

Issuing Date: 18-Apr-2014

Revision Date: 24-Jun-2025

Revision Number 6

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

### 1.1. Product identifier

Product form : Substance  
Trade name : Magnesium Hydroxide SNB-10  
: Magnesium Hydroxide UF (ULTRA-FINE)  
  
Chemical name : Magnesium hydroxide  
CAS No : 1309-42-8  
Formula : Mg(OH)<sub>2</sub>  
Other means of identification : Magnesium dihydroxide, Magnesium hydroxide, Magnesium(II) hydroxide, milk of magnesia

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

Use of the substance/mixture : Magnesium hydroxide is employed as a flame retardant in plastics that are used in molded parts for the transportation industry, plastic compounds for electrical applications and the construction industry, polymer processing, PVC compounds and thermoplastic olefin roofing.

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

The Hanson Group, LLC  
3044 Adriatic Court Peachtree Corners, GA 30071 USA  
Tel: 770-495-9554  
Email: sales@thehansongroup.com

### 1.4. Emergency telephone number

Emergency number : CHEMTREC, U.S.: 1-800-424-9300 INTERNATIONAL: +1-703-527-3887 Available 24/7

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification (GHS-US)

This product is not classified as hazardous

### 2.2. Label elements

#### GHS-US labeling

No labeling applicable

### 2.3. Other hazards

Other hazards not contributing to the classification : No additional hazards have been identified.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : Magnesium Hydroxide (SNB-10)  
CAS No : 1309-42-8

| Name                                           | Product identifier | %      | Classification (GHS-US) |
|------------------------------------------------|--------------------|--------|-------------------------|
| Magnesium hydroxide                            | (CAS No) 1309-42-8 | 98     | Not classified          |
| Magnesium stearate                             | (CAS No) 557-04-0  | <= 2.5 | Not classified          |
| Oxides of silicon, iron, aluminum, and calcium | (CAS No) mixture   | 1      | Not classified          |
| Inorganic chloride salts                       | (CAS No) mixture   | 0.3    | Not classified          |
| Inorganic silicates and carbonates             | (CAS No) mixture   | 0.2    | Not classified          |

### 3.2. Mixtures

Not applicable

# Magnesium Hydroxide

## Safety Data Sheet

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                       |                                                                                                                                   |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation   | : If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.                        |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.                 |
| First-aid measures after eye contact  | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.                          |
| First-aid measures after ingestion    | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.                                                        |

#### 4.2. Most important symptoms and effects, both acute and delayed

|                                      |                                                                                                                 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Symptoms/injuries                    | : Not expected to present a significant hazard under anticipated conditions of normal use. Do not breathe dust. |
| Symptoms/injuries after inhalation   | : Inhalation may cause: irritation, cough, shortness of breath.                                                 |
| Symptoms/injuries after skin contact | : Effects of skin contact may include: skin irritation.                                                         |
| Symptoms/injuries after eye contact  | : May cause eye irritation.                                                                                     |

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional medical information found. If you feel unwell, seek medical advice.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

|                                |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| suitable extinguishing media   | : Not combustible. If there is a fire close by, use suitable extinguishing agents. Water fog. Carbon dioxide. Dry powder. Foam. |
| Unsuitable extinguishing media | : None known.                                                                                                                   |

#### 5.2. Special hazards arising from the substance or mixture

|                  |                                                                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire hazard      | : If magnesium hydroxide is heated to the point of decomposition ( $>350\text{ }^{\circ}\text{C}$ ), it forms magnesium oxide and water. If magnesium oxide is heated to the point of volatilization (i.e., $>1700\text{ }^{\circ}\text{C}$ ), magnesium oxide fumes may be generated. |
| Explosion hazard | : Product is not explosive.                                                                                                                                                                                                                                                            |
| Reactivity       | : Reacts with: Incompatible materials.                                                                                                                                                                                                                                                 |

#### 5.3. Advice for firefighters

|                                |                                                                                                                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Firefighting instructions      | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection.                                                                                      |
| Other information              | : No additional risk management measures required.                                                                                                                                   |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |                                                                           |
|------------------|---------------------------------------------------------------------------|
| General measures | : Avoid creating or spreading dust. Dust deposited may be vacuum cleaned. |
|------------------|---------------------------------------------------------------------------|

##### 6.1.1. For non-emergency personnel

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| Protective equipment | : Where excessive dust may result, use approved respiratory protection equipment. |
| Emergency procedures | : Evacuate unnecessary personnel.                                                 |

##### 6.1.2. For emergency responders

|                      |                                                                                                                   |
|----------------------|-------------------------------------------------------------------------------------------------------------------|
| Protective equipment | : Where excessive dust may result, use approved respiratory protection equipment.                                 |
| Emergency procedures | : Ventilate area. If a major spill occurs, all personnel should be immediately evacuated and the area ventilated. |

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

|                         |                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------|
| For containment         | : Do not allow minor leaks or spills to accumulate on walking surfaces. Contain and collect as any solid. |
| Methods for cleaning up | : On land, sweep or shovel into suitable containers. Minimize generation of dust.                         |

# Magnesium Hydroxide

## Safety Data Sheet

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of dust.
- Hygiene measures : Smoking, eating and drinking should be prohibited in areas of storage and use. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Incompatible materials. Keep container closed when not in use.
- Incompatible products : ACID (Strong) - vigorous reaction, heat generated; MALEIC ANHYDRIDE – Alkali and other alkaline earth compounds including magnesium compounds, will cause explosive decomposition of maleic anhydride; PHOSPHORUS – Phosphorus boiled with alkaline hydroxides yields mixed phosphines which may ignite spontaneously with air.

### 7.3. Specific end use(s)

Reference section 1.2

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

For components listed in Section 3.1, all available OELs are displayed

| Magnesium hydroxide (1309-42-8) |                                     |                                                                                                                    |
|---------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| USA ACGIH                       | ACGIH TWA (mg/m <sup>3</sup> )      | 10 mg/m <sup>3</sup> (inhalable)<br>as Particulates (insoluble or poorly soluble) not otherwise specified          |
| USA ACGIH                       | ACGIH TWA (mg/m <sup>3</sup> )      | 3 mg/m <sup>3</sup> (respirable fraction)<br>as Particulates (insoluble or poorly soluble) not otherwise specified |
| USA OSHA                        | OSHA PEL (TWA) (mg/m <sup>3</sup> ) | 15 mg/m <sup>3</sup> (total dust)<br>as inert or nuisance dust not otherwise regulated                             |
| USA OSHA                        | OSHA PEL (TWA) (mg/m <sup>3</sup> ) | 5 mg/m <sup>3</sup> (respirable fraction)<br>as inert or nuisance dust not otherwise regulated                     |

### 8.2. Exposure controls

- Appropriate engineering controls : Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Provide local exhaust ventilation of closed transfer systems to minimize exposures.
- Hand protection : No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin contact. It is a good industrial hygiene practice to minimize skin contact. Wear protective gloves. Dust impervious gloves.
- Eye protection : Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product. Where excessive dust may result, wear goggles.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.; Use air-purifying respirator equipped with particulate filtering cartridges.  
**Up to 10 mg/m<sup>3</sup>:**  
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode  
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.  
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.  
(APF = 50) Any self-contained breathing apparatus with a full facepiece  
(APF = 50) Any supplied-air respirator with a full facepiece  
**Emergency or planned entry into unknown concentrations or IDLH conditions:**  
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode  
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus  
**Escape:**  
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
- Other information : When using, do not eat, drink or smoke.

# Magnesium Hydroxide

## Safety Data Sheet

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|                                             |                             |
|---------------------------------------------|-----------------------------|
| Physical state                              | : Solid                     |
| Appearance                                  | : Powder.                   |
| Color                                       | : white.                    |
| Odor                                        | : Odorless.                 |
| Odor threshold                              | : No data available         |
| pH                                          | : No data available         |
| pH solution                                 | : $\geq 10$                 |
| Relative evaporation rate (butyl acetate=1) | : No data available         |
| Melting point                               | : 350 °C decomposes         |
| Freezing point                              | : No data available         |
| Boiling point                               | : No data available         |
| Flash point                                 | : No data available         |
| Self ignition temperature                   | : Does not self-ignite      |
| Decomposition temperature                   | : >350 °C                   |
| Flammability (solid, gas)                   | : No data available         |
| Vapor pressure                              | : No data available         |
| Relative vapor density at 20 °C             | : No data available         |
| Relative density                            | : No data available         |
| Density                                     | : 2.36 g/cm <sup>3</sup>    |
| Solubility                                  | : Water: 6.9 mg/l           |
| Log Pow                                     | : No data available         |
| Log Kow                                     | : No data available         |
| Viscosity, kinematic                        | : No data available         |
| Viscosity, dynamic                          | : No data available         |
| Explosive properties                        | : Product is not explosive. |
| Oxidizing properties                        | : No oxidizing properties.  |
| Explosive limits                            | : No data available         |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts with: Incompatible materials.

#### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Avoid contact with incompatible materials, excessive heat or cold; moisture.

#### 10.5. Incompatible materials

ACID (Strong) - vigorous reaction, heat generated; MALEIC ANHYDRIDE – Alkali and other alkaline earth compounds including magnesium compounds, will cause explosive decomposition of maleic anhydride; PHOSPHORUS – Phosphorus boiled with alkaline hydroxides yields mixed phosphines which may ignite spontaneously with air.

#### 10.6. Hazardous decomposition products

If magnesium hydroxide is heated to the point of decomposition (> 350 °C), it forms magnesium oxide and water. If magnesium oxide is heated to the point of volatilization (i.e., >1700 °C), magnesium oxide fumes may be generated.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified. (Based on available data, the classification criteria are not met)

# Magnesium Hydroxide

## Safety Data Sheet

| Magnesium hydroxide (1309-42-8)   |                                                                                      |
|-----------------------------------|--------------------------------------------------------------------------------------|
| LD50 oral rat                     | > 2000 mg/kg OECD Guideline 423                                                      |
| LC50 inhalation rat (mg/l)        | > 2.1 ml/m³ OECD Guideline 403. No mortality seen at this level.                     |
| Skin corrosion/irritation         | : Not classified. (Based on available data, the classification criteria are not met) |
| Serious eye damage/irritation     | : Not classified. (Based on available data, the classification criteria are not met) |
| Respiratory or skin sensitization | : Not classified. (Based on available data, the classification criteria are not met) |
| Germ cell mutagenicity            | : Not classified. (Based on available data, the classification criteria are not met) |
| Carcinogenicity                   | : Not classified. (Based on available data, the classification criteria are not met) |

| Magnesium hydroxide (1309-42-8)                     |                                                                                      |
|-----------------------------------------------------|--------------------------------------------------------------------------------------|
| IARC group                                          | Not listed in carcinogenicity class                                                  |
| National Toxicology Program (NTP) Status            | Not listed in carcinogenicity class                                                  |
| Reproductive toxicity                               | : Not classified. (Based on available data, the classification criteria are not met) |
| Specific target organ toxicity (single exposure)    | : Not classified. (Based on available data, the classification criteria are not met) |
| Specific target organ toxicity (repeated exposure)  | : Not classified. (Based on available data, the classification criteria are not met) |
| Aspiration hazard                                   | : Not classified. (Based on available data, the classification criteria are not met) |
| Potential Adverse human health effects and symptoms |                                                                                      |
| Symptoms/injuries after inhalation                  | : Inhalation may cause: irritation, cough, shortness of breath.                      |
| Symptoms/injuries after skin contact                | : Effects of skin contact may include: skin irritation.                              |
| Symptoms/injuries after eye contact                 | : May cause eye irritation.                                                          |
| Likely routes of exposure                           | : dermal;Inhalation.                                                                 |

## SECTION 12: Ecological information

### 12.1. Toxicity

| Magnesium hydroxide (1309-42-8) |                               |
|---------------------------------|-------------------------------|
| LC50 fish 1                     | 1293 mg/l Onchorinchus mykiss |
| EC50 Daphnia 1                  | 284.76 mg/l                   |
| LC50 fish 2                     | 511.31 mg/l P. promelas       |
| ErC50 (algae)                   | > 100 mg/l                    |

### 12.2. Persistence and degradability

| Magnesium hydroxide (1309-42-8) |                                             |
|---------------------------------|---------------------------------------------|
| Persistence and degradability   | Not readily biodegradable.                  |
| Biodegradation                  | Does not degrade although it does dissolve. |

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                |                                                                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste treatment methods        | : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. |
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations.                                                                               |
| Ecology - waste materials      | : Avoid release to the environment.                                                                                                                     |

# Magnesium Hydroxide

## Safety Data Sheet

### SECTION 14: Transport information

In accordance with DOT

Not considered a dangerous good for transport regulations.

#### Additional information

Other information : No supplementary information available.

#### ADR

Transport document description :

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Magnesium Hydroxide (1309-42-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

| Jurisdiction  | List                                                             | Comment                                              |
|---------------|------------------------------------------------------------------|------------------------------------------------------|
| Asia Pacific  | Asia - PAC                                                       |                                                      |
| Australia     | Australian Inventory of Chemical Substances (AICS)               |                                                      |
| China         | Inventory of Existing Chemical Substances (IECSC)                |                                                      |
| Japan         | Existing and New Chemical Substances (ENCS)                      | # 1-386; inorganic compounds                         |
| Korea         | KECI (Chemical Inventory of Korea)                               | KE-22716                                             |
| New Zealand   | Inventory of Chemicals (NZIoC)                                   | HSNO approval                                        |
| Phillipines   | Inventory of Chemicals and Chemical Substances (PICCS)           |                                                      |
| Europe        | EEC International Cosmetics Ingredients Inventory (INCI)         | absorbant/ buffering                                 |
|               | EU REACH pre-registered                                          |                                                      |
|               | EU REACH registered                                              | 01-2119488756-18-0001                                |
|               | EU Inventory of Existing Commercial Chemical Substances (EINECS) | 215-170-3                                            |
|               | German Water Hazard Class Substance List                         | Classification: VwVwS                                |
|               | Switzerland Giftliste 1 (List of Toxic Substances)               | G-8166 Toxic Category 4                              |
| Canada        | Canadian Domesticated Substances List (DSL)                      |                                                      |
| North America | DOT Coast Guard Bulk Hazardous Materials                         |                                                      |
|               | EPA Pesticide Inert Ingredients (PII)                            |                                                      |
|               | FDA Food Substances Generally Recognized as Safe (GRAS)          |                                                      |
|               | FDA Priority-based Assessment of Food Additives (PAFA)           |                                                      |
|               | High Production Volume Chemicals (HPV)                           |                                                      |
|               | OSHA Permissible Exposure Limits                                 | 8 hour TWA: total particulates 15 mg/ m <sup>3</sup> |
|               | Toxic Substances Control Act (TSCA) Inventory                    |                                                      |
|               | Toxic Inventory Update Rule (IUR)                                |                                                      |
|               | TSCA Section 8A-Preliminary Assessment Information Rule (PAIR)   |                                                      |
|               | High Production Volume Chemicals: ICCA                           |                                                      |
|               | High Production Volume Chemicals: OECD                           |                                                      |

#### 15.3. US State regulations

##### Magnesium Hydroxide (1309-42-8)

|                            |            |
|----------------------------|------------|
| State or local regulations | Not listed |
|----------------------------|------------|

# Magnesium Hydroxide

## Safety Data Sheet

### SECTION 16: Other information

Indication of changes : Original document

#### Data sources

: ACGIH 2010  
ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla> European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>  
European Chemicals Agency (ECHA) Registered Substances list. Accessed at [http://apps.echa.europa.eu/registered/data/dossiers/DISS-9ea79197-1fe4-5688-e044-00144f67d031/AGGR-0e1e1da7-ccae-4cb9-a7d9-45a4191708ed\\_DISS-9ea79197-1fe4-5688-e044-00144f67d031.html#GEN\\_RESULTS\\_HD](http://apps.echa.europa.eu/registered/data/dossiers/DISS-9ea79197-1fe4-5688-e044-00144f67d031/AGGR-0e1e1da7-ccae-4cb9-a7d9-45a4191708ed_DISS-9ea79197-1fe4-5688-e044-00144f67d031.html#GEN_RESULTS_HD)  
Kristen Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.  
Merck Index, 11<sup>th</sup> edition  
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.  
NIOSH Occupational Health Guide for chemical Substances - Vol. II, September, 1978.  
REGULATION (EC) No 1272/2008 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.  
US National Library of Medicine National Institutes of Health Haz-Map. Accessed at <http://hazmap.nlm.nih.gov>.

#### Abbreviations and acronyms

: ACGIH (American Conference of Government Industrial Hygienists).  
ATE: Acute Toxicity Estimate.  
CAS (Chemical Abstracts Service) number.  
EC50: Environmental Concentration associated with a response by 50% of the test population.  
GHS: Globally Harmonized System (of Classification and Labeling) of Chemicals .  
LD50: Lethal Dose for 50% of the test population.  
OSHA: Occupational Safety & Health Administration.  
TSCA: Toxic Substances Control Act.  
TWA: Time Weighted Average.

#### Other information

: None.

#### NFPA health hazard

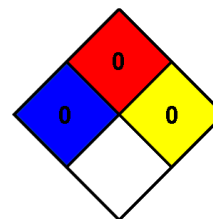
: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

#### NFPA fire hazard

: 0 - Materials that will not burn.

#### NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*