威科特瑞
发挥非金属资源无限潜能

# MATERIAL SAFETY DATA SHEET

## 1.IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

**Product Name: Aluminum hydroxide**

**Application Scope:** Plastic Processing Industry

**Recommended Usage:** Flame Retardant or Flame Retardant Synergist

**Substance Classification Information :** Pigments and Additives Category

Manufacturer: Liaoning Victory Fire-retardant Material Technology Co., LTD

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## 2.HAZARDS IDENTIFICATION

### Emergency overview

White, odourless solid. In case of inhalation: Move to fresh air. In case of skin contact: Remove/Take off all contaminated clothing immediately. Wash skin with water/take a shower. In case of eye contact: Rinse thoroughly with plenty of water. Remove contact lenses. In case of ingestion: Drink immediately (max. 2 glasses of water).

Seek medical advice if unwell. Non-flammable. Hazardous vapours may be released if exposed to external ignition sources.

Exothermic reaction with: Strong acids

**2.1 GHS Classification：** Not a hazardous substance or mixture.

**2.2 GHS label elements, including precautionary statements**

No hazard pictograms, signal words, hazard statements, and precautionary statements are required.

**2.3 Physical and chemical hazards**

No physical or chemical hazards are known based on the available information.

**2.4 Health hazards**

No health hazards are known based on the available information.

**2.5 Environmental hazards**

No environmental hazards are known based on the available information.

**2.6 Other hazards**

None

**3.COMPOSITION/INFORMATION ON INGREDIENTS**

Substance/mixture: Substance

**3.1 Substance**

**Molecular formula:** $Al(OH)_3$

**Molecular weight:** 78 g/mol

**CAS No.:** 21645-51-2

**EC Number:** 244-492-7

**Hazardous components**

| Component | Classification | Concentration/Concentration range |
|---|---|---|
| Aluminium hydroxide | - | ⩽100% |

## 4.FIRST-AID MEASURES

### 4.1 Description of first-aid measures

- **Inhalation**: Move to fresh air.
- **Skin contact**: Remove/Take off all contaminated clothing immediately. Wash skin with water/take a shower.
- **Eye contact**: Rinse thoroughly with plenty of water. Remove contact lenses.
- **Ingestion**: Drink immediately (max. 2 glasses of water). Seek medical advice if unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects have been described in the label (see Section 2.2) and/or Section 11.

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

No data available

### 4.4 Notes to physician

No data available

## 5 .FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Extinguishing methods and media: Use fire-fighting measures appropriate to the surrounding circumstances and environment. Unsuitable extinguishing media: No restrictions on extinguishing media are specified for this substance/mixture.

### 5.2 Special hazards arising from the substance or mixture

Aluminium oxide: Non-flammable. Hazardous vapours may be released if exposed to external ignition sources.

### 5.3 Advice for fire-fighters

Wear self-contained breathing apparatus in case of fire.

Other: None

## 6. Accidental Release Measures

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

Advice for non-emergency personnel: Avoid inhalation of dust. Evacuate the danger area, follow emergency procedures, and consult an expert. For personal protection, see Section 8.

### 6.2 Environmental precautions

No special environmental precautions required.

### 6.3 Methods and materials for containment and cleaning up

Comply with any applicable material restrictions (see Sections 7 and 10). Collect dry. Dispose of appropriately. Clean the affected area. Avoid dust formation.

### 6.4 Reference to other sections

See Section 13 for disposal.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

See Section 2.2 for precautionary measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions: Keep tightly closed. Store in a dry place. Recommended storage temperature: See product label. VCI storage classGerman storage class (TRGS 510):

13 - Non-combustible solids

## 8 .Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limits for hazardous components

| Component | CAS No. | Value | Control parameter | Basis |
|---|---|---|---|---|
| Aluminium hydroxide | 21645-51-2 | TWA 1 mg/m3 | Threshold Limit Value (TLV) | ACGIH, USA |
| Note: Not classified as a human carcinogen. | | | | |

**8.2 Exposure controls**

**Appropriate engineering controls**

Change contaminated clothing. Wash hands after use of this material.

**Personal protective equipment**

**Eye/face protection**: Use equipment tested and approved under official standards such as NIOSH (US) or EN 166 (EU) for eye protection. Safety glasses are recommended.

**Skin protection**: This recommendation applies only to the product supplied by us, as listed in this SDS, and for the intended use specified by us. In case of dissolution in or mixing with other substances, or if conditions deviate from EN 16523-1, contact a CE-approved glove supplier (e.g., KCL GmbH, Germany, website: www.kcl.de).

**Full contact**: Material: Nitrile rubber; Minimum layer thickness: 0.11 mm; Breakthrough time for solvents: 480 minutes; Tested material: KCL 741 Dermatril® L

**Splash protection**: Material: Nitrile rubber; Minimum layer thickness: 0.11 mm; Breakthrough time for solvents: 480 minutes; Tested material: KCL 741 Dermatril® L

**Respiratory protection**: Required if dust is generated. Our recommendations for filter respiratory protection are based on the following standards: DIN EN 143, DIN 14387, and other accompanying standards related to the respiratory protection device used.

**Environmental exposure controls**: No special environmental exposure controls are required.

## 9.Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Physical state: Solid

b) Colour: White

c) Odour: Odourless

d) Melting point/freezing point: 300 ° C - loss of water of crystallization

e) Initial boiling point and boiling range: Not applicable

f) Flammability (solid, gas): This product is non-flammable. No data available

g) Upper/lower flammability or explosive limits: No data available

h) Flash point: Not applicable

i) Autoignition temperature: No data available

j) Decomposition temperature: Approximately 150 - 300 ° C

k) pH value: Approximately 8 – 9 (residue) at 100 g/l, 20 ° C

l) Viscosity: Kinematic viscosity: No data available; Dynamic viscosity: No data available

m) Water solubility: Insoluble at 20 ° C - OECD Test Guideline 105

n) n-octanol/water partition coefficient: Not applicable for inorganic substances

o) Vapour pressure: < 0.1 hPa at 20 ° C

p) Density: 2.42 g/cm3 at 20 ° C; Relative density: No data available

q) Vapour density: No data available

r) Particle characteristics: No data available

s) Explosive properties: No data available

t) Oxidising properties: None

**9.2 Other safety information**

No data available

**10 .Stability and Reactivity**

**10.1 Reactivity**

This product is chemically stable under standard ambient conditions (room temperature).

**10.2 Chemical stability**

Exothermic reaction with: Strong acids

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

No data available

**10.6 Hazardous decomposition products**

In case of fire: See Section 5 for fire-fighting measures.

**11. Toxicological Information**

**11.1 Information on toxicological effects**

**Acute toxicity**: LD50 (oral) - Rat, female - > 2,000 mg/kg (OECD Test Guideline 423); Inhalation: No data available; Dermal: No data available

**Skin corrosion/irritation**: Skin - Rabbit - Result: No skin irritation - 4 h (OECD Test Guideline 404)

**Serious eye damage/eye irritation**: Eye - Rabbit - Result: No eye irritation (OECD Test Guideline 405)

**Respiratory or skin sensitization**: Maximisation test - Guinea pig - Result: Negative (OECD Test Guideline 406)

**Germ cell mutagenicity**:

Test type: In vitro mammalian cell gene mutation test; Test system: Mouse lymphoma test; Metabolic activation: With or without; Method: OECD Test Guideline 476; Result: Negative

**Carcinogenicity**: No data available

**Reproductive toxicity**: No data available

**Specific target organ toxicity - single exposure**: No data available

**Specific target organ toxicity - repeated exposure**: No data available

**Aspiration hazard**: No data available

### 11.2 Additional information

Repeated dose toxicity - Rat, male - Oral - 28 d - No Observed Adverse Effect Level (NOAEL) - 302 mg/kgNote: Subacute toxicity

## 12 .Ecological Information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

Methods for determining biodegradability are not applicable to inorganic compounds.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPVB assessment

PBT/vPvB assessment is not available as a chemical safety assessment was not required/conducted.

### 12.6 Endocrine-disrupting properties

No data available

### 12.7 Other adverse environmental effects

No data available

## 13.Disposal Considerations

### 13.1 Waste disposal methods

**Product:** Dispose of remaining and non-recyclable solutions to a licensed waste disposal company.

## 14. Transport Information

### 14.1 UN number

ADR/RID (European road transport): - IMDG (International maritime transport): - IATA-DGR (International air transport): -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goodsIMDG: Not dangerous goodsIATA-DGR: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -IMDG: -IATA-DGR: -

### 14.4 Packaging group

ADR/RID: -IMDG: -IATA-DGR: -

**14.5 Environmental hazards**

ADR/RID: NoIMDG Marine pollutant: NoIATA-DGR: No

**14.6 Special precautions for user**

None

**14.7 Incompatible materials**

Other information: Not classified as dangerous goods in accordance with transport regulations.

**15. Regulatory Information**

**15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture**

Applicable regulations: Occupational Disease Prevention and Control Law of the People's Republic of China

**16.Other Information**

Date of Preparation: Jan. 1, 2026

Date of Revision: Jan. 1, 2026

Note: This SDS is prepared based on available information and for safety and trade reference only.

Other provisions: Note that waste disposal shall also comply with local regulatory requirements.