

**MAGNIFIN® H-5A; MAGNIFIN® H-10A**

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013  
Globally Harmonized System (GHS)

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**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

|                                                                     |                                                                                                                             |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Product Name:                                                       | MAGNIFIN® H-5A; MAGNIFIN® H-10A                                                                                             |
| Chemical Name                                                       | Magnesium Hydroxide (surface modified)                                                                                      |
| Pure substance/mixture                                              | Mixture                                                                                                                     |
| <u>Magnesium hydroxide</u>                                          |                                                                                                                             |
| CAS Number                                                          | 1309-42-8                                                                                                                   |
| Weight-%                                                            | >=97                                                                                                                        |
| <u>Surface modified magnesium hydroxide with substituted silane</u> |                                                                                                                             |
| CAS Number                                                          | Proprietary                                                                                                                 |
| Weight-%                                                            | 1-2                                                                                                                         |
| Recommended Use                                                     | Additive : Flame retardant                                                                                                  |
| Company:                                                            | MARTINSWERK GmbH<br>Kölner Strasse 110<br>50127 Bergheim<br>Germany<br>Tel. : +49-2271-90.22.78<br>Fax. : +49-2271-90.27.17 |
| Emergency Telephone                                                 | CHEMTREC: 1 800 424 9300 or International +1 703 527 3887                                                                   |
| E-mail                                                              | hubermaterials@huber.com                                                                                                    |
| Internet                                                            | www.hubermaterials.com                                                                                                      |

**Section 2: HAZARDS IDENTIFICATION**

|                      |                |
|----------------------|----------------|
| GHS Classification   | Not classified |
| Physical Hazard      | Not classified |
| Health Hazard        | Not classified |
| Environmental Hazard | Not classified |
| Label Elements       |                |
| Symbols/Pictograms   | None           |

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**Signal Word** None

## Precautionary Statements

**Prevention** Avoid release to the environment  
Observe good industrial hygiene practices.  
Avoid breathing dust.  
Use mechanical ventilation (dilution and local exhaust) to control exposure

**Response** IF ON SKIN: Wash with plenty of soap and water  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

**Spills and Leaks** Collect spillage

**Storage** Store in a dry place  
Store away from incompatible materials.

**Disposal** Dispose in accordance with local, state and national regulations

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

| Chemical Name                                                | CAS Number  | China (IECSC) | China classification              | TSCA: United States | REACH registration number | Weight-% |
|--------------------------------------------------------------|-------------|---------------|-----------------------------------|---------------------|---------------------------|----------|
| Magnesium hydroxide                                          | 1309-42-8   | Y             | Not classified                    | A                   | 01-2119488756-18-0000     | >=97     |
| Surface modified magnesium hydroxide with substituted silane | Proprietary | Y             | H226 - Flammable liquid and vapor | A                   | --                        | 1-2      |

## Section 4: FIRST AID MEASURES

**General Advice** In case of doubt or when symptoms persist, seek medical attention.

**Eye Contact** Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

**Skin Contact** Wash skin with soap and water

**Inhalation** IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

**Notes to Physician** Treat symptomatically

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**Personal Protective Equipment** Wear suitable protective clothing  
**For First Aid Responders** IF exposed or concerned: Get medical advice/attention

**Expected acute symptoms and delayed symptoms** None known

### Section 5: FIRE FIGHTING MEASURES

**Flammable Properties** None known

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media:** None known

**Specific Hazards Arising from the Chemical** None known

**Unusual fire & explosion hazards:** None

**Protective measures:** Use protective equipment that is appropriate for surrounding materials.

**Protective Equipment and Precautions for Firefighters** Wear self-contained breathing apparatus and protective suit

### Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

**Personal Precautions** Ensure adequate ventilation. Avoid dust formation. Avoid inhalation of dust. Refer to Section 8 for personal protective equipment.

**Environmental Precautions** Prevent from entering into soil, ditches, sewers and waterways.

**Methods for cleaning up** Sweep or vacuum spilled material Dispose of according to local and regional authority requirements

**Other Information:** None known

### Section 7: HANDLING AND STORAGE

**Handling** In case of exposure to environments exceeding the occupational exposure limit, wear a respirator in compliance with national legislation. Handle in accordance with good industrial hygiene and safety practice.

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

### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Exposure Limits** Provide adequate ventilation as well as local exhaust at critical locations

**Magnesium hydroxide**

|       |                       |
|-------|-----------------------|
| China | Not Established       |
| ACGIH | STEL: Not established |
| NIOSH | TWA: Not established  |
| OSHA  | TWA: Not established  |

**Engineering Measures** Do not handle until all safety precautions have been read and understood  
Ensure adequate ventilation, especially in confined areas  
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)  
Use exhaust ventilation to keep airborne concentrations below exposure limits  
In case of insufficient ventilation, wear suitable respiratory equipment

**Personal Protective Equipment**

|                                 |                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Eye/Face Protection</b>      | Wear safety glasses with side shields (or goggles)                                                               |
| <b>Skin and Body Protection</b> | Wear suitable protective clothing                                                                                |
| <b>Hand Protection</b>          | Protective gloves                                                                                                |
| <b>Respiratory Protection</b>   | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice                                            |

**Environmental Exposure Controls** Dispose of in accordance with local regulations

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

**Appearance:**

|                                                |                                                 |
|------------------------------------------------|-------------------------------------------------|
| <b>Physical State</b>                          | Solid<br>Powder                                 |
| <b>Color</b>                                   | White                                           |
| <b>Odor</b>                                    | Odorless                                        |
| <b>Odor Threshold</b>                          | No information available                        |
| <b>pH:</b>                                     | +/- 10 (10% H <sub>2</sub> O)                   |
| <b>Melting point / Freezing point</b>          | Not applicable                                  |
| <b>Melting point / Freezing point</b>          | Decomposes at > 320 °C                          |
| <b>Initial boiling point and boiling range</b> | Not applicable                                  |
| <b>Flash Point:</b>                            | Not applicable. Product/Substance is inorganic. |
| <b>Evaporation Rate</b>                        | Not applicable                                  |
| <b>Flammability (solid, gas)</b>               | Not applicable                                  |
| <b>Upper flammability limit:</b>               |                                                 |
| <b>Lower flammability limit:</b>               |                                                 |
| <b>Vapor Pressure</b>                          | Not applicable                                  |
| <b>Vapor Density</b>                           | Not applicable                                  |

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|                              |                                               |
|------------------------------|-----------------------------------------------|
| Relative Density             | 2.4 g/cm <sup>3</sup> , 20° C                 |
| Water Solubility             | Insoluble                                     |
| Solubility in other solvents | No data available                             |
| Partition coefficient        | Not applicable Product/Substance is inorganic |
| Autoignition Temperature     | Not applicable                                |
| Decomposition Temperature    | > 320 °C                                      |
| Kinematic viscosity          | Not applicable : Solid                        |
| Dynamic viscosity            | Not applicable : Solid                        |
| Oxidizing Properties         | None                                          |

## 9.2. Other information

No data available

## Section 10: STABILITY AND REACTIVITY

|                                  |                                |
|----------------------------------|--------------------------------|
| Stability                        | Stable under normal conditions |
| Conditions to avoid:             | None                           |
| Incompatible materials           | None known                     |
| Hazardous decomposition products | None under normal processing   |
| Hazardous Reactions              | None under normal processing   |
| Hazardous polymerization:        | None under normal processing   |

## Section 11: TOXICOLOGICAL INFORMATION

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| General Information | Users are advised to consider national Occupational Exposure Limits or other equivalent values. |
|---------------------|-------------------------------------------------------------------------------------------------|

### Product Information

#### Information on Likely Routes of Exposure

|                   |                                                                   |
|-------------------|-------------------------------------------------------------------|
| Inhalation        | Based on available data, the classification criteria are not met  |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

#### 11.1. Information on toxicological effects

##### Magnesium hydroxide

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Oral LD50       | > 2000 mg/kg mg/kg Rat                                      |
| Inhalation LC50 | > 2.1 mg/L 4- hours                                         |
| Chronic Effects | NOAEL (No observed adverse effect level) >1000 mg/kg bw/day |

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**Serious eye damage/eye irritation**

Rabbit : Non-irritant

**Skin Corrosion/Irritation**

Dust may cause mechanical irritation to eyes

**Reproductive Toxicity**

in vitro : Non-irritating to the skin

Repeated exposure may cause skin dryness or cracking

Not classified

NOAEL (No observed adverse effect level) 1000 mg/kg bw/day

**Surface modified magnesium hydroxide with substituted silane**

**Oral LD50**

8 mL/kg Rat

**Specific target organ toxicity - Single exposure**

No information available.

**Specific target organ toxicity - Repeated exposure**

No information available.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

**Magnesium hydroxide**

96-Hour LC50

776 mg/l Fish

72-Hour EC50

> 100 mg/L Algae

48-Hour EC50

170.86 mg/l Daphnia Magna (Water Flea)

**Persistence/Degradability:**

No data available.

**Bioaccumulative Potential**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

**Partition coefficient**

Not applicable Product/Substance is inorganic

**Bioconcentration factor (BCF)**

No data available.

**Mobility in soil**

No data available.

**Results of PBT and vPvB assessment**

This substance does not meet the criteria for classification as PBT or vPvB.

**Other Adverse Effects**

None known

## Section 13: DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused Products**

Dispose of in accordance with local regulations

**Contaminated Packaging:**

Dispose of contents/container to an approved waste disposal plant

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## Section 14: TRANSPORT INFORMATION

### Mode of Transportation (Road, Water, Air, Rail)

|          |               |
|----------|---------------|
| DOT      | Not regulated |
| ADR      | Not regulated |
| RID      | Not regulated |
| IATA     | Not regulated |
| IMDG/IMO | Not regulated |
| ICAO     | Not regulated |

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Global Inventories

| Chemical Name                                                | CAS Number  | EC No       | REACH registration number | Australia (AICS) | Canada (DSL) | China (IECSC) | Japan              | S. Korea (KECL) | Mexico | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|--------------------------------------------------------------|-------------|-------------|---------------------------|------------------|--------------|---------------|--------------------|-----------------|--------|-------------|---------------------|--------|---------------------|
| Magnesium hydroxide                                          | 1309-42-8   | 215-170-3   | 01-211948875-6-18-0000    | Y                | Y            | Y             | (1)-386 ENCS; ISHL | KE-22716        | Y      | Y           | Y                   | Y      | A                   |
| Surface modified magnesium hydroxide with substituted silane | Proprietary | Proprietary | --                        | Y                | Y            | Y             | Y                  | Y               | N      | Y           | Y                   | Y      | A                   |

#### Legend

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

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## Section 16: OTHER INFORMATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prepared by                | Huber Engineered Materials Global Regulatory Affairs<br>email: regulatory.affairs@huber.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Reason for Revision        | GB/T 16483-2008<br>GB/T 24774-2009<br>GB 13690 – 2009<br>GB/T 17519–2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| GHS Classification         | Not classified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Physical Hazard            | Not classified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Health Hazard              | Not classified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Environmental Hazard       | Not classified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Label Elements             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Symbols/Pictograms         | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Signal Word                | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviations and acronyms | International Agency for Research on Cancer (IARC)<br>International Air Transport Association (IATA)<br>International Maritime Dangerous Goods (IMDG)<br>International Uniform Chemical Information Database (IUCLID)<br>Workplace Hazardous Materials Information System (WHMIS) status and classification<br>EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification<br>DOT (Department of Transportation)<br>OSHA (Occupational Safety and Health Administration of the US Department of Labor)<br>TWA - Time-Weighted Average<br>Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)<br>The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)<br>PPE - Personal Protection Equipment<br>NIOSH - National Institute for Occupational Safety and Health<br>TDG (Transport of Dangerous Goods) Canada<br>CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)<br>Reportable Quantity (RQ) (RQ/% in mixture)<br>STEL - Short Term Exposure Limit<br>TLV® - Threshold Limit Value<br>Derived No Effect Level (DNEL)<br>SVHC: Substances of Very High Concern for Authorization:<br>Land transport (ADR/RID)<br>Biochemical oxygen demand (BOD)<br>Chemical oxygen demand (COD)<br>ICAO (air)<br>(IMDG) International Maritime Dangerous Goods<br>Positive Pressure Self-Contained Breathing Apparatus (SCBA)<br>Predicted No Effect Concentration (PNEC)<br>Globally Harmonized System (GHS) |

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**End of Safety Data Sheet**