



Safety Data Sheet

FIRE RETARDANT ADDITIVES

Vertex® 60

This material safety datasheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2014 GHS (Globally Harmonized System)

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Revision Number 1.4.1

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

1.1. Product identifier

Product Name: Vertex® 60
Chemical Name Magnesium Hydroxide
Pure substance/mixture Substance

Magnesium Hydroxide

CAS Number 1309-42-8
Weight-% 100

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

Recommended Use Flame retardant
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Company: J.M. Huber Corporation
3100 Cumberland Boulevard, Suite 600
Atlanta, GA 30339 USA
Tel: +1 678 247-7300

Internet www.hubermaterials.com

E-mail hubermaterials@huber.com

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

SECTION 2: Hazards identification

Brazil Ministry of Transport

This product is not part of the Hazardous Products Classification established by the Brazilian Federal Department of Transportation's Administrative Ruling 204

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from 5/20/1997.

2.1. Classification of the substance or mixture**Physical Hazards** Not classified**Health Hazards** Not classified**Environmental Hazard** Not classified**2.2. Label elements****Symbols/Pictograms** None.**Signal Word** None.**Hazard Statements** None**Precautionary Statements**

Prevention Employ good industrial hygiene practice
Do not handle until all safety precautions have been read and understood
Do not breathe dust
Wear protective gloves/protective clothing/eye protection/face protection

Response IF exposed or concerned: Get medical advice/attention
Wash with plenty of soap and water

Storage Store away from incompatible materials
Keep in a dry place

Disposal Dispose of contents/containers in accordance with local regulations

SECTION 3: Composition/information on ingredients

Pure substance/mixture Substance

Chemical Name	CAS Number	TSCA: United States	EU REACH registration number	GHS Classification	Weight-%
Magnesium Hydroxide	1309-42-8	A	01-2119488756-18-00 40	Not classified.	100

Additional information TSCA A: Component is listed on Inventory as Active

SECTION 4: First aid measures

4.1. Description of first aid measures

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General Advice	Do not handle until all safety precautions have been read and understood. Employ good industrial hygiene practice. Wear suitable protective clothing, gloves and eye/face protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. When in doubt or if symptoms are observed, get medical advice.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact	Wash with plenty of soap and water.
Ingestion	Rinse mouth thoroughly with water.
Inhalation	Do not breathe dust. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Aspiration hazard	Not an expected route of exposure.
4.2. Most important symptoms and effects, both acute and delayed	May cause skin, eye, and respiratory tract irritation.
4.3. Indication of any immediate medical attention and special treatment needed	Treatment should be symptomatic and supportive. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media None known.

5.2. Special hazards arising from the substance or mixture Avoid dust formation.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures Water mist may be used to cool closed containers. Combustible dust may form combustible (explosive) dust-air mixtures.

SECTION 6: Accidental release measures

- | | |
|---|--|
| 6.1. Personal precautions, protective equipment and emergency procedures | <p>Keep unauthorized personnel away
Ensure adequate ventilation
Avoid dust formation
Use personal protection recommended in Section 8</p> <p>For non-emergency personnel Keep unauthorized personnel away.</p> <p>For emergency responders Keep unauthorized personnel away
Use personal protection recommended in Section 8</p> |
| 6.2. Environmental precautions | Avoid runoff to waterways and sewers. |
| 6.3. Methods and material for containment and cleaning up | <p>Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust Small Spill: Vacuum or sweep material and place in a disposal container The use of water wash down is not recommended unless the spilled material is already wet</p> |
| 6.4. Reference to other sections | Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information. |

SECTION 7: Handling and storage

- | | |
|--|--|
| 7.1. Precautions for safe handling | <p>Avoid exposure - obtain special instructions before use
Do not handle until all safety precautions have been read and understood.
Minimize dust generation and accumulation
Do not breathe dust
Ensure adequate ventilation
Wear appropriate personal protective clothing to prevent skin contact
Handle in accordance with good industrial hygiene and safety practice</p> |
| 7.2. Conditions for safe storage, including any incompatibilities | Keep container tightly closed and dry. Store away from incompatible materials. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Magnesium Hydroxide - 1309-42-8

OSHA	TWA: 15 mg/m ³ total dust 5 mg/m ³ respirable
NIOSH	TWA: 15 mg/m ³ (total dust)
ACGIH	TLV-TWA: 8-hr : 10 mg/m ³ (total dust) 3 mg/m ³ (respirable fraction)
Mexico	TWA/OEL (VLE-PPT): Not established

PNEC (Predicted No Effect) No information available

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Concentration)

Biological Limit Values No information available

8.2. Exposure controls

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

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Wear suitable protective clothing.

Hand Protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards None known. Wear suitable protective clothing.

Hygiene Measures No information available.

Environmental Exposure Controls Dispose of in accordance with local regulations.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical State Solid.

Color White

Odor Odorless

Odor Threshold No information available

pH: 8.4-10.2 (5% water suspension)

Melting point / Freezing point Not available

Initial boiling point Not available

Flash Point Non-combustible

Evaporation Rate Not applicable

Vapor Density Not applicable

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Relative Density	No data available
Density	2.4 g/cm ³ , 20°C
Water Solubility	11.7 mg/l , 25° C
Partition coefficient	No data available
Autoignition Temperature	Not applicable
Decomposition Temperature	626 °F (330° C)
Viscosity	Not applicable
Explosive Properties	Not applicable
Oxidizing Properties	Not available
VOC Content (%)	Not applicable
Solubility in other solvents	No information available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity	None.
10.2. Chemical stability	Stable under normal conditions.
10.3. Possibility of hazardous reactions	No specific hazard known.
10.4. Conditions to avoid	Incompatible materials. Dust formation.
10.6. Hazardous decomposition products	None known.

SECTION 11: Toxicological information

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

Information on Likely Routes of Exposure

Inhalation	Avoid inhalation of the product. May cause irritation of respiratory tract.
Skin	Prolonged or repeated contact may dry skin and cause irritation.
Eyes	Dust contact with the eyes can lead to mechanical irritation.

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Ingestion	Ingestion is not a likely route of exposure.
Aspiration hazard	Not an expected route of exposure.
Symptoms related to the physical, chemical and toxicological characteristics	Signs and symptoms may include coughing, gasping, choking and difficulty breathing. Contact with eyes may cause irritation.

11.1. Information on toxicological effects

Magnesium Hydroxide - 1309-42-8

Oral LD50 8500 mg/kg Rat

Acute Toxicity	Based on available data, the classification criteria are not met
Chronic Toxicity	Based on available data, the classification criteria are not met.
Chronic Effects	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory Sensitization	Based on available data, the classification criteria are not met.
Skin Sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive Effects	Based on available data, the classification criteria are not met.
Reproductive Toxicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Not listed as a carcinogen.
Specific target organ toxicity - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure	No information available.
Mixture versus substance information	No information available.

SECTION 12: Ecological information

12.1. Ecotoxicity Not considered to be harmful to aquatic life.

Magnesium Hydroxide - 1309-42-8

WGK Classification (AwSV) 5209 WGK: nwg

12.2. Persistence and degradability	Not biodegradable.
12.3. Bioaccumulative potential	This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
Partition coefficient	No data available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This substance does not meet the criteria for classification as PBT or vPvB.
12.6. Other adverse effects	None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated Packaging	Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Waste codes	Waste codes should be assigned by the user based on the application for which the product was used
Disposal Methods	Dispose of waste product or used containers according to local regulations

Magnesium Hydroxide - 1309-42-8
European Waste Catalog 060299

SECTION 14: Transport information

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

ADR	Not regulated
RID	Not regulated
ADN	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

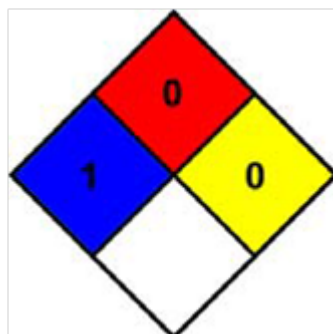
Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Magnesium Hydroxide	1309-42-8	215-170-3	01-211948 8756-18-0 040	Y	Y	Y	(1)-386 (ENCS) (ISHL)	KE-22716	Y	Y	Y	Y	A

Legend

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

Information on risks and safety as written on the label

- Health - Blue
- Flammability - Red
- Physical Hazard - Yellow
- Special - White



4- Extreme

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3- High
2- Moderate
1- Low
0- Minimum

SECTION 16: Other information

Prepared by Huber Engineered Materials (HEM) Global Regulatory Affairs
regulatory.affairs@huber.com

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Training Advice Do not handle until all safety precautions have been read and understood.

Abbreviations and acronyms

- IARC (International Agency for Research on Cancer)
- IATA (International Air Transport Association)
- IMDG (International Maritime Dangerous Goods)
- IUCLID (International Uniform Chemical Information Database)
- WHMIS (Workplace Hazardous Materials Information System)
- DOT (Department of Transportation)
- OSHA (Occupational Safety and Health Administration of the US Department of Labor)
- TWA (Time-Weighted Average)
- CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))
- PPE (Personal Protection Equipment)
- NIOSH (National Institute for Occupational Safety and Health)
- TDG (Transport of Dangerous Goods) Canada
- CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
- RQ (Reportable Quantity) (RQ/% in mixture)
- STEL (Short Term Exposure Limit)
- TLV® (Threshold Limit Value)
- DNEL (Derived No Effect Level)
- SVHC (Substances of Very High Concern)
- BOD (Biochemical oxygen demand)
- COD (Chemical oxygen demand)
- ICAO (International Civil Aviation Organization)
- IMDG (International Maritime Dangerous Goods)
- SCBA (Self-Contained Breathing Apparatus) Positive Pressure
- PNEC (Predicted No Effect Concentration)
- GHS (Globally Harmonized System)
- TSCA (Toxic Substances Control Act)

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet