

## Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

### Poly Aluminum Chloride (PAC)

#### SECTION 1: Identification

##### 1.1 Product Identifiers

- Product Name: Poly Aluminum Chloride (PAC)
- Product Number: PAC-CAS1327419-202611
- Brand: SIGALD
- CAS-No.: 1327-41-9
- Synonyms: Polyaluminum Chloride; Aluminum Polychloride; PAC
- Chemical Family: Inorganic Polymer Flocculant

##### 1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
- RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI)PILOT FREE TRADE ZONE.
- Telephone : +86-021-50350029
- Fax : +86-021-50350029

##### 1.3 Emergency telephone

Emergency Phone # : +86-021-50350029  
(CHEMTREC)

##### 1.4 Uses & Restrictions

- Identified Uses: Water treatment (municipal sewage, industrial wastewater, drinking water purification); sludge dewatering; environmental engineering flocculant.
- Uses Advised Against: Pharmaceutical, food, or household purposes.

#### SECTION 2: Hazards Identification

2.1 GHS Classification: Skin corrosion/irritation (Category 1B); Eye damage (Category 1); Corrosive to metals (Category 1)

- Hazard Pictogram: (Corrosion)
- Signal Word: DANGER
- Hazard Statements: H314 (Causes severe skin burns and eye damage); H290 (May corrode metals)
- Precautionary Statements: P260, P280, P301+P330+P331, P304+P340, P305+P351+P338

2.3 Physical/Chemical Hazards: Corrosive to metals (aluminum, zinc); releases slight heat when mixed with water; reacts violently with strong bases.

2.4 Health Hazards: Severe skin/eye burns;



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inhalation of mist irritates nasal and respiratory tract mucosa.2.5 Environmental Hazards: Low toxicity to aquatic organisms; avoid direct discharge without neutralization.

## SECTION 3: Composition/Information on Ingredients

- Substance/Mixture: Mixture (Inorganic Polymer) | Main Component | Content (w/w) | CAS-No. | Hazard Classification | |-----|-----|-----|-----| | Poly Aluminum Chloride (as Al<sub>2</sub>O<sub>3</sub>) | 10.0-12.0% | 1327-41-9 | Skin Corros. 1B; Eye Dam. 1; Metal Corros. 1 | | Deionized Water | Balance | 7732-18-5 | Non-hazardous |

## SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; administer oxygen if breathing is difficult; seek medical attention.
- Skin Contact: Remove contaminated clothing; rinse skin with plenty of running water for ≥15 minutes; consult a doctor.
- Eye Contact: Hold eyelids open; rinse with water/normal saline for ≥15 minutes; seek emergency medical help.
- Swallowed: Do not induce vomiting; rinse mouth with water; bring this MSDS to the doctor.

## SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Water spray, foam, carbon dioxide (CO<sub>2</sub>), dry powder.
- Unsuitable Media: Direct high-pressure water jet (may splatter corrosive liquid).
- Special Hazards: Non-combustible; decomposes above 110°C releasing hydrogen chloride (HCl) and aluminum oxides.
- Firefighter Advice: Wear self-contained breathing apparatus (SCBA) and corrosion-resistant protective clothing; cool containers with water spray.

## SECTION 6: Accidental Release Measures

- Personal Precautions: Wear full PPE (chemical safety goggles, face shield, nitrile rubber gloves, acid-resistant clothing).
- Environmental Precautions: Prevent runoff into sewers, rivers, or groundwater; contain with sandbags.
- Cleanup: Small spill - absorb with inert materials (sand, vermiculite) and neutralize with lime; large spill - dike and transfer to corrosion-resistant tanks.

## SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated area; use local exhaust ventilation to avoid mist accumulation; avoid contact with skin/eyes; do not mix with strong bases/oxidizing agents.
- Storage: Cool, dry, well-ventilated warehouse (storage temperature ≤30°C); keep container tightly closed; store separately from strong bases, oxidizing agents, and metals.
- Shelf Life: 12 months (unopened, under specified conditions).

## SECTION 8: Exposure Controls/Personal Protection

- Engineering Controls: Install local exhaust ventilation; use acid-resistant pipelines and equipment.
- Personal Protective Equipment (PPE):
  - Eye/Face Protection: Chemical safety goggles and face shield (compliant with EN 166 or NIOSH standards).
  - Skin Protection: Nitrile rubber gloves (minimum thickness 0.15 mm) and acid-resistant protective clothing.
  - Respiratory Protection: Half-mask respirator with acid gas cartridges (when mist is generated).
- Hygiene Measures: Wash hands thoroughly with soap and water after work; do not eat/drink/smoke in the workplace.

## SECTION 9: Physical and Chemical Properties

- Physical State: Liquid; Color: Yellowish-brown to reddish-brown; Odor: Slight pungent acidic odor
- pH (1% Solution, 25°C): 3.5-5.0; Density (25°C): 1.15-1.35 g/cm<sup>3</sup>; Viscosity (25°C): 10-30 mPa·s
- Boiling Point: Decomposes; Solubility: Fully miscible with water; Decomposition Temperature: >110°C
- Vapor Pressure (25°C): <0.5 hPa; Partition Coefficient (n-octanol/water): No data available

## SECTION 10: Stability and Reactivity

- Stability: Stable under normal storage and handling conditions.
- Incompatibilities: Strong bases (e.g., NaOH, KOH), oxidizing agents (e.g., H<sub>2</sub>O<sub>2</sub>, KMnO<sub>4</sub>), active metals (e.g., Al, Zn).
- Hazardous Decomposition Products: HCl, aluminum oxides (above 110°C).

## SECTION 11: Toxicological Information

- Acute Toxicity: Oral (Rat, LD<sub>50</sub>): >2000 mg/kg (5% aqueous solution); Dermal (Rabbit, LD<sub>50</sub>): >5000 mg/kg
- Skin Corrosion/Irritation: Severe skin burns (GHS Category 1B).
- Eye Damage/Irritation: Severe eye damage (GHS Category 1).
- Respiratory Irritation: May irritate respiratory tract if mist is inhaled.

## SECTION 12: Ecological Information

- Fish (Zebrafish, LC<sub>50</sub>): >180 mg/L (96-hour exposure)
- Daphnia (EC<sub>50</sub>): >100 mg/L (48-hour exposure)
- Biodegradability: Biodegradable in natural water environments; no long-term environmental accumulation.

## SECTION 13: Disposal Considerations

- Product Waste: Neutralize with alkaline substances (lime, sodium carbonate) to pH 6-9 before disposal; dispose via licensed hazardous waste treatment facilities.

- Packaging Waste: Rinse thoroughly with water to remove residual product; dispose as hazardous waste or recycle if permitted.

#### **SECTION 14: Transport Information**

- UN Number: ADR/RID: UN 3260; IMDG: UN 3260; IATA-DGR: UN 3260
- UN Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Poly Aluminum Chloride)
- Transport Class: 8; Packaging Group: III; Environmental Hazards: No
- Special Precautions: Transport in acid-resistant vehicles; avoid collision, leakage, and exposure to sunlight/rain.

#### **SECTION 15: Regulatory Information**

- National Regulations (China): Complies with Hazardous Chemical Safety Management Regulation; meets GB/T 15892-2020 standard.
- International Regulations: GHS Rev.9 (Corrosion 1B); REACH (EU, not in SVHC List); TSCA (US, listed as inorganic polymer).

#### **SECTION 16: Other Information**

- Revision Date: 15 NOV 2025
- Disclaimer: Based on current scientific knowledge; supplier not liable for damage caused by improper use.