

## SAFETY DATA SHEET

Version 4.6  
Revision Date 06/28/2014  
Print Date 06/23/2016

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1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : Magnesium nitrate hexahydrate

Product Number : 237175  
Brand : Sigma-Aldrich

CAS-No. : 13446-18-9

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

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2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

## 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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3. COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1 Substances

Formula :  $\text{MgN}_2\text{O}_6 \cdot 6\text{H}_2\text{O}$   
Molecular Weight : 256.41 g/mol  
CAS-No. : 13446-18-9  
EC-No. : 233-826-7

## Hazardous components

| Component                     | Classification | Concentration |
|-------------------------------|----------------|---------------|
| Magnesium nitrate hexahydrate |                |               |
|                               |                | -             |

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4. FIRST AID MEASURES

## 4.1 Description of first aid measures

## General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

no data available

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

nitrogen oxides (NO<sub>x</sub>), Magnesium oxide

**5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**

no data available

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Handle and store under inert gas.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Do not let product enter drains.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |                           |                                            |
|---------------------------|--------------------------------------------|
| a) Appearance             | Form: solid<br>Colour: white               |
| b) Odour                  | odourless                                  |
| c) Odour Threshold        | no data available                          |
| d) pH                     | 5 - 7 at 50 g/l at 20 °C (68 °F)           |
| e) Melting point/freezing | Melting point/range: 89 °C (192 °F) - dec. |

point

- |                                                 |                          |
|-------------------------------------------------|--------------------------|
| f) Initial boiling point and boiling range      | 330 °C (626 °F)          |
| g) Flash point                                  | no data available        |
| h) Evaporation rate                             | no data available        |
| i) Flammability (solid, gas)                    | no data available        |
| j) Upper/lower flammability or explosive limits | no data available        |
| k) Vapour pressure                              | no data available        |
| l) Vapour density                               | no data available        |
| m) Relative density                             | 1.636 g/cm <sup>3</sup>  |
| n) Water solubility                             | 420 g/l at 20 °C (68 °F) |
| o) Partition coefficient: n-octanol/water       | no data available        |
| p) Auto-ignition temperature                    | no data available        |
| q) Decomposition temperature                    | no data available        |
| r) Viscosity                                    | no data available        |
| s) Explosive properties                         | no data available        |
| t) Oxidizing properties                         | no data available        |

## 9.2 Other safety information

no data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Hygroscopic.

### 10.5 Incompatible materials

Strong reducing agents, Strong acids, Organic materials, Powdered metals, Dimethylformamide, Combustible material

### 10.6 Hazardous decomposition products

Other decomposition products - no data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 5,440 mg/kg

Inhalation: no data available

Dermal: no data available

no data available

**Skin corrosion/irritation**

Skin - rabbit

Result: Mild skin irritation - 24 h

**Serious eye damage/eye irritation**

Eyes - rabbit

Result: Mild eye irritation - 24 h

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: 2A - Group 2A: Probably carcinogenic to humans (Magnesium nitrate hexahydrate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: OM3756000

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Prolonged or repeated inhalation may cause:, May be harmful., Local irritation, Effects due to ingestion may include:, Nausea, Vomiting, Exposure to large amounts can cause:, tiredness, Methaemoglobinemia, Headache, cardiac dysrhythmias, drop in blood pressure, Spasmodic reactions, May cause cyanosis.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

no data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

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## 15. REGULATORY INFORMATION

#### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Chronic Health Hazard

#### Massachusetts Right To Know Components

|                               | CAS-No.    | Revision Date |
|-------------------------------|------------|---------------|
| Magnesium nitrate hexahydrate | 13446-18-9 | 1993-04-24    |

#### Pennsylvania Right To Know Components

|                               | CAS-No.    | Revision Date |
|-------------------------------|------------|---------------|
| Magnesium nitrate hexahydrate | 13446-18-9 | 1993-04-24    |

#### New Jersey Right To Know Components

|                               | CAS-No.    | Revision Date |
|-------------------------------|------------|---------------|
| Magnesium nitrate hexahydrate | 13446-18-9 | 1993-04-24    |

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

#### HMIS Rating

|                        |   |
|------------------------|---|
| Health hazard:         | 0 |
| Chronic Health Hazard: | * |
| Flammability:          | 0 |
| Physical Hazard        | 0 |

#### NFPA Rating

|                |   |
|----------------|---|
| Health hazard: | 0 |
|----------------|---|

Fire Hazard: 0  
Reactivity Hazard: 0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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