Tai Xing
泰星股份 绿色智造

Aluminium Hypophosphite

$Al(H_2PO_2)_3$

CAS No. 7784-22-7

Description

Aluminium hypophosphite, CAS No.7784-22-7, Chemical formula $Al(H_2PO_2)_3$, Molecular Weight 221.96. It is kind of new type phosphorus flame retardant, slightly soluble in water, high purity and high decomposition temperature, widely used in engineering plastics, wire and cable compounds.

Physical and Chemical Properties

Items	Technical Standard	
	Aluminium Hypophosphite	Aluminium Hypophosphite (Low Sulfate Content)
Purity /%	≥94.5	≥94.5
Whiteness/%	≥95	≥95
Particle Size D50/μm	≤20	≤10
PH Value (100g/L Suspension)	3.0 ～ 5.0	
Loss On Ignition /%	≤0.3	
TGA(1%)/°C	≥310	
ppm	＜ 3000	＜ 1000

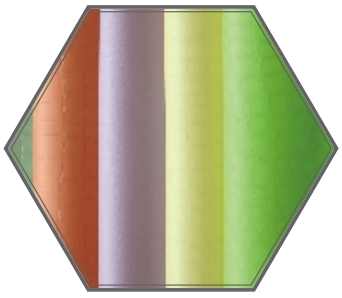
Sulfate content

HIGH TGA:TGA(1%) ≥310℃

HIGH STABLE QUALITY: Purity mainly stable in 96.0%-97.5%

Application

Recommended be used in engineering plastics, wire and cable

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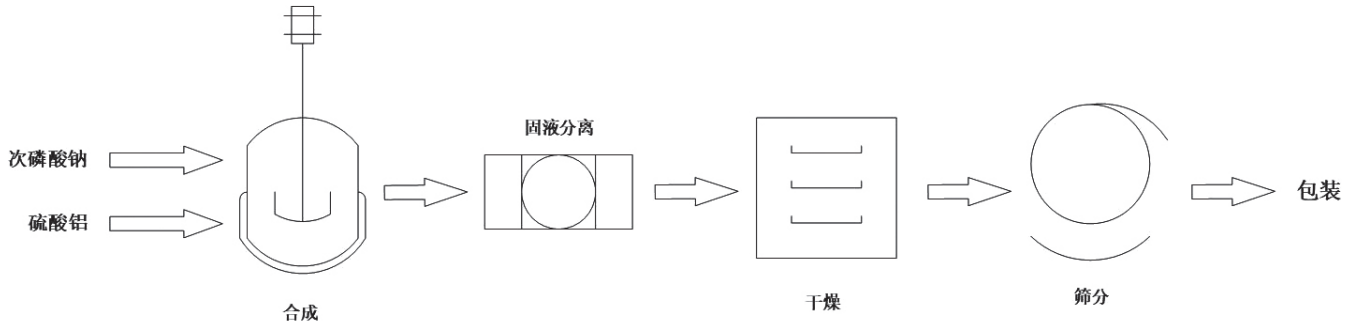
Production Process

The main production methods of aluminum hypophosphite are $H_4N_aO_3P$ and $Al_2(SO_4)_3 \cdot 18H_2O$ in the aqueous phase system, after reacting at a constant temperature for a certain period of time under certain conditions, filtering, washing, and drying are performed to obtain a white powder aluminum hypophosphite solid.

The process flow chart is as follows:



Applications

Applications and Benefits	Aluminium Hypophosphite	Aluminium Hypophosphite (Low Sulfate Content)
Processability	★★★★	★★★★★
Applications	PBT	PBT、PET、PP、TPU、PA 等

Applications

1.It can be used as polypropylene PPV-2 flame retardant after compounding with melamine hydrobromide, DMDPB, etc, add 0.5-1% compound flame retardant can achieve flame retardant effect.

2.It can be used as flame retardant of low smoke halogen-free cable material after compounding with melamine cyanurate.

3.Be used for polyester PBT flame retardant formula, synergist is more critical, otherwise polyester products are easy to yellow.

4. After compounding with other flame retardants, it can be used for potting adhesive flame retardant.