HUBER ENGINEERED MATERIALS

MATERIAL SAFETY DATA SHEET

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03

Issue Date: 01/Jun/2015
Print Date: 24/May/2016
Revision Number: 1.2

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

1.1. Product identifier

Product Name: SB-222

Chemical Name Aluminum Hydroxide

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

Physical Hazards Not classified.

Health Hazards Not classified

Environmental Hazard Not classified

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

2.2. Label elements

Symbols/Pictogram 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 ON SKIN: Wash with plenty of soap and water
Storage	Store away from incompatible materials
Disposal	Dispose in accordance with local and national regulations

Hazards not otherwise classified (HNOC) Not classified.

SECTION 3: Composition/information on ingredients

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	REACH registration number	OSHA Regulatory Status	% by Wt
Aluminum Hydroxide	21645-51-2	Y	Y	Y	01-2119529246-39	This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)	

Legend
Y: Yes N: No Exempt

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 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 emergency procedures Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. 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 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 in a dry and well-ventilated place.

7.3. Specific end use(s) Flame retardant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Aluminum Hydroxide - 21645-51-2

OSHA - TWA	10 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
ACGIH - TLV-TWA 8-hour	1 mg/m³ (respirable)
ACGIH	8-H TLV-TWA 1 mg/m³ respirable fraction
Canada - Nova Scotia - OEL - TWA	1 mg/m³ TWA (respirable fraction)

Predicted No Effect Concentration (PNEC) No information available

Biological Limit Values: None

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

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

Physical State Solid, Powder

Color White

Odor Odorless

Odor Threshold No information available

pH: 8.4 - 10.2 5% Water suspension

Melting point / Freezing point 572 °F (300 °C) 101,3 kPa.

Initial Boiling Point	5396 °F (2980 °C) 101,3 kPa
Boiling Point	No information available
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	2.4 g/cm3, 20° C
Water Solubility	0,00009 g/l at 20 °C
Partition coefficient n-octanol/water (log Kow)	Not applicable
Autoignition Temperature	Not applicable
Decomposition temperature °C	200° C
Viscosity	Not applicable
Explosive Properties	Not applicable
Oxidizing Properties	Not applicable

9.2. Other information

VOC Content (%)	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.

Information on Likely Routes of Exposure

Inhalation	Avoid inhalation of the product. Inhalation of dust may cause irritation of the respiratory system.
Skin	Avoid prolonged or repeated contact with skin.
Eyes	Avoid contact with eyes. Dust may cause mechanical irritation to eyes.
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.
Symptoms	Low hazard for usual industrial or commercial handling

11.1. Information on toxicological effects

Aluminum Hydroxide - 21645-51-2

Oral LD50	15900 mg/kg Rat
Inhalation LC50	7.6 mg/l 1 hour

Acute Toxicity	Not classified.
Chronic Toxicity	Not classified.
Chronic Effects	Not classified.
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 Corrosion/Irritation	Prolonged or repeated contact may dry skin and cause irritation.
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 toxicity:	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Specific target organ toxicity - Single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - Repeated exposure	Based on available data, the classification criteria are not met.
Mixture versus substance information	No information available.

SECTION 12: Ecological information

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

Aluminum Hydroxide - 21645-51-2
Aquatic toxicity

Crustacea
Daphnia Magna (Water Flea) 0.72 mg/l 48 hour pH 7.5
Fish EC50
Pimephales promelas (fathead minnow) 1.16 mg/l pH 7.8
Pimephales promelas (fathead minnow) >218644 1 µg/L 96 hour

Chronic
Fish LC50: Pimephales promelas (fathead minnow) 145190 1.16 7 day

Other
LC50 Lymnaea stagnalis >2099 µg/L 30 day
EC50 Aeromonas sp 1923 9 µg/L 17 day

12.2. Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) Not applicable.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil None.

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 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 in accordance with local and national regulations.

Aluminum Hydroxide - 21645-51-2
European Waste Catalog 060299

SECTION 14: Transport information

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

DOT Not regulated

ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG	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	REACH registration number	Australia (AICS)	Canada (DSL)	China (IECSC)	Japan (ENCS)	South Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Legend
Y: Yes N: No Exempt

US Federal Regulations

EPA

CERCLA/SARA RQ
Not listed

CAA (Clean Air Act)
Not listed

CWA (Clean Water Act)
Not listed

U.S. State Right-to-Know Regulations

Aluminum Hydroxide - 21645-51-2

California Proposition 65	--
Massachusetts	--
Minnesota	--
New Jersey Worker and	--

Community Right-to-Know Act:
Pennsylvania --

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
This product contains no chemicals at levels known to the State of California to cause cancer or reproductive hazards.

CANADA

WHMIS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Aluminum Hydroxide - 21645-51-2
Uncontrolled product according to WHMIS classification criteria

SECTION 16: Other information

Prepared by	Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com
Reason for Version	OSHA (Occupational Safety and Health Administration of the US Department of Labor). May 25, 2012.
Training Advice	Do not handle until all safety precautions have been read and understood.
Abbreviations and acronyms	ACRONYMS: INTERNATIONAL: ADR: International Carriage of Dangerous Goods by Road. BOD: Biochemical Oxygen Demand. CLP: Classification, Labeling and Packaging. COD: Chemical Oxygen Demand. D.O.T.: U.S. Department of Transportation. ICAO International Civil Aviation Organization. IATA: International Air Transport Association. IARC: International Agency for Research on Cancer. IMO: International Maritime Organization. IMDG: International Maritime Dangerous Goods. INCI: International Nomenclature of Cosmetic Ingredients. OES: Occupational Exposure Standard. OR: EU REACH Only Representative. PPE: Personal protection equipment. RID: International Carriage by Rail. SCBA: self contained breathing apparatus. TLV-STEL: Threshold Limit Values - Short Term Exposure Limits. TWA: Time Weighted Averages. North America: CERCLA RQ: US EPA Comprehensive Environmental, Response, and Liability Act Reportable Quantity. CERCLA: US EPA Comprehensive Environmental Response, Compensation, and Liability Act of 1980. CONEG: Conference of North Eastern Governors. NIOSH/MSHA - National Institute for Occupational Safety and Health/Mine Safety and Health Administration. SARA: Superfund Amendments and Reauthorization Act (US EPA). TDG: Canada Transport of Dangerous Goods. WHMIS: Canada's Workplace Hazardous Materials Information System.

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