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Zinc Borate, a non-halogen flame retardant, approved by EPA (Environmental Protection Agency), is a low toxicity and inorganic amalgam. The most applauded attribute of this flame retardant and smoke suppressant chemical is its non-toxic, stability with high heat and low water solubility.

This chemical has various closely related synonyms as well or in other words it has few other chemical names such as Boric Acid, Zinc Salt, Hydrate, Boron Zinc Oxide, Hydrate and Firebrake ZB. This agent is a composite of elements like Boron, Oxygen and Zinc and the chemical formula that represents its chemistry is 2 ZNO.3 B2O3.3.5H2O (chemical formula)

Its applications -

Zinc Borate is used for various purposes, such as:

It is primary used for cellulose fibers, textiles, paints, papers, pigments, rubbers and adhesives as well.

The chemical is competent of replacing antimony trioxide as a synergist in both systems whether they are halogen based or halogen free.

The appropriate combination of alumina, red phosphorus, trihydrate or magnesium bydroxide is generally used, when Zinc Borate is to be used in halogen free systems.

Most of us donâ€™t know that this agent is an anti-dripping and char-promoting one and in all circumstance, it hold back the adhesives of afterglows.

The product is also used as a fire retardant in PVC, polyolefins, elastomers, polyamides, and epoxy resins.

It holds back arcing and tracking, when used in electrical insulators.

It is also used in the manufacturing of paper, floor leather, fiber fabric or decorative boards.

As this chemical is an agent that retards, delays or hinders, it is also used in vinyl chloride latex formulations.

It is also used as epoxy resins while bonding fiberglass insulation to aluminum foil.

Health hazards -

In case of any accidental exposure with this chemical, one must see a doctor immediately in case -

One complaints about irritation in eyes or nose or throat (E.N.T)

If one has its contact with eyes, do not close eyelids and use plenty of water

In case one has inhaled it by mistake, breathing difficulty or coughing will be the result and if breathing is stopped; use artificial respiration or give oxygen.

If swallowed, will results in nausea, queasiness and vomiting. In this kind of situation, remove infected clothes and shoes and use plenty of water as flushing the affected area.

Handling precautions -

The chemical demands careful handling, so one must use security goggles, protective gloves and finally yet importantly, face shield, while handling Zinc Borate.

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