

**MAGNESIUM NITRATE HEXAHYDRATE**

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**1 Identification of the substance/preparation and of the company/undertaking****1.1 Identification of the substance or the preparation**

Chemical name : Magnesium nitrate hexahydrate  
Chemical formula :  $Mg(NO_3)_2 \cdot 6H_2O$   
EC number : 233-829-7  
CAS number : 13446-18-9

**1.2 Use of the substance**

Use : Used as a granular fertilizer mineral containing magnesium and nitrogen and as a chemical intermediate.

Uses advised against : No uses advised against.

**1.3 Company/undertaking identification****Manufacturer**

Shri Shanti Laboratories,  
Shri Shanti Niwas,  
Gangashahar Road, Bikaner,  
India-334001

**1.4 Emergency telephone**

732-7140-400 ; Hazard response# : +91-9571511119

**2 Hazards identification****2.1 Classification of the substance or preparation****2.1.1 Classification (EC) N°1272/2008(CLP/GHS):**

Eye Irritant 2

**H319** - Causes serious eye irritation.

**2.1.2 Classification 67/548/EEC (DPD):**

None

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## 2.2 Labelling

Labelling Regulation GHS US Classification:

Hazard pictogram



GHS07

signal word: **WARNING**

Hazard statements

**H319** - Causes serious eye irritation. Eye Irritant 2 .

Precautionary

statements Prevention

**P264** Wash hands thoroughly after handling.

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

Response

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**P337+P313** If eye irritation persists: Get medical advice/attention.

## 2.3 Other hazards

None

## 3 Composition/information on ingredients

Name Component	Content	CAS-nr.	EG-nr.	Annex -nr	Classification
Magnesium nitrate hexahydrate	>= 99 %	13446-18-9	233-829-7	.....	eye irritant 2 H319

## 4 First aid measures

**COMMONLY**

In case of persisting adverse effects consult a physician.

### 4.1 Description of the first aid measures

Attention: Causes irritation to eyes and digestive system (if swallowed) and skin.

- Skin contact : After contact with skin, wash with plenty of water :  
Take off contaminated cloths.

- Eye contact : Immediately flush eyes with large amounts of water for at least 15 minutes while holding the eyelids open to ensure that the entire surface is flushed  
: Seek medical advice
- Ingestion : Wash mouth out with water. Drink 1-2 glass of water.  
: Seek medical advice.

#### **4.2 Acute and delayed symptoms and effects**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.  
TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available

#### **4.3 Special means to provide specific and immediate treatment**

No additional information available.

In the case of abnormal symptoms contact medicine doctor.

## **5 Fire-fighting measures**

### **5.1 Extinguishing media**

- Suitable extinguishing media  
Use water only! Contact professional fire-fighters immediately. For small fires, do NOT use chemicals, carbon dioxide, halon or foams. For large fires flood fire with water from a distance.
- Extinguishing media which shall not be used for safety reasons  
For small fires, do NOT use chemicals, carbon dioxide, halon or foams. For large fires flood fire with water from a distance.

### **5.2 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

In case of fire, the following can be released: Nitrogen oxides (NO<sub>x</sub>)  
High temperatures may cause pressure build-up in closed containers.  
During the thermal decomposition produced of harmful compounds.  
Reduce dust and vapour with water spray.

Brown fumes containing toxic nitrogen oxides  
Explosive mixture: Not applicable-non-explosive.

### **5.3 Special protective equipment for fire-fighters**

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

Clothing resistant to high temperatures.  
Independent self-contained breathing apparatus.

## **6 Accidental release measures**

### **6.1 Personal precautions**

Use personal protective equipment (section 8). Avoid contact with eyes.

Do not let this chemical enter the environment.  
Do not ingest.

### **6.2 Environmental precautions**

Avoid direct discharge into drains.

### **6.3 Methods for cleaning up**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Collect up the product and place it in a sealable container . Suitably labeled. Transfer carefully to container. Then take the spare containers to an area reserved for subsequent recycling or disposal.

Do not put the cast down material back into the original container, for re-use.

Avoid prolonged or repeated exposure.

### **6.4 Note**

See headings 8 and 13

## **7 Handling and storage**

### **7.1 Handling**

Keep in original containers in a covered warehouse. Storage in dry area.

Protect from direct sunlight.

### **7.2 Storage**

Keep away from incompatibles such as reducing agents, flammable agents, strong acids

Keep away from foodstuffs, beverages and feed.

Keep away from heat and sources of ignition.

### **7.3 Specific use(s)**

None

## **8 Exposure controls/personal protection**

### **8.1 Control parameters**

The product does not contain any relevant quantities of material with critical values that have to be monitored at the workplace.

## 8.2 Exposure controls

### 8.2.1 Occupational exposure controls

Personal protective equipment:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.

Immediately remove all spoiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with eyes.



Eye protection Use safety goggles.

Protection of hands

The selected protective gloves have to satisfy the specifications of UE Directive 89-689-EEC and standard EN 374 derived from it.

## 9 Physical and chemical properties

### 9.1 General information

- |                  |                |
|------------------|----------------|
| - Physical state | solid crystals |
| - Colour         | white          |
| - Odour          | odourless      |

### 9.2 Important health, safety and environmental information

- |                               |                        |
|-------------------------------|------------------------|
| - pH (in 5% solution)         | 7                      |
| - Boiling point/boiling range | Not available          |
| - Flash point                 | Not applicable         |
| - Melting/freezing point      | 95°C at 1013 hPa       |
| - Flammability (solid, gas)   | Not flammable          |
| - Explosive properties        | Not explosive          |
| - Vapour pressure             | <0.00001 Pa at 20°C    |
| - Relative density at 20°C    | 1.46 g/cm <sup>3</sup> |
| - Solubility                  | soluble in water       |
| - Water solubility            | 225g/100g water        |
| - Partition coefficient       | Not available          |
| - Viscosity                   | Not applicable         |
| - Evaporation rate            | No data                |

### 9.3 Other information

## 10 Stability and reactivity

### 10.1 Reactivity

Reactive with strong reducing agents.

### 10.2 Stability

Under normal storage and use, the substance is chemically stable.

### 10.3 Conditions to avoid

Avoid contact with strong heat sources such as solar radiation and flames.

### 10.4 Materials to avoid

Strong reducing agents.

### 10.5 Hazardous decomposition products

Intensive heated to temperatures > 330 ° C followed by decomposition with emission of toxic gases (nitrogen oxides).

## 11 Toxicological information

#### - **Acute effects**

Substances

LD50 (oral): > 2000 mg / kg

LD50 (dermal): > 5000 mg / kg

**on the eyes: irritating to eyes.** Substance may cause irritation, burning and tearing.

**ingestion:** swallowing small amounts can cause headache, dizziness, nausea, vomiting. Swallowing large quantities can cause severe gastrointestinal disorders.

**sensitization by inhalation or skin;:** no sensitizing effects known.

**other information:** no data.

#### - **Repeated dose toxicity**

For NOAEL: ≥ 1500 mg / kg / day (subacute effect, rat)

There is no effect on classification.

#### - **Delayed effects and chronic effects**

Carcinogenicity: Magnesium nitrate hexahydrate is not a carcinogen

Mutagenicity: Magnesium nitrate hexahydrate is not mutagenic.

Reproductive toxicity: The substance is not a threat to fertility. .

NOAEL: ≥ 1500 mg / kg / day (orally)

Narcosis: Not available.

## 12 Ecological information

### 12.1 Ecotoxicity

magnesium nitrate hexahydrate

There is no direct test for magnesium nitrate.

The data were based on studies of similar substances. LC50 for freshwater fish: 1378 mg / L

EC50/LC50 for freshwater invertebrates: 490 mg /

L EC50/LC50 for freshwater algae:> 1700 mg / L

EC10/LC10 or freshwater algae NOEC: 1700 mg / L

EC50/LC50 aquatic microorganisms:> 1000 mg / L

EC10/LC10 or NOEC aquatic organisms: 180 mg / L

PNEC aqua (water freshwater): 0.45 mg / L

PNEC aqua (sea water): 0.045 mg /

L PNEC (broken version): 4.5 mg / L

### 12.2 Mobility

Freely soluble in water. Very quickly penetrates into the groundwater.

### 12.3 Persistence and degradability

Decomposition under anaerobic conditions in wastewater treatment plants.

### 12.4 Bioaccumulative potential

The substance has a low potential for biodegradation

### 12.5 Results of PBT assessment

The substance has not PBT and vPvB assesment.

### 12.6 Other adverse effects

None.

## 13 Disposal considerations

Waste Removal: Apply as fertilizer or transfer for disposal.

Disposing of the packaging: Empty containers contain residue of material on the inner surfaces. Thoroughly empty containers to be transmitted to authorized waste collector

Empty packaging completely.

Prevent pollution of surface

waters. Contaminated packaging:

EC codes:

15 01 02 plastic packaging;

Prohibition: Do not dispose of untreated packing with ordinary industrial wastes.

NOTE: The user's attention is drawn to the possible existence of local regulations regarding disposal.

## 14 Transport information

- UN number UN 1474
- Class 5.1
- Proper shipping name Magnesium Nitrate, Solid Packing Group(III)
- Marine pollutant N.A.

## 15 Regulatory information

### Health, safety and environmental information shown on the label according to Directives 67/548/EEC and 1999/45/EC

- Regulation (EC) No 1272/2008 (CLP) of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (REACH).

- REGULATION (EC) No 1907/2006 OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

- COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

### Chemical Safety Assessment

Not yet registered.

## 16 Other Information

### HMIS Classification

Health Hazard : 0  
Flammability : 0  
Physical Hazards : 0

### NFPA Rating

Health Hazard : 0  
Flammability : 0  
Physical Hazards : 0

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Shri Shanti Laboratories and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.