

Antimony Trioxide (ATO)

Flame-retardant synergist development in halogen-containing plastics and rubber.

CAS No. 1309-64-4	EC / List No. 215-175-0	Transport Non-dangerous goods
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Product Information

Antimony trioxide, often abbreviated ATO, is the inorganic antimony(III) oxide used as a synergist in selected halogen-containing flame-retardant packages. It supports the action of the complete additive system rather than providing a universal flame rating on its own. It differs from antimony pentoxide and should be identified by CAS 1309-64-4.

Specifications

Parameter	Specification
Appearance	White powder, free of visible contamination
Sb ₂ O ₃ assay	≥99.5 %
As ₂ O ₃	≤0.060 %
PbO	≤0.10 %
Fe ₂ O ₃	≤0.006 %
CuO	≤0.002 %
Selenium	≤0.005 %
Whiteness	≥93 %
Average particle size	≤1.6 μm

Supply specifications follow the local ZXCHEM TDS. Values apply to the stated grade; complete-formulation flame performance requires testing.

Typical Properties

Property	Typical Value
Molecular formula	Sb ₂ O ₃
Molecular weight	291.52 g/mol

Applications

Polymer flame-retardant systems: Synergist for selected halogen-containing PVC, polyolefin and styrenic compounds. Test dispersion, stabilizer interactions and complete-compound flame performance.

Rubber and coated materials: Component for selected elastomer and coated-material packages. Check cure response, adhesion, ageing and physical-property retention.

Glass, ceramics and enamels: Industrial oxide for selected glass and ceramic compositions. Evaluate impurity control, colour response and process compatibility for the intended article.

Packaging / Storage

Item	Information
Packing	25 kg bags / 500 kg or 1,000 kg bulk bags
Storage	Keep sealed in a cool, dry, ventilated warehouse. Protect from moisture, heat and contamination; store away from incompatible chemicals.
Handling	Use enclosed feeding or local dust extraction and suitable particulate exposure controls. Wear gloves, goggles and work clothing; avoid dust inhalation. Monitor airborne antimony against applicable occupational limits.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
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