FIRE RETARDANT ADDITIVES

Safety Data Sheet

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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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

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	01-2119488756-18-0040	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

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

Keep unauthorized personnel away
Ensure adequate ventilation
Avoid dust formation
Use personal protection recommended in Section 8

For non-emergency personnel

Keep unauthorized personnel away.

For emergency responders

Keep unauthorized personnel away
Use personal protection recommended in Section 8

6.2. Environmental precautions

Avoid runoff to waterways and sewers.

6.3. Methods and material for containment and cleaning up

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

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

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

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/m³ total dust 5 mg/m³ respirable
NIOSH	TWA: 15 mg/m³ (total dust)
ACGIH	TLV-TWA: 8-hr : 10 mg/m³ (total dust) 3 mg/m³ (respirable fraction)
Mexico	TWA/OEL (VLE-PPT): Not established

PNEC (Predicted No Effect

No information available

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

Relative Density	No data available
Density	2.4 g/cm3, 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.

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

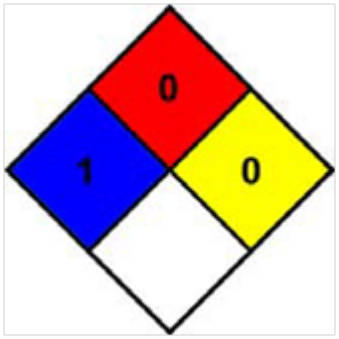
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global Inventories

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIC)	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	01-2119488756-18-0040	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

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

SECTION 16: Other information

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Reason for Version

Brasil: ABNT NRB 14725-4: 2014.

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