Zinc Borate Tech Data Sheet

Item\Specification	$ZB3.5H_2O$	$ZB7H_2O$	$ZB3H_2O$
ZnO, %	36.0-39.0	32.0-35.0	44-47
B_2O_3, %	45.0-48.0	40.0-43.0	37.5-40
Appearance water, %	≤ 0.5		
Weight loss on ignition	13.5-15.5	24.0-26.5	14-16
Particle size range, µm	2-5 6-10	3-5	3-5
Melting point	980		
Loss crystalline water temperature	> 320		
Refractive index	1.58		
Screen floating	≤ 0.01		
Cd ppm	≤ 5		
Arsenic ppm	≤ 1		
Fe ppm	≤ 20		
Pb ppm	≤ 10		

Key Benefits

- **Flame Retardant**
- **Smoke Suppressant**
  In contrast to antimony oxide, which promotes smoke formation, zinc borate reduces smoke emission
- **Synergist with antimony oxide**
  Use in conjunction with antimony oxide to give synergistic effect
- **Synergist with Alumina Trihydrate (ATH) or Magnesium compounds**
  Use in conjunction with alumina trihydrate or magnesium compounds such as magnesium hydroxide and magnesium carbonate to give synergistic effect
- **Acid Suppressant**
  Low HCl/acid value
- **Afterglow Suppressant**
- **Char Promoter**
  Form a glassy layer
- **Corrosion Inhibition**
  Used in flame retardant vinyl chloride latex formulations, as an adhesive in bonding fiberglass insulation to aluminum foil
- **Low Tinting Strength**
  Has a refractive index similar to most polymer systems, which results in the retention of considerable translucence, which allows the use of lower pigment loading as compared to antimony oxide
- **Specific Gravity of 2.77**
- **Considered Low Toxicity**

Introduction:
Zinc Borate is environmental protection non-halogen flame retardants, According to the difference of composition (XZnO.YB2O3.ZH2O), FB flame retardant has more than ten varieties. Through SGS testing, zinc borate is environmental protection type non-halogen flame retardants. Zinc Borate can be used as a fire retardant in PVC, Polyolefins, Elastomers, Polyamides, Epoxy resins. In halogen-containing systems, ZB is used in conjunction with antimony oxide, while in halogen-free systems; it is normally used in conjunction with alumina trihydrate, magnesium hydroxide, or red phosphorus. In some particular application Zinc Borate can be used alone. The most commonly used variety is this product-3.5 water zinc, also know ZB-2335, flame retardants. This product is non-toxic, low-water-soluble, high heat stability, small particle size, proportion small proportion, good dispersion characteristics, as highly effective flame retardants is widely used in plastics, rubber, paint and other fields.

Product Applications:

1. Zinc Borate can be used as a kind of multi-functional synergistic additive of Anti mony oxide and other halogen flame retardant ,can improve the nature of flame retardant effectively, to reduce the smoke produced when combustion, and can adjust rubber products chemical machinery, electricity and other aspects of perf ormance.

2. As the partial or completely environmental protection substitute of containing h alogen and other flame retardants , zinc borate is being directly applied to a wide range of plastics and rubber processing, such as PVC, PE, PP, enhance polyamide, PVC resin, polyphenylene ethylene, epoxy resin, polyester resin acid ethylene an d natural rubber, styrene butadiene rubber, chloroprene rubber. It can also be a pplied to the production of paper, fiber fabric, decorative panels, floor leather, w allpaper, carpet, ceramic glaze, fungicides, and paint production in order to impr ove flame retardants performance.

3. Based on other natures, zinc borate, can also be used for anti-corrosion, far-infra red absorption, and timbers anti-pest and anti-bacteria handle and other fields.