

Ammonium Polyphosphate (APP-II)

Low-solubility phosphorus-nitrogen acid-source development in intumescent systems.

CAS No. 68333-79-9	EC / List No. 269-789-9	Transport Non-dangerous goods
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Product Information

Ammonium polyphosphate phase II is a long-chain inorganic phosphate salt used as the acid source in selected intumescent flame-retardant systems. This APP-II powder is a low-water-solubility polymeric grade; it differs from soluble liquid ammonium phosphate fertilizers and from shorter-chain grades.

Specifications

Parameter	Specification
Appearance	White free-flowing powder
Phosphorus	≥31.0 %
Nitrogen	≥14.0 %
Moisture	≤0.25 %
pH, 10% suspension	5.5–7.5
Thermal decomposition temperature	≥275 °C
Viscosity, 10% suspension	≤50 mPa·s
Water solubility	≤0.5 g/100 mL
Average particle size	≤20 μm

Supply specifications follow the local ZXCHEM TDS. Values apply to the stated grade; complete-formulation flame performance requires testing.

Typical Properties

Property	Typical Value
Molecular formula	(NH ₄ PO ₃) _n
Molecular weight	Polymeric material

Applications

Intumescent coatings and sealants: Acid-source component for selected expanding protective coatings and sealants. Assess dispersion, wet-state viscosity, adhesion, ageing and the complete fire-test system.

Polyolefins and thermosets: Phosphorus-nitrogen powder for selected PP, PE and thermoset packages. Evaluate processing temperature, compatibility, moisture response and mechanical properties.

Textile, cable and construction materials: Component for selected flame-retardant systems. Assess binder compatibility, durability under service conditions and finished-material fire performance.

Packaging / Storage

Item	Information
Packing	25 kg PE-lined bags
Storage	Keep sealed in a cool, dry, ventilated warehouse. Protect from moisture, heat and contamination; store away from incompatible chemicals.
Handling	Use enclosed powder feeding or local extraction. Wear suitable protective gloves, eye protection and work clothing; avoid dust inhalation and direct contact. Provide controls for fumes during hot processing.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Shanghai office	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / Email	+86-21-54265599 / sales@zxchem.com.cn
Website	www.zxchem.com