"Novochem" LLC
Russian Federation, 634050, Tomsk, Berezovaya Street, 2/2, structure 7
Tel.: +7 (3822) 32-55-33, e-mail: info@novochem.ru
www.novochem.ru

AMMONIUM POLYPHOSPHATE (water-insoluble APP 202)

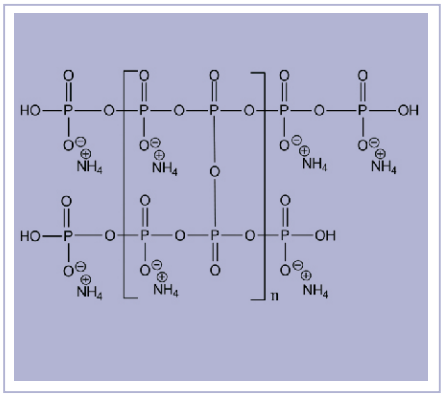
Halogen free retardants for polymers

PRODUCT BRIEF

APP 202 is a halogen free retardant. It is an inorganic polymer with a branched structure, that has a high polymerization degree (n≥1000), polyphosphoric acid and ammonia compound. It is a white, poorly water-soluble powder with a decomposition point of 250 °C. The product is used in the production of various high-performance intumescents and for fire-proofing of multistoried buildings, courts, trains, cables.

It doesn't affect polymers' physical and mechanical properties if added. The retardant makes synergic combinations with other retardants (metal hydroxides, melamine, melamine salts, pentaerythritol). It is non-toxic, doesn't educe smoke due to surface raising. Due to unique properties, it can be used as a halogenated flame retardants substitute in polyurethanes and thermoplastics.

Structural formula



Molecular formula: $(NH_4PO_3)_n$, (n≥1000)

APPLICATIONS

APP-II is used as a retardant in polymers. It has a high polymerization degree and specific crystallinity (phase II). When heated, phosphoric acid evolves, which is a catalyst for coked cellular material formation in intumescents. If combined with polyalcohols (pentaerythritol) and melamine, it can be used as an intumescent. The product is widely used in organic-solvents-based intumescent coatings, as well as in polyurethanes, unsaturated esters, epoxy resins, acrylic paints.

DOSAGE

- PA 6 (polyamide 6), UL 94 V-0 10-40% of net weight
- PP (polypropylene) UL 94 V-0 10-30% of net weight
- TPE (thermoplastic elastomers) UL94 10-0 30% of net weight

SPECIFICATIONS

Particle size, μm	up to 40
Filtrate's pH, 10% of suspension	5,0-7,0
Decomposition point, °C	≥250
Water solubility at 20 °C, g/100ml	≤ 0,8
Phosphorus content, %	28-32

CHEMICAL SAFETY DATA SHEET

According to GOST 12.1.007 the product is a low hazardous substance (4th category).
May be harmful if swallowed.

Producer: Novochem LLC (Tomsk)
Ammonium polyphosphate (APP 202), Specifications 20.13.42.130-033-67017122-2019