Ammonium polyphosphate AKnoka® AP440

I. Product Introduction

AKnoka® AP440 is a high-polymerization non-halogen phosphorus-nitrogen synergistic intumescent flame retardant that achieves efficient flame retardancy through phosphorus-nitrogen synergy. It exhibits advantages such as low water solubility, high thermal stability, low smoke and toxicity, and excellent compatibility, making it widely applicable to intumescent flame retardant systems and various polymer materials.

General characteristic

Surface	White powder
Molecular formula	$(NH_4)_{n+2}P_nO_{3n+1}$ (n≥1000)
Cas number	68333-79-9
Formula weight	/
Water-solubility	Insoluble in water and most organic solvents

Key indicators

Project	Unit	Numeric value
Phosphorus content	%	31-32
Nitrogen content	%	14-15
Moisture Content	%	≤0.5
Particle Size(D50)	μm	10-20
PH value	pH	5.5-7.5
Thermal decomposition temperature (1%)	℃	≥270
Water-soluble (10% at 25°C)	g/100ml	≤0.5

II. Product Features

High-temperature carbonization provides oxygen isolation and gas release to suppress combustion, resulting in significantly improved flame retardancy rating. Compatible with high-temperature processing and resistant to decomposition.

High polymerization with low water solubility, exhibits minimal migration and precipitation during prolonged use. Uniform particle size ensures stable compatibility with most resins and fillers, along with smooth processing.

III. Application Fields

Engineering plastic systems including household appliance casings, PCB circuit boards, power adapters, and electronic connectors.

IV. Storage and Packaging

Packaging: Each bag has a net weight of 25 kg and is constructed with a three-layer composite paper bag lined with polyethylene (PE).

Storage: Store in a cool, dry place.

V. Safety and Environmental Protection

The Material Safety Data Sheet (MSDS) for this product may be obtained from our company upon request. The MSDS provides information on material handling, safety precautions, disposal requirements, and applicable local health and safety regulations. This product complies with EU RoHS/REACH regulations. According to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), this product is not classified as hazardous.

VI. Remarks:

The information and data provided in this document are for reference purposes only, based on our current technical expertise and experience. Customers must conduct tests on purchased products to verify their suitability for specific processes or applications and ensure compliance with intended objectives. We cannot control further applications or processing procedures of the products. Our liability is limited to the delivered products you use and does not cover any indirect losses arising from their use. Our technical support and customer service teams are available to provide product consultation and application assistance. Please feel free to contact us via email or phone.