ANTIMONY OXIDE NANOPOWDER

Purity 99.9%

Sb$_2$O$_3$

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Antimony oxide nanoparticles are a key member among all the other metal oxides from V to VI groups. There are three phases of well-identified, which are antimony trioxide (Sb2O3), antimony tetroxide (Sb2O4), and antimony pentoxide (Sb2O5). The change in Gibbs energy is the key parameter that affects the formation of the desired phase. Antimony oxide nanoparticles possess excellent properties as compared to bulk Sb2O3, for example, a higher refractive index, higher abrasive resistance, higher proton conductivity, excellent mechanical strength, and higher absorbability. Unique properties of antimony oxide nanoparticles, a few technological applications have been raised eventually. These applications can be grouped into three fields, namely, chemical, sensing, and semiconductors. Antimony oxide nanoparticles are useful as a flame retardant synergist using it together with halogenated compounds in plastics, paints, adhesives, sealants, rubbers, and textile back coatings.

**Quick Facts**

**Product**: Antimony Oxide Nanopowder  
**Stock No**: NS6130-03-340  
**CAS**: 1309-64-4  
**Color**: White  
**Form**: Powder  
**Symbol**: Sb₂O₃  
**Group**: Antimony 15/Oxygen 16  

**Electronic Configuration**: Antimony [Kr] 4d105s2 5p3 /Oxygen [He] 2s2 2p4

**Applications**

- In high conductivity applications
- As an antistatic additive and a flame retardant in coatings, nanowires, plastics, fiber and textiles
- In some alloy and catalyst applications
- In electro-optics and magnetic machines and micro-equipment
- Construction of LEDs, LCDs and other lights and display devices.
- Flame retardant applications
- Magnetic applications