



Safety Data Sheet

ADVANCED MATERIALS

SB-332

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)

Issue Date 21/Feb/2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: SB-332
Pure substance/mixture: Substance

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

2.1. Classification of the substance or mixture

OSHA Regulatory Status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Physical Hazards: Not classified

Health Hazards: Not classified

Environmental Hazard: Not classified

2.2. Label elements

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Symbols/Pictograms None

Signal Word None

Hazard Statements 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 ON SKIN: Wash with plenty of soap and water

Storage Store away from incompatible materials

Disposal Dispose of contents/containers in accordance with local regulations

Additional Information: None.

Hazards not otherwise classified (HNOC) Not classified.

SECTION 3: Composition/information on ingredients

Pure substance/mixture Substance

| Chemical Name | CAS Number | TSCA: United States | Canada (DSL) | Mexico | EU REACH registration number | OSHA Regulatory Status | WHMIS | Weight-% |
|--------------------|------------|---------------------|--------------|--------|------------------------------|------------------------|-------|----------|
| Aluminum Hydroxide | 21645-51-2 | A | Y | Y | 01-211952924-6-39 | Not classified | -- | 100 |

Legend

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice When in doubt or if symptoms are observed, get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Eye Contact In case of eye contact, remove contact lens and rinse immediately with plenty of

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water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash with plenty of soap and water.

Ingestion

Rinse mouth thoroughly with water.

Inhalation

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

Signs and symptoms may include coughing, gasping, choking and difficulty breathing.

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

Treatment should be symptomatic and supportive.

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

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

In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and

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

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emergency procedures

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 Minimize dust generation and accumulation. Provide local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities Store away from incompatible materials. Keep container tightly closed and dry.

7.3. Specific end use(s) Flame retardant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Aluminum Hydroxide

OSHA

TWA: 15 mg/m³ Total Dust

ACGIH

5 mg/m³ Respirable Dust

Canada - Nova Scotia - OEL - TWA

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)1 mg/m³ TWA (respirable fraction)

PNEC (Predicted No Effect Concentration) No information available

DNEL (Derived No Effect Level) Consumer - oral, long-term - local and systemic 4.74 mg/kg bw/day
Worker - inhalative, long-term - local and systemic 10.74 mg/m³

Biological Limit Values None

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8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

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.

Hygiene Measures

Follow general hygiene considerations recognized as common good workplace practices. The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.

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 |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | 8.4 - 10.2 5% Water suspension |
| Melting point / Freezing point | ca 300 °C / 572 °F (101.3 kPa) |
| Initial boiling point | 5396 °F (2980 °C) 101.3 kPa |
| Freezing Point | Not applicable |
| Flash Point | Not applicable |
| Evaporation Rate | Not applicable. |
| Flammability (solid, gas) | Not applicable |
| Flammability (solid, gas) | Not applicable |
| Upper flammability limit: | -- |
| Lower flammability limit: | -- |
| Vapor Pressure | Not applicable |
| Vapor Density | Not applicable |
| Vapor Density | Not applicable |
| Density | No data available |
| Relative Density | 2.4 g/cm ³ , 20° C |
| Water Solubility | Insoluble |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition Temperature | Not applicable |
| Decomposition Temperature | 392 °F (200 °C) |

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| | |
|----------------------|--------------------------|
| Viscosity | Not applicable. |
| Kinematic viscosity | Not applicable |
| Explosive Properties | None |
| Oxidizing Properties | Not applicable |
| Particle Size | No information available |
| VOC Content (%) | Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

Not applicable

SECTION 10: Stability and reactivity

| | |
|--|--------------------------------|
| 10.1. Reactivity | None |
| 10.2. Chemical stability | Stable under normal conditions |
| 10.3. Possibility of hazardous reactions | None under normal processing |
| 10.4. Conditions to avoid | Incompatible materials |
| 10.5. Incompatible materials | Strong acids |
| 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.

11.1. Information on toxicological effects

Aluminum Hydroxide

| | |
|-----------------|---|
| Oral LD50 | > 2000 mg/kg Rat |
| Inhalation LC50 | Rat > 2.3 mg/l (Al ₂ O ₃) Aerosol Maximum attainable concentration |
| IARC | Not Listed |

Acute Toxicity Based on available data, the classification criteria are not met

Chronic Toxicity Based on available data, the classification criteria are not met.

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| | |
|---|---|
| Chronic Effects | Based on available data, the classification criteria are not met. |
| Respiratory Sensitization | No information available |
| Serious eye damage/eye irritation | Non-irritant Rabbit |
| Skin Corrosion/Irritation | Non-irritant Rabbit |
| Skin Sensitization | Based on available data, the classification criteria are not met Not a skin sensitizer Guinea pig |
| Mutagenicity | in vitro Not genotoxic in bacteria and mammalian cell systems. in vivo Mutagenicity (micronucleus test) Rat Negative (weight of evidence approach) |
| Germ cell mutagenicity | No information available. |
| 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 | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity - Single exposure | Not classified. |
| Specific target organ toxicity - Repeated exposure | No information available. |
| Mixture versus substance information | No information available |
| Information on Likely Routes of Exposure | |
| Inhalation | Do not breathe dust Inhalation of dust may cause irritation of the respiratory system |
| Ingestion | Ingestion is not a likely route of exposure |
| Skin | Contact with dust can cause mechanical irritation or drying of the skin |
| Eyes | Dust contact with the eyes can lead to mechanical irritation |
| Aspiration hazard | Not an expected route of exposure. |

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

11.2.2. Other information Not applicable

SECTION 12: Ecological information

12.1. Toxicity Not considered to be harmful to aquatic life

Aluminum Hydroxide

WGK Classification (AwSV) 5220 WGK: nwg

12.2. Persistence and degradability The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential Not likely to bioaccumulate.

Partition coefficient No information available

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

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 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

Aluminum Hydroxide

European Waste Catalog 060299

WGK Classification (AwSV) 5220 WGK: nwg

SECTION 14: Transport information

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

| | |
|-------------|---------------|
| TDG -Canada | Not regulated |
| DOT | Not regulated |
| ADR | Not regulated |
| RID | Not regulated |
| ADN | Not regulated |
| IATA | Not regulated |
| IMDG/IMO | Not regulated |
| ICAO | Not regulated |

14.1. UN number or ID 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. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

Global Inventories

Pure substance/mixture

Substance

| Chemical Name | CAS Number | EC No | EU REACH registration number | Australia (AIC) | Canada (DSL) | China (IECSC) | Japan | S. Korea (KECL) | Mexico | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|--------------------|------------|-----------|------------------------------|-----------------|--------------|---------------|---------------------------|-----------------|--------|-------------|---------------------|--------|---------------------|
| Aluminum Hydroxide | 21645-51-2 | 244-492-7 | 01-211952 9246-39 | Y | Y | Y | (1)-17 (ENCS); ISHL | KE-00980 | Y | Y | Y | Y | A |

Legend

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

US Federal Regulations

EPA

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SARA 304

Not regulated

Aluminum Hydroxide

CERCLA

Not listed

SARA 302

Not listed

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 |
|--------------------|------------|---------------------------|---------------|-----------|------------|--------------|
| Aluminum Hydroxide | 21645-51-2 | N | N | N | N | N |

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

SECTION 16: Other information

| | |
|-----------------------------------|---|
| Prepared by | Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com |
| Issue Date | 21/Feb/2023 |
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| Revision Number | 1.3.1 |
| 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 | <p>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)</p> |

HUBER

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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)
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