

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Aluminum Sulfate (Hydrated)
- English Name: Aluminum Sulfate
- CAS Number: 10043-01-3
- Formula: $Al_2(SO_4)_3 \cdot nH_2O$ (n=14-18)
- Molecular Weight: Variable (approx. 666.43 g/mol for 18-hydrate)
- Product Characteristics: High-efficiency inorganic flocculant and chemical intermediate. Forms stable flocs in water to remove suspended solids, colloids, and organic pollutants. Acidic in nature, stable under standard storage conditions, and compatible with most water treatment chemicals. Cost-effective and widely used in industrial and municipal applications.

2. Technical Specifications (Complies with GB/T 31060-2014)

Item	Specification
Appearance	White crystalline powder or flakes
Aluminum Oxide (Al_2O_3) Content	$\geq 15.6\%$
Iron (Fe)	$\leq 0.5\%$
pH Value (1% Aqueous Solution, 25°C)	2.5-4.0
Insoluble Matter in Water	$\leq 0.1\%$
Heavy Metals (Pb)	$\leq 0.0005\%$
Arsenic (As)	$\leq 0.0002\%$
Chromium (Cr^{6+})	$\leq 0.0003\%$
Mercury (Hg)	$\leq 0.00001\%$
Cadmium (Cd)	$\leq 0.00005\%$
Chloride (as Cl^-)	$\leq 0.01\%$
Density (25°C, 10% Solution)	1.10-1.15 g/cm ³
Particle Size	80-200 mesh (passing rate $\geq 95\%$)

3. Product Advantages

1. Efficient Flocculation: Forms dense, fast-settling flocs, improving solid-liquid separation efficiency.
2. Wide Adaptability: Effective over pH 4.0-8.0 and temperature 0-60°C, suitable for various water quality.
3. Cost-Effective: Low dosage (10-50 mg/L); easy to dissolve and use, reducing operational costs.
4. Versatile Applications: Multi-functional for water treatment, papermaking, textile, and soil conditioning.
5. Stable Performance: Consistent quality under standard storage and use conditions.

4. Application Fields

- Municipal Water Treatment: Drinking water purification, municipal sewage treatment, sludge dewatering.



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- Industrial Wastewater Treatment: Printing and dyeing, papermaking, electroplating, chemical, and food processing wastewater.
- Papermaking Industry: Sizing agent to improve paper strength and water resistance.
- Textile Industry: Mordant for dyeing, enhancing color fastness.
- Other Fields: Soil conditioner (adjusts pH for acidic crops); wastewater neutralization agent.

5. Usage Methods

- Dosage:
 - Municipal Sewage: 15-30 mg/L
 - Industrial Wastewater: 20-50 mg/L
 - Drinking Water: 10-20 mg/L
 - Papermaking Sizing: 0.5-2.0% (based on pulp weight)
- Usage: Dissolve in water at 1:10-1:20 (product: water) to form uniform solution; add to target system with stirring.
- Optimal Conditions: pH 4.0-8.0, temperature 15-35°C; can be compounded with anionic PAM (0.1-0.3 mg/L) for enhanced effect.

6. Packaging & Storage

- Packaging Specifications:
 - 25 kg kraft paper bags with PE inner lining (powder/flakes)
 - 200 kg HDPE plastic drums (aqueous solution)
 - 1000 kg FIBC bulk bags (large-scale industrial use)
 - Custom packaging available upon request.
- Storage Conditions: Store in cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); keep tightly closed; avoid moisture, direct sunlight, and high temperature; store separately from strong bases/oxidizing agents.
- Shelf Life: 24 months (unopened, specified conditions).
- Transportation: UN 3260 (Class 8 Corrosive Substance); transport in acid-resistant containers; avoid collision, leakage, and exposure to sunlight/rain.

7. Safety & Protection

- Corrosive; avoid direct contact with skin, eyes, and clothing.
- Operators must wear chemical safety goggles, nitrile rubber gloves, and acid-resistant protective clothing.
- In case of contact, rinse immediately with plenty of running water for ≥ 15 minutes; seek medical attention if necessary.
- Do not ingest; if swallowed, rinse mouth with water and consult a doctor immediately.

8. Quality Assurance

- Manufactured in accordance with ISO 9001 quality management system standards.
- Each batch is tested with a Certificate of Analysis (COA) to meet GB/T 31060-2014.
- Provide technical support: dosage adjustment, dissolution method optimization, and application problem-solving.