Ammonia Nitrogen Remover (MAP Precipitation Reagent)

CAS No. Mixture (main component $MgCl_2 \cdot 6H_2O$ CAS 7791-18-6) | HS Code 3824.99

This ammonia nitrogen remover is a magnesium-salt reagent engineered for MAP precipitation: dosed into ammonia-rich wastewater, Mg^{2+} reacts with NH_4^+ and PO_4^{3-} to form magnesium ammonium phosphate (struvite, $MgNHPO_4 \cdot 6H_2O$), a compact crystalline solid that settles and dewaters far more easily than biological flocs. It removes ammonia nitrogen in minutes rather than the days anammox or nitrification requires, and holds effluent below strict discharge limits when biology alone cannot.

MAP chemistry works best at pH 8.5–10, where a molar Mg:N:P ratio near 1.2:1:1 drives residual NH_3-N below 1–5 ppm in typical leachate and digester-liquor matrices; the struvite by-product is recoverable as a slow-release fertilizer. For high-strength streams, dosing the magnesium reagent after CO_2 stripping reduces consumption — jar testing fixes the exact ratio for your water chemistry.

Technical Specifications

Parameter	Unit	Value
$MgCl_2$ content	%	≥ 46.0
Water insolubles	%	≤ 0.5
Magnesium (Mg)	%	≥ 11.5
pH (5% aqueous solution)	—	6.5–8.0
Sulfate (SO_4)	%	≤ 1.0
Heavy metals (as Pb)	ppm	≤ 10
Appearance	—	White to off-white flakes or powder

Applications

- Emergency ammonia nitrogen reduction at landfill leachate plants facing discharge-limit deadlines
- Sidestream treatment of anaerobic digester liquor ahead of the main biological process
- Ammonia stripping from low C/N industrial wastewater where biological nitrification is capacity-limited
- Struvite recovery and controlled precipitation in nutrient-rich effluents

Packaging & Shipping

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

Storage & Shelf Life

Store in a dry, sealed warehouse — the product is hygroscopic and will cake if exposed to humid air. Keep away from strong alkalis and ammonia compounds. Shelf life 12 months in original sealed packaging.

Transport Classification

Not classified as a dangerous good under IMDG/IATA and ships as general cargo.

Safety Notes

Low toxicity, but dust may irritate eyes and the respiratory tract. Wear gloves, goggles and a dust mask when handling powder. 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.

Henan Hanna Environmental Protection Technology Co., Ltd · Zhengzhou, Henan, China · info@hannaenv.com