollutant (Sea)** Not applicable  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available

### IATA

**UN number** UN1475  
**Proper shipping name:** Magnesium perchlorate  
**UN classification** 5.1  
**Subsidiary hazard class**  
**Packing group** II  
**Environmentally Hazardous Substance** Not applicable

## Section 15: REGULATORY INFORMATION

### International Inventories

<b>EINECS/ELINCS</b>	Listed
<b>TSCA</b>	Listed

### Japanese regulations

<b>Fire Service Act</b>	Category I, perchlorates, dangerous grade 1
<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>Pollutant Release and Transfer Register Law</b>	Not applicable
<b>Export Trade Control Order</b>	Not applicable

## Section 16: OTHER INFORMATION

<b>Key literature references and sources for data etc.</b>	<p>NITE: National Institute of Technology and Evaluation (JAPAN)  <a href="http://www.safe.nite.go.jp/japan/db.html">http://www.safe.nite.go.jp/japan/db.html</a>            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</p>
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### **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**