Phosphorus Remover (Iron-Aluminium Blend)

CAS No. Mixture | HS Code 3824.99

This phosphorus remover is a polymeric iron-aluminium blend (high-basicity poly-ferric-aluminium salt) engineered for deep phosphorus removal where standard alum or PAC dosing leaves total phosphorus above strict limits. Dosed at 30–150 ppm, its pre-hydrolyzed Fe/Al species chemically bind dissolved orthophosphate and adsorb colloidal organic phosphorus into dense, fast-settling flocs, taking effluent TP from around 1 ppm down to 0.1–0.3 ppm in secondary or tertiary dosing points.

The high-basicity polymerized structure reacts less with alkalinity than low-basicity salts, so pH depression is milder at high doses and sludge volume per mole of P removed drops. Compared with ferrous sulfate it delivers a stable Fe(III)/Al(III) charge-neutralization front without the oxidation lag, and versus liquid ferric chloride it avoids strongly corrosive handling — a practical fit for environmentally sensitive discharge zones and river-restoration emergency work.

Technical Specifications

Parameter	Unit	Value
Fe_2O_3 + Al_2O_3 (effective oxides)	%	≥ 24.0
Basicity	%	60–90
pH (1% aqueous solution)	—	3.5–5.0
Water insolubles	%	≤ 0.5
As (arsenic)	ppm	≤ 5
Heavy metals (as Pb)	ppm	≤ 15
Appearance (solid)	—	Yellow to tan powder / granules
Appearance (liquid)	—	Red-brown transparent liquid

Applications

- Tertiary deep phosphorus removal to TP limits of 0.1–0.3 ppm
- Emergency phosphorus reduction ahead of discharge-limit deadlines at municipal plants
- River and lake restoration — in-situ phosphorus inactivation in black-odour water bodies
- Enhanced coagulation combined with anionic PAM for simultaneous SS and TP polishing

Packaging & Shipping

PP woven bag with PE inner liner (solid) — 25 kg | HDPE drum (liquid) — 250 kg | IBC tote (liquid) — 1000 kg

Storage & Shelf Life

Store in a dry, ventilated warehouse away from direct sunlight, strong alkalis and reactive chemicals. Keep packaging sealed to prevent caking of solid grades. Shelf life 12 months in original sealed packaging.

Transport Classification

Not classified as a dangerous good under IMDG/IATA and ships as general cargo (mild acidity — standard corrosion precautions for liquid grades).

Safety Notes

Mildly acidic; may irritate eyes and skin on prolonged contact. Avoid mixing with strong alkalis. Wear gloves and goggles when preparing and dosing solutions. 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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