

HOFNIL-ZB-2335

HOFNIL-ZB is a boron-based versatile flame retardant widely used in polymers, plastics, and rubber compounds due to its ability to release water at high temperatures, aiding in fire suppression. It is effective in enhancing the fire resistance of materials such as PVC, polyolefins, elastomers, polyamides, and epoxy resins.

When used with antimony oxide, zinc borate effectively contributes to flame retardancy in halogen-containing systems. In halogen-free systems, zinc borate is typically combined with other flame retardants to achieve optimal fire protection. These include alumina trihydrate (ATH), which releases water when heated to help cool the material and form a protective char layer; magnesium hydroxide ($Mg(OH)_2$), which decomposes endothermically to release water and act as a heat sink; red phosphorus, which promotes char formation and acts as a flame retardant; and ammonium polyphosphate (APP), which aids in forming a char layer and releasing phosphorus-containing acids to inhibit flame spread. Zinc borate is used as a flame retardant, char promoter, smoke suppressant, and anti-arc agent.

PRODUCT PROPERTIES

Product Name: HOFNIL-ZB-2335

Product Code: ZB-2335

TECHNICAL PARAMETERS		
S. NO.	PARAMETERS	SPECIFICATION
1.	Appearance	White powder
2.	pH (10% w/v)	6.0-7.0
3.	Boron trioxide content (%)	46.5 – 49.5
4.	Zinc oxide content (%)	37.0 – 40.0
5.	Moisture content (%)	≤ 1.0
6.	Weight loss on heating at 270 °C (%)	≤ 6.0
7.	Weight loss on heating at 850 °C (%)	≤ 16.0
8.	Water of crystallization (%)	11.5 – 16.5
9.	Particle size, D50 (μm)	≤ 5
10.	Dehydration temperature (°C)	330 – 340

Applications of HOFNIL-ZB-2335

- HOFNIL-ZB can be used as a multifunctional synergistic additive with antimony oxide and other halogen flame retardants. It effectively enhances flame retardancy, reduces smoke production during

combustion, and can improve various properties of rubber products, including chemical resistance, mechanical strength, and electrical performance.

- It is widely used in the processing of plastics and rubber. It can be directly applied to materials such as PVC (polyvinyl chloride), PE (polyethylene), PP (polypropylene), reinforced polyamides, PVC resin, polyphenylene ethylene, epoxy resin, polyester resin, ethylene-vinyl acetate, natural rubber, styrene-butadiene rubber, and chloroprene rubber. These applications benefit from improved flame retardancy and reduced smoke generation.
- Beyond plastics and rubber, HOFNIL-ZB can be used in the production of paper, fiber fabrics, decorative panels, floor leather, wallpaper, carpet, ceramic glaze, fungicides, and paint. These uses leverage its flame-retardant properties to enhance the safety and performance of these materials.

Please Note: We are manufacturing other grades of ZB, blends, and surface coated ZB as well like anhydrous and a specified grade for high temperature polymers. We can provide technical data or assistance in order to make better FR for any kind of material.

For further information, please contact manufacturer:

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