

Aluminum diethyl hypophosphite AKnoka[®] DP350

I. Product Introduction

AKnoka[®] DP350 demonstrates exceptional water resistance, with no precipitation and insolubility in water and common organic solvents. It features high phosphorus content and superior flame retardancy, compatible with lead-free welding processes. The material exhibits excellent thermal stability, with processing temperatures up to 350°C and resistance to discoloration. Post-flame retardation treatment enhances its physical and electrical properties, while maintaining halogen-free environmental compliance with EU regulations such as ROHS and REACH. Additionally, it offers outstanding coloring performance.

General characteristic

Surface	White powder
Molecular formula	(C ₄ H ₀ O ₂ P) ₃ ·Al
Cas number	225789-38-8
Formula weight	/
Water-solubility	Insoluble in water and common organic solvents

Key indicators

Project	Unit	Numeric value
Phosphorus content	%	23-24
Moisture Content	%	≤0.5
Bulk density	g/cm ³	0.2-0.5
Decomposition temperature	°C	≥350
Particle size (D50)	μm	≤5.0
Coating	/	N/A

II. Product Features

Aluminum diethyl phosphite (ADP) is a premium halogen-free flame retardant that integrates high phosphorus content, heat resistance, water resistance, non-exudation, easy dispersion, halogen-free environmental friendliness, low smoke emission, and excellent chemical stability. It is particularly suitable for high-temperature engineering plastics and electronic appliance applications.

III. Application Fields

It is widely used in cable and elastomer materials such as PVC cables, low-smoke halogen-free cables (insulation layer and sheath layer), cross-linked polyethylene (XLPE), thermoplastic elastomers (TPE), and ethylene propylene rubber (EPR/EPDM). Additionally, it is applicable to photovoltaic module encapsulation materials, polyester fibers, and related products, meeting the requirements of various polymer materials for halogen-free flame retardancy, heat resistance, environmental friendliness, and excellent mechanical and electrical properties.

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.