

Highly Efficient Functional Antimony Oxide Compound

Avolex

Avolex is a special antimony trioxide high-efficiency composite flame retardant synergist. Using ultra-high dispersion technology, in conjunction with the synergistic effect of special structured antimony compounds and functional additives, it can exhibit a superlative synergistic flame-retardant effect in various halogen-antimony flame retardant systems. Due to the good dispersibility of antimony trioxide, combined with other antimony compounds and functional additives, the ability to inhibit free radical chain reactions is enhanced, promoting surface carbonization, improving flame retardant efficiency, and significantly reducing the amount of halogen flame retardants required.

Item	Unit	Specifications
Appearance	-	White Powder
Whiteness	%	≥90
TGA 1%	°C	≥300
Volatile 150°C/2h	%	≤0.3
Effective component	%	≥90

Performance

1. Ultra-high dispersibility, significant synergistic flame retardant effect.
2. Low smoke emission and excellent carbonization effect during combustion, making it easier to meet UL94 V-0 rating.
3. Reduces the amount of bromine-based flame retardants added, lowering costs and enhancing product performance.
4. Complies with environmental regulations such as ROHS, REACH, and is environmentally friendly.

Application

Avolex can be widely used in bromine/antimony flame retardant systems such as HIPS, ABS, PP, PA, PBT, and PC, exhibiting flame retardant synergistic effects and reducing the flame retardant content.

Resin	Recommended Dosage (UL94 / V-2)	Recommended Dosage (UL94 / V-0)	Reduced amount of halogen flame retardants.
PE, PP	1-3%	5-7%	For a decabromodiphenyl ethane system, the dosage can be reduced by 3-6%.
PS, ABS	1-3%	3-5%	For tetrabromobisphenol A, brominated triazine, or brominated epoxy systems, the dosage can be reduced by 2-4%.
PA, PBT	2-4%	3-6%	For brominated epoxy or decabromodiphenyl ethane systems, the dosage can be reduced by 2-5%.

* Our above dosage recommendations are based on relevant knowledge and experience. The accurate dosage ultimately needs to be determined through specific testing by the customer.

Packaging and storage

1. Packaging: Composite paper-plastic packaging 25kgs/bag; bulk packaging 1000kgs/bag, or customized according to customer requirements.
2. Storage: Store according to general chemical transportation and storage practices, in a dry, ambient temperature environment, strictly preventing moisture and heat.

Precautions

1. This product is in powder form with high density. When using, please be cautious to prevent stratification, as it may affect the flame retardant effectiveness.
2. During the screw extrusion process, pay attention to uniform dispersion and maintain a certain level of vacuum.