

Polyaluminium Chloride (PAC)

Inorganic polymer coagulant for clarification, wastewater treatment and papermaking.

CAS No. 1327-41-9	EC / List No. 215-477-2	Transport Non-dangerous goods
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Product Information

Polyaluminium chloride is a family of partially neutralized aluminium chloride polymers. It acts as a cationic coagulant to destabilize suspended matter and promote floc formation. Its basicity and aluminium content vary by grade, so one fixed molecular weight does not describe all commercial PAC materials.

Specifications

Parameter	Specification
Aluminium as Al ₂ O ₃ — liquid / solid 30 / solid 28	≥10 / ≥30 / ≥28 %
Basicity — liquid / solids	≥50 / 40–90 %
pH — liquid	3.5–5.0
pH — 1% solid-grade solution	≥5.0
Lead — liquid / solid 30 / solid 28	≤2 / ≤5 / ≤12 ppm
Chromium(VI) — liquid / solid 30 / solid 28	≤2 / ≤4 / ≤4 ppm
Water insolubles — liquid	≤0.2–0.5 (grade-dependent) %
Water insolubles — solid 30 / solid 28	≤0.5 / ≤1.0 %

Grade limits follow the local TDS; commercial aluminium content is reported on an Al₂O₃ basis. The source reports zero for certain trace elements without detection limits, so those values are not presented as proof of absence. No potable-water certification is implied.

Typical Properties

Property	Typical Value
Molecular formula	Variable basic aluminium chloride polymer
Molecular weight	Variable polymer molecular weight

Applications

Industrial clarification: Cationic coagulant for suspended-solid removal from process water. Use jar testing to select the grade, dose and mixing/settling conditions for the actual water.

Wastewater treatment: Coagulant for industrial wastewater clarification and solid-liquid separation. Evaluate pH, alkalinity, sludge generation and compatibility with polymer aids.

Papermaking water systems: Coagulation aid for selected papermaking and process-water systems. Verify compatibility with furnish, retention aids and water-circuit conditions before use.

Packaging / Storage

Item	Information
Packing	250 kg HDPE drums (liquid) / 25 kg lined bags (powder)
Storage	Keep original containers closed in a cool, dry, ventilated area. Protect powder from moisture, and liquid from extreme temperatures. Avoid unsuitable metals, strong oxidizers and incompatible acids or alkalis.
Handling	Control powder dust and liquid splashes with suitable ventilation and transfer equipment. Wear chemical-resistant gloves, protective clothing and chemical goggles; use face protection when handling concentrated material.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
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