SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Magnesium hydroxide
Product Number : 310093
Brand : SIGALD
CAS-No. : 1309-42-8

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

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES
Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 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

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : H₂MgO₂
Molecular weight : 58.32 g/mol
SIGALD - 310093
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

CAS-No. : 1309-42-8
EC-No. : 215-170-3

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Magnesium oxide

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
none

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 **Environmental precautions**
No special precautionary measures necessary.

6.3 **Methods and materials for containment and cleaning up**
Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 **Reference to other sections**
For disposal see section 13.

**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling**
For precautions see section 2.2.

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

* Storage conditions
  Tightly closed. Dry.

* Storage class
  Storage class (TRGS 510): 11: Combustible Solids

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**SECTION 8: Exposure controls/personal protection**

8.1 **Control parameters**

* Ingredients with workplace control parameters
  Contains no substances with occupational exposure limit values.

8.2 **Exposure controls**

* Appropriate engineering controls
  Change contaminated clothing. Wash hands after working with substance.

* Personal protective equipment
  
  **Eye/face protection**
  Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

  **Respiratory protection**
  Recommended Filter type: Filter type P1
  The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
  Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Control of environmental exposure
No special precautionary measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**
  - Form: powder
  - Color: white

- **Odor**
  - No data available

- **Odor Threshold**
  - No data available

- **pH**
  - 9.5 - 10.5

- **Melting point/freezing point**
  - Melting point/range: 350 °C (662 °F) - lit.

- **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**
  - No data available

- **Vapor pressure**
  - No data available

- **Vapor density**
  - No data available

- **Density**
  - 2.360 g/cm³
  - Relative density: No data available

- **Water solubility**
  - Insoluble

- **Partition coefficient: n-octanol/water**
  - No data available

- **Autoignition temperature**
  - Not auto-flammable

- **Decomposition temperature**
  - No data available

- **Viscosity**
  - No data available

- **Explosive properties**
  - No data available

- **Oxidizing properties**
  - No data available

9.2 Other safety information
No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No information available

10.5 Incompatible materials
Strong oxidizing agents, Strong acids

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**
- Oral: No data available
- Inhalation: No data available
- Dermal: No data available
- No data available

**Skin corrosion/irritation**
- Remarks: No data available

**Serious eye damage/eye irritation**
- Remarks: No data available

**Respiratory or skin sensitization**
- No data available

**Germ cell mutagenicity**
- **Test Type:** reverse mutation assay
- **Test system:** Salmonella typhimurium
- **Metabolic activation:** with and without metabolic activation
- **Method:** Mutagenicity (Salmonella typhimurium - reverse mutation assay)
- **Result:** negative

- **Test Type:** Chromosome aberration test in vitro
- **Test system:** lymphocyte
- **Metabolic activation:** with and without metabolic activation
- **Method:** OECD Test Guideline 473
- **Result:** negative

- **Test Type:** In vitro mammalian cell gene mutation test
- **Test system:** mouse lymphoma cells
- **Metabolic activation:** with and without metabolic activation
- **Method:** OECD Test Guideline 476
- **Result:** negative
Carcinogenicity
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No ingredient 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 on OSHA’s list of regulated carcinogens.

Reproductive toxicity
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

11.2 Additional Information
Repeated dose toxicity - Rat - Oral - NOAEL (No observed adverse effect level) - >= 1,000 mg/kg
RTCECS: OM3570000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 511.31 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates static test LC50 - Daphnia magna (Water flea) - ca. 284.76 mg/l - 48 h
Toxicity to algae static test EC50 - Scenedesmus capricornutum (fresh water algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria EC50 - activated sludge - > 1,000 mg/l (OECD Test Guideline 209)

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 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

Further information
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
**SARA 313 Components**
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**
Acute Health Hazard

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

<table>
<thead>
<tr>
<th>Component</th>
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<th>Revision Date</th>
</tr>
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<tbody>
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**New Jersey Right To Know Components**

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**California Prop. 65 Components**
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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**SECTION 16: Other information**

**Further information**
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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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