

## Ammonium Polyphosphate II(APP-II)

### 1. Brief introduction

Ammonium polyphosphate's (APP) molecular formula is  $(\text{NH}_4\text{PO}_3)_n$ ,  $n > 1000$ . As inorganic chain polymer, there's P-N collaboration effect because of high phosphorus and nitrogen content, so it has excellent fire retardant effect. It has good heat stability (decomposing temperature more than  $275^\circ\text{C}$ ), low water-solubility (no more than 0.2g/100ml water), and it approaches neuter polarity. It becomes the most important and widely used acid and gas stuff in chemistry expansive system. It can be compounded with other fire retardants, and it is of slight toxicity, ( $\text{LD}_{50} > 10\text{g/kg}$ ). It can be applied in PE, PP, engineering plastic, rubber, fibre after surface modification. So it is named environmental fire retardant.

### 2. Performance index:

item	unit	spec
Appearance		White power
$\text{P}_2\text{O}_5$	%(w/w)	70~71
N content	%(w/w)	13-14
Decompose temperature	$^\circ\text{C}$	$\geq 270$
density( $25^\circ\text{C}$ )	$\text{g/cm}^3$	1.9
Solubility	$\text{g/100mlH}_2\text{O@}25^\circ\text{C}$	$\leq 0.2$
PH value	10% water solution	5-7
Free water	%(w/w)	$< 0.25$
Average particle size D50	$\mu\text{m}$	6~12

- 1 Supply Micro-capsule treatment of melamine, amino resin, epoxy resin, organic silicon, heat-welding resin according to clients' demand.
- 2 According with EU RoHS.

### 3. Use

- 1、Applied in EVA, PE, POE, PP, PVC, PET and rubber
- 2、Applied in advanced expansive fireproofing dope.
- 3、Applied in fiber material(paper, wood, fireproofing fabric and so on)
- 4、Applied in synthetic fiber layer fire retardant.

### 4. Packing

25kg polypropylene woven bag inner lining polyethylene film

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