

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Aluminum Hydroxide
- English Name: Aluminum Hydroxide; Alumina Trihydrate
- CAS Number:21645-51-2
- Formula:Al(OH)<sub>3</sub>
- Molecular Weight:78.00 g/mol
- Product Characteristics: White powder with no obvious odor. High-purity weak base with flame-retardant properties. Low-toxic, non-flammable, slightly soluble in water. Suitable for flame retardants, pharmaceuticals, and water treatment.

### 2. Technical Specifications

Item	Specification
Appearance	White powder
Purity (Al(OH) <sub>3</sub> Content)	≥ 99.0%
Water Content	≤ 1.0%
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Iron (Fe)	≤ 1 ppm
Particle Size (D50)	10-30 μm
pH Value (1% aqueous suspension, 25°C)	8.0-10.0
Solubility (25°C)	0.001 g/100 mL water
Flame-Retardant Property	Effective flame retardant (decomposes at 200°C)

### 3. Product Advantages

1. High Purity: Low impurity content ensures stable performance in flame retardancy and adsorption.
2. Flame-Retardant & Smoke-Suppressant: Ideal for polymer flame retardation.
3. Low Toxicity: Safe for pharmaceutical and consumer product applications.
4. Environmental Friendly: Non-toxic, biodegradable after disposal.

### 4. Application Fields

- Flame Retardants: Polyethylene, polypropylene, and rubber flame retardation.
- Pharmaceutical: Antacid and phosphate binder in medications.
- Water Treatment: Fluoride and phosphate removal from wastewater.
- Laboratory Research: Analytical reagent and buffer component.

### 5. Usage Methods

- Dosage: 10-50% concentration (adjust by application).
- Application: Mix evenly with polymers or water; add during processing.
- Optimal Conditions: Operate in well-ventilated areas; avoid high temperature (> 200°C).

### 6. Packaging & Storage



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- Packaging: 1kg/5kg HDPE bags, 25kg woven bags, 50kg steel drums (UN-approved).
- Storage: Cool, dry, well-ventilated warehouse ( $\leq 30^{\circ}\text{C}$ ); sealed, away from heat/acids.
- Shelf Life: 24 months (unopened, specified conditions).
- Transportation: Non-hazardous; transport by ordinary vehicles.

### 7. Safety & Protection

- Low-toxic and non-flammable; avoid dust inhalation and prolonged skin contact.
- Wear dust mask, nitrile rubber gloves, and safety glasses during handling.
- In case of eye contact, rinse with plenty of water for 5-10 minutes.

### 8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch comes with a COA for compliance verification.
- Provide technical support for application optimization and formulation design.



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