



Anhydrous zinc borate

Hexaboron dizinc undecaoxide

Grade: Granular

CAS Number 12767-90-7

Polymer protection at very high temperatures

Firebrake[®] 500 is a dehydrated, white, crystal-like powdered zinc borate with multifunctional fire-retardant applications in a variety of polymers.

Applications

Firebrake 500 can be used as a flame retardant and smoke suppressant in a variety of polymers including polyetherketone, polysulfone, fluoropolymer, polyester, and nylon. It can be fed to extruders, calenders, or injection moulding equipment in the same way as other solid polymer additives.

Firebrake 500's rate of heat release is a benefit where this factor is important, as in aircraft applications.

Characteristics

Theoretical chemical composition

Boric oxide (B_2O_3)	56.2%
Zinc oxide (ZnO)	43.8%

Typical properties

Refractive index	1.58
Median particle size (laser diffraction)	9 microns
Weight loss (TGA)	1.5 max to 400°C
Thermal stability	Stable up to about 600°C Can gradually absorb surface moisture—store in sealed container
Specific gravity	2.6

Stability

Since it contains no water of hydration, *Firebrake* 500 is stable up to 600°C (1112°F) and can be used in polymer systems requiring very high processing temperatures. The product is chemically stable and shows little tendency to cake.

Storage

Should be stored in a sealed container because of its tendency to gradually pick up surface moisture in high humidity environments. This surface moisture is easily removed by heating at about 200°C.

Containers

25kg (55lbs) plastic bags and IBCs



About U.S. Borax

U.S. Borax, part of Rio Tinto, is a global leader in the supply and science of borates—naturally-occurring minerals containing boron and other elements. We are 1,000 people serving 650 customers with more than 1,800 delivery locations globally. We supply around 30% of the world's need for refined borates from our world-class mine in Boron, California, about 100 miles northeast of Los Angeles.

About 20 Mule Team products

U.S. Borax produces the *20 Mule Team*® borates family of products from naturally occurring minerals and have an excellent reputation for purity and safety when used as directed. Borates are key ingredients in a number of industrial applications including fiberglass, glass, ceramics, batteries and capacitors, wood preservatives, and flame retardants.

High quality, high reliability, high performance borate products. It's what we're known for.

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