



Safety Data Sheet

FIRE RETARDANT ADDITIVES

Vertex® 100 ST1

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03
Canadian Workplace Hazardous Material Information System (WHMIS) 2015
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015
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® 100 ST1

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

Recommended Use Smoke suppressant 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

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

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Signal Word None

Hazard Statements None

Precautionary Statements

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

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water

Storage Store away from incompatible materials
Keep in a dry place

Disposal Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified None known.
(HNOC)

SECTION 3: Composition/information on ingredients

| Chemical Name | CAS Number | TSCA: United States | Canada (DSL) | Mexico | EU REACH registration number | OSHA Regulatory Status | WHMIS | Weight-% |
|---------------------|------------|---------------------|--------------|--------|------------------------------|------------------------|---------------------|----------|
| Magnesium Hydroxide | 1309-42-8 | A | Y | Y | 01-211948875 6-18-0040 | Not regulated | -- | - |
| Surface treatment | 57-11-4 | A | Y | Y | Exempt | Not classified | Combustible Dust | - |

Legend

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

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.

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| | |
|--|--|
| 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 irritation to mucous membranes and respiratory tract. Contact with dust can cause mechanical irritation or drying of the skin. |
| 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). Dry chemical. Foam. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media

None known.

5.2. Special hazards arising from the substance or mixture

None known.

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. No special fire protection measures are necessary. Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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

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

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

Surface treatment

| | |
|--------|----------------------|
| Canada | 10 mg/m ³ |
|--------|----------------------|

PNEC (Predicted No Effect Concentration) No information available

DNEL (Derived No Effect Level) No information available

Biological Limit Values No information available

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8.2. Exposure controls**Engineering Measures**

Provide a good standard of controlled ventilation (5 to 10 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

In case of inadequate ventilation wear respiratory protection.

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****Appearance:**

| | |
|-------------------------------------|--------------------------------|
| Physical State | Solid Powder |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | 8.4-10.2 (5% water suspension) |
| Flash Point | Non-combustible |
| Evaporation Rate | Not determined. |
| Flammability (solid, gas) | Not applicable |
| Upper flammability limit: | |
| Lower flammability limit: | |
| Relative Density | No data available |
| Water Solubility | Insoluble |
| Solubility in other solvents | No data available |
| Partition coefficient | No data available |
| Autoignition Temperature | Not applicable |
| Decomposition Temperature | Not applicable |

SECTION 10: Stability and reactivity

10.1. Reactivity Stable under normal conditions

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 |
| 10.5. Incompatible materials | None known |
| 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 |
| 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. |

11.1. Information on toxicological effects

Magnesium Hydroxide

| | |
|---------------------------------|------------------|
| Oral LD50 | 8500 mg/kg Rat |
| <u>Surface treatment</u> | |
| Oral LD50 | 4600 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. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met |
| Skin Sensitization | Based on available data, the classification criteria are not met |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Target Organ Effects | Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

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

Magnesium Hydroxide

WGK Classification (AwSV) 5209 WGK: nwg

Surface treatment

WGK Classification (AwSV) 661: WGK: nwg

12.2. Persistence and degradability No data available.

12.3. Bioaccumulative potential No data available.

Partition coefficient No data available

Bioconcentration factor (BCF) No data available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects No information available

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Disposal Methods Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

Magnesium Hydroxide

European Waste Catalog 060299

WGK Classification (AwSV) 5209 WGK: nwg

Surface treatment

WGK Classification (AwSV) 661: WGK: nwg

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SECTION 14: Transport information

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

| | |
|----------|---------------|
| DOT | Not regulated |
| ADR | 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

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 |
| Surface treatment | 57-11-4 | - | Exempt | Y | Y | Y | (2)-609 (2)-608 (ENCS)(ISHL) | KE-26333 | Y | Y | Y | Y | A |

Legend

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US Federal Regulations

EPA

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CWA (Clean Water Act)

Not regulated

CAA (Clean Air Act)

Not regulated

U.S. State Right-to-Know Regulations

| Chemical Name | CAS Number | California Proposition 65 | Massachusetts | Minnesota | New Jersey | Pennsylvania |
|---------------------|------------|---------------------------|---------------|-----------|------------|--------------|
| Magnesium Hydroxide | 1309-42-8 | No | No | No | No | No |
| Surface treatment | 57-11-4 | No | No | No | No | No |

Legend Y: Listed ; N: Not Listed

CANADA

WHMIS

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

Surface treatment

Combustible Dust

SECTION 16: Other information

| | |
|----------------------------|---|
| Prepared by | Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com |
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| Revision Number | 1.3 |
| Reason for Version | OSHA (Occupational Safety and Health Administration of the US Department of Labor). |
| 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) IUCID (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) |

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ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
GHS (Globally Harmonized System)
SARA (Superfund Amendments and Reauthorization Act of 1986)
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