Poly Aluminium Ferric Chloride (PAFC) (PAFC)

CAS No. 1327-41-9 | HS Code 2827.32

Poly aluminium ferric chloride (PAFC) is a composite inorganic polymer coagulant in which aluminium and iron are co-polymerized in one molecule. The result combines the strengths of both single-salt coagulants: the aluminium fraction forms large, well-structured flocs, while the iron fraction makes those flocs dense and fast-settling — so clarification is both effective and quick where PAC alone leaves fines behind or ferric salts over colour the water.

PAFC is particularly useful in cold, low-turbidity raw water where single coagulants are sluggish, in oily wastewater where the iron fraction improves emulsion breaking, and in high-turbidity water where settling velocity drives tank sizing. In many plants it can replace a PAC + PFS dual-dosing arrangement with a single product, which simplifies storage, dosing and control. Effective across pH 4–10, it typically produces less sludge than ferric sulfate at equivalent performance.

Technical Specifications

Parameter	Unit	Value
Al_2O_3 content	%	≥ 26.0
Fe_2O_3 content	%	2.0–5.0
Basicity (salinity)	%	≥ 60
pH (1% aqueous solution)	—	3.5–5.0
Water insolubles	%	≤ 0.5
Arsenic (As)	ppm	≤ 5
Heavy metals (as Pb)	ppm	≤ 15
Appearance	—	Yellow-brown powder

Applications

- Coagulation of cold, low-turbidity raw water where single-salt coagulants react slowly
- Oily wastewater treatment where the ferric fraction improves emulsion breaking
- High-turbidity water and storm-event spikes where fast settling drives throughput
- Single-product replacement for PAC + PFS dual dosing at plants seeking simpler operation

Packaging & Shipping

PP woven bag with PE inner liner — 25 kg | Jumbo bag on export pallet — 500 / 1000 kg

Storage & Shelf Life

Hygroscopic — store sealed in a dry, ventilated warehouse away from direct sunlight, moisture, strong alkalis and reactive chemicals. Shelf life 12 months in original sealed packaging.

Transport Classification

PAFC is not classified as a dangerous good under IMDG/IATA and ships as general cargo.

Safety Notes

Acidic, corrosive in concentrated form — dust and solution irritate eyes, skin and the respiratory tract. Wear gloves, goggles and a dust mask when handling powder. Do not mix with strong alkalis. Full handling details in the MSDS available on request.

Typical values for reference only. Final specifications are confirmed per batch Certificate of Analysis (COA) issued with each shipment. This document does not replace the MSDS — request it via the inquiry form.

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