



Safety Data Sheet

FIRE RETARDANT ADDITIVES

SB-36

Japan-JIS Z 7253:2012
Occupational Safety and Health Act
Globally Harmonized System (GHS)

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: SB-36

Pure substance/mixture Substance

Aluminum Hydroxide

CAS Number 21645-51-2

Weight-% 100

Recommended Use Flame retardant

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2. HAZARD IDENTIFICATION

Japan GHS Classification

Physical Hazards Not classified

Health Hazard Not classified

Environmental Hazards Not classified

GHS label elements

Symbols/Pictograms None

Signal Word None

Hazard statements Based on available data, the classification criteria are not met

Precautionary Statements

Prevention Do not handle until all safety precautions have been read and understood.
Employ good industrial hygiene practice
Do not breathe dust

Response IF exposed or concerned: Get medical advice/attention
Wash with plenty of soap and water

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Storage Store away from incompatible materials.
 Keep in a dry place

Disposal Dispose of contents/container to an approved waste disposal plant

Additional Information: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Substance

Chemical Name	CAS Number	Japan	Japan GHS Classification	TSCA: United States	REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Not classified	Y	01-2119529246-39-0016	100

4. FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse

IF IN EYES: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
 Call a physician if irritation develops and persists

If swallowed: Rinse mouth thoroughly with water

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water spray (fog)
 Foam
 Dry chemical
 Carbon dioxide (CO₂)

Unsuitable Extinguishing Media Do not use water jetstream

Special hazards arising from the substance or mixture Avoid dust formation

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Fire-fighting measures In case of fire and/or explosion do not breathe fumes
 Water mist may be used to cool closed containers
 Keep unauthorized personnel away

Special Protective Equipment for Firefighters Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment and Precautions for Firefighters Avoid dust formation
 Ensure adequate ventilation
 Use personal protection recommended in Section 8
 Avoid contact with eyes and skin. Wear suitable personal protection equipment.
 Keep unauthorized personnel away

Environmental Precautions Keep out of drains, sewers, ditches and waterways
 Disposal considerations
 See section 13 for more information

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 Minimize use of water during clean-up
 Recommended filter type: High efficiency particulate air filter (HEPA filter)

Other Information Not applicable

7. HANDLING AND STORAGE

Handling

Technical measures Provide adequate ventilation as well as local exhaust at critical locations
 Ensure adequate ventilation
 Use personal protection equipment
 See section 8 for more information

Advice on safe handling Minimize dust generation and accumulation

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a cool, well-ventilated place

Hygiene Measures Wash hands thoroughly after handling

Storage

Packaging compatibilities Keep/store only in original container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits Provide adequate ventilation as well as local exhaust at critical locations

Aluminum Hydroxide

Japan
 ACGIH
 OSHA

TWA: 2 mg/m³
 TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)
 TWA: 15 mg/m³ Total Dust
 5 mg/m³ Respirable Dust

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Engineering Measures Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Respiratory Protection In case of inadequate ventilation wear respiratory protection

Hand protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn

Eye Protection Wear safety glasses with side shields (or goggles)

Skin and Body Protection Wear suitable protective clothing.
 Chemical resistant apron.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice
 Wash thoroughly after handling
 Avoid contact with eyes and skin
 Do not breathe dust

9. 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 (1013 kPa)
Initial boiling point	5396 °F (2980 °C) 101,3 kPa
Flash Point:	Not applicable.
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	Not applicable
Vapor Density	Not applicable
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)
Viscosity	Not applicable
VOC Content (%)	Not applicable
Explosive Properties	None
Oxidizing Properties	Not applicable

10. STABILITY AND REACTIVITY

Reactivity Stable under normal conditions

Chemical stability Stable under normal conditions

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Possibility of hazardous reactions	None known
Incompatible materials	Strong oxidizing agents
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

Ingestion	Ingestion is not a likely route of exposure
Aspiration hazard	Not an expected route of exposure.

Symptoms Low hazard for usual industrial or commercial handling

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.
Chronic Effects	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Non-irritant Rabbit
Respiratory Sensitization	No information available
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.

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on available data, the classification criteria are not met

Persistence and degradability No data available

Bioaccumulation No data available.

Mobility in soil No data available

Hazardous to the ozone layer No data available

13. DISPOSAL CONSIDERATIONS

Disposal Dispose of in accordance with federal, state and local regulations

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal

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 Not applicable

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user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 Not applicable

15. REGULATORY INFORMATION

Global Inventories

Pure substance/mixture Substance

Chemical Name	CAS Number	EC No	REACH registration number	Australia (AICS)	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 9246-39-0 016	Y	Y	Y	Y	KE-00980	Y	Y	Y	Y	Y

Legend

X / Y: Complies - / N: Not Listed Exempt

KECL - Korean Existing and Evaluated Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances
 TSCA (Toxic Substances Control Act)
 DSL (Domestic Substance List)
 NDSL (Non-Domestic Substances List)
 Japan - ISHL Notifiable Substances
 ENCS - Japan Existing and New Chemical Substances

16. OTHER INFORMATION

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Reason for Revision This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan)

Bibliography NITE GHS Classified list
 Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.
 ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

Abbreviations and acronyms International Agency for Research on Cancer (IARC)
 International Air Transport Association (IATA)
 International Maritime Dangerous Goods (IMDG)
 International Uniform Chemical Information Database (IUCLID)
 Workplace Hazardous Materials Information System (WHMIS) status and classification
 EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
 DOT (Department of Transportation)
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 TWA - Time-Weighted Average
 The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
 PPE - Personal Protection Equipment
 NIOSH - National Institute for Occupational Safety and Health

HUBER

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TDG (Transport of Dangerous Goods) Canada
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
Reportable Quantity (RQ) (RQ/% in mixture)
STEL - Short Term Exposure Limit
TLV@ - Threshold Limit Value
Derived No Effect Level (DNEL)
SVHC: Substances of Very High Concern for Authorization:
Land transport (ADR/RID)
Biochemical oxygen demand (BOD)
Chemical oxygen demand (COD)
ICAO (air)
(IMDG) International Maritime Dangerous Goods
Positive Pressure Self-Contained Breathing Apparatus (SCBA)
Predicted No Effect Concentration (PNEC)
Globally Harmonized System (GHS)

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