



# Safety Data Sheet

**ADVANCED MATERIALS**

Malaysia CLASS Regulation, 2013  
GHS (Globally Harmonized System)

Issue Date 15/Feb/2023

Print Date 01/Mar/2023

Revision Number 1.3.1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Name:** SB-432  
**Pure substance/mixture** Substance

### Aluminum Hydroxide

**CAS Number** 21645-51-2  
**Weight-%** --

### 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](http://www.hubermaterials.com)

**E-mail** [hubermaterials@huber.com](mailto:hubermaterials@huber.com)

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

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

**GHS Classification** This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

### Hazards identification

**Physical Hazard** Not classified  
**Health Hazards** Not classified  
**Environmental Hazard** Not classified

**2.2. Label elements**

Symbols/Pictograms None

Signal Word 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.

**2.3. Other hazards** No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Pure substance/mixture Substance

Chemical Name	CAS Number	TSCA: United States	EU REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	A	01-2119529246-39	--

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

**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.

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- Notes to Physician** Treat symptomatically.
- 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.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media**

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**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.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protection recommended in Section 8. 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.

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**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.

## 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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Occupational exposure limits

##### Aluminum Hydroxide

NIOSH  
ACGIH  
OSHA

TWA: 5 mg/m<sup>3</sup> (respirable dust); 10 mg/m<sup>3</sup> TWA (total dust)  
TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)  
TWA: 15 mg/m<sup>3</sup> Total Dust  
5 mg/m<sup>3</sup> Respirable Dust

#### Biological Limit Values

None

#### Recommended monitoring procedures

Refer also to national guidance documents for information on currently recommended monitoring procedures

### 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

Wear suitable gloves.

##### 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

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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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

**Appearance:**

<b>Physical State</b>	Solid Powder
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	8.4 - 10.2 5% Water suspension
<b>Melting point / Freezing point</b>	ca 300 °C / 572 °F (101.3 kPa)
<b>Initial boiling point</b>	5396 °F (2980 °C) 101.3 kPa
<b>Flash Point</b>	Not applicable.
<b>Evaporation Rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper flammability limit:</b>	
<b>Lower flammability limit:</b>	
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Relative Density</b>	2.4 g/cm <sup>3</sup> , 20° C
<b>Water Solubility</b>	0.00009 g/l at 20 °C
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	Not applicable
<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	392 °F (200 °C)
<b>Viscosity</b>	Not applicable.
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	Not applicable

**VOC Content (%)** Not applicable

## 10. STABILITY AND REACTIVITY

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

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**10.6. Hazardous decomposition products** None known

## 11. TOXICOLOGICAL INFORMATION

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

### Information on Likely Routes of Exposure

<b>Inhalation</b>	Avoid inhalation of the product Inhalation of dust may cause irritation of the respiratory system
<b>Skin</b>	Avoid prolonged or repeated contact with skin
<b>Eyes</b>	Avoid contact with eyes Dust contact with the eyes can lead to mechanical irritation
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Not an expected route of exposure.

### 11.1. Information on toxicological effects

#### Aluminum Hydroxide

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

<b>Acute Toxicity</b>	Based on available data, the classification criteria are not met
<b>Chronic Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Chronic Effects</b>	Based on available data, the classification criteria are not met.
<b>Respiratory Sensitization</b>	No information available
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met
<b>Skin Corrosion/Irritation</b>	Prolonged or repeated contact may dry skin and cause irritation
<b>Skin Sensitization</b>	Based on available data, the classification criteria are not met Not a skin sensitizer Guinea pig
<b>Mutagenicity</b>	in vitro Not genotoxic in bacteria and mammalian cell systems. in vivo Mutagenicity (micronucleus test) Rat Negative (weight of evidence approach)
<b>Germ cell mutagenicity</b>	No information available.

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<b>Reproductive Effects</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Specific target organ toxicity - Single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - Repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Mixture versus substance information</b>	No information available

## 12. ECOLOGICAL INFORMATION

### Aluminum Hydroxide

WGK Classification (AwSV) 5220 WGK: nwg

<b>12.2. Persistence and degradability</b>	The methods for determining biodegradability are not applicable to inorganic substances.
<b>12.3. Bioaccumulative potential</b>	Not likely to bioaccumulate.
<b>Partition coefficient</b>	Not applicable
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No information available.
<b>12.5. Results of PBT and vPvB assessment</b>	This substance does not meet the criteria for classification as PBT or vPvB.
<b>12.6. Other adverse effects</b>	No information available

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

<b>Disposal Methods</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Empty containers should be taken to an approved waste handling site for recycling

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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

## 14. TRANSPORT INFORMATION

### 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 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

## 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 (AIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum	21645-51-	244-492-7	01-211952924	Y	Y	Y	(1)-17	KE-00980	Y	Y	Y	Y	A



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Hydroxide	2		6-39				(ENCS); ISHL					
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**Legend**

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

## 16. OTHER INFORMATION

<b>Prepared by</b>	Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com.
<b>GHS Classification</b>	This product is not classified as hazardous according to the UN GHS guideline and labeling is not required
<b>Physical Hazard</b>	Not classified
<b>Health Hazards</b>	Not classified
<b>Environmental Hazard</b>	Not classified
<b>Labeling</b>	
<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	None
<b>Training Advice</b>	Do not handle until all safety precautions have been read and understood.
<b>Abbreviations and acronyms</b>	<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)          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          PNEC (Predicted No Effect Concentration)          GHS (Globally Harmonized System)          TSCA (Toxic Substances Control Act)</p>

HUBER

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SB-432

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**End of Safety Data Sheet**