

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Magnesium Hydroxide Powder

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

1.1. Product identifier

: Substance

Chemical name : Magnesium hydroxide
 CAS No : 1309-42-8
 Formula : Mg(OH)₂
 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 : For use in industrial applications such as industrial & municipal wastewater treatment & silica removal.

1.4. Emergency telephone number

Emergency number : (800) 255-3924 – Domestic USA, Canada, Puerto Rico and USVI +(813) 248-0585 – International

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

None

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Magnesium Hydroxide : Substance type : Mono-constituent

Name	Product Identifier	%	Classification (GHS-US)
Magnesium hydroxide	CAS# 1309-42-8	98.5	Not Classified
Oxides of silicon, iron, aluminum and calcium	CAS# Mixture	1	Not Classified
Inorganic chloride salts	CAS# Mixture	0.3	Not Classified
Inorganic silicates and carbonates	CAS# Mixture	0.2	Not Classified

3.2. Mixtures

Not applicable

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 be a significant hazard under anticipated conditions of normal use. Do not breathe dust.
Symptoms/injuries after inhalation	: Inhalation may cause: irritation, cough, short breathing.
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 heated to point of decomposition (>360°C), magnesium oxide & water are formed. If heated to point of volatilization (i.e. >1700°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.
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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.

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.
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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 ³
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 & other alkaline earth compounds including magnesium compounds, will cause explosive decomposition of maleic anhydride; Phosphorus - Phosphorus boiled w/ alkaline hydroxides yields mixed phosphines which may ignite spontaneously with air.

10.6. Hazardous decomposition products

If heated to point of decomposition (>350 °C), it forms magnesium oxide & water. If heated to point of volatilization (ie >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 (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

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.
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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.

SECTION 14: Transport information

In accordance with DOT
Not considered a dangerous good for transport regulations

Additional information

Other information	: No supplementary information available.
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ADR

Transport document description	:
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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

Magnesium hydroxide (1309-42-8)		
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
Phillippines	Inventory of Chemicals and Chemical Substances (PICCS)	
Europe	EEC International Cosmetics Ingredients Inventory (INCI)	absorbant/ buffering
	EU REACH pre-registered	
	EU Inventory of Existing Commercial Chemical Substances (EINECS)	215-171-9
	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 American	DOT Coast Guard Bulk Hazardous Materials	
	EPA Pesticide Inert Ingredients (PII)	
	FDA Food Substances Generally Regcognized 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/ m3
	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

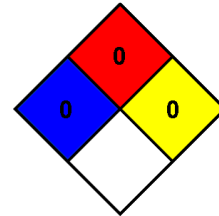
SECTION 16: Other information

Indication of changes : Original Document.

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.