**Application of Boric Acid**

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Boronic acid, with the chemical formula $H_3BO_3$, is a white powdery crystal or a scaly lustrous crystal with a triclinic axis. It has a slippery touch and no smell. Dissolved in water, alcohol, glycerin, ethers and essential oils, the aqueous solution is weakly acidic. It is widely used in the glass (optical glass, acid-resistant glass, heat-resistant glass, glass fiber for insulating materials) industry to improve the heat resistance and transparency of glass products, increase mechanical strength, and shorten the melting time.

【Application】

Electronic components industry, high-purity analytical reagents, medicinal disinfection and anticorrosion, photosensitive material processing chemicals.

【Properties】

White powdery crystals or scaly lustrous crystals with three oblique axes. It has a slippery feel and no smell. It is soluble in water, alcohol, glycerin, ethers and essential oils. Odorless. The taste is slightly sour and bitter and sweet. It feels slippery in contact with skin. No change in the exposed air. Can volatilize with water vapor. When heated to 100□105℃, it loses a molecule of water to form metaboric acid. It is converted into pyroboric acid when heated for a long time at 104□160℃, and anhydrous is formed at higher temperature. It is irritating. Toxic, cause death when taken orally.

Boronic Acid

Boronic Acid

【Use】

If the laboratory is splashed by strong alkali, in addition to washing with plenty of water, it should also be coated with boric acid solution. To neutralize the residual strong base. This is the most basic and one of the most recent uses. (If there is no boric acid solution around and being splashed by a strong base, carbonic acid can be used in an emergency, but boric acid is preferred because boric acid is also an acid, which is weaker than the carbonic acid in cola.)

Prepare the buffer. boronic acid synthesis. Insecticide for cockroaches and black beetles in carpets. Used in medicine as a hemostatic agent and preservative.

Used as a pH regulator, disinfectant, antibacterial preservative, etc.; used to prepare borate, borate, optical glass, paint, pigment, boric acid soap, leather finishing agent, printing and dyeing auxiliary, and medical disinfection □ etc.

Used in capacitor manufacturing and electronic component industry, high-purity analytical reagents, medicinal disinfection and anti-corrosion, and preparation of exposed photosensitive materials processing chemicals.

Used in glass, enamel, ceramics, medicine, metallurgy, leather, dyes, pesticides, fertilizers, textiles and other industries; used as chromatographic analysis reagents, also used in the preparation of buffers; widely used in glass (optical glass, acid-resistant glass, Glass fiber for thermal glass and insulating materials) industry can improve the heat resistance and

transparency of glass products, increase the mechanical strength, and shorten the melting time. In the enamel and ceramic industries, it is used to enhance the gloss and fastness of enamel products, and is also one of the components of glazes and pigments. Used as an additive and cosolvent in the metallurgical industry, especially boron steel has high hardness and good rolling ductility, and can replace nickel steel. Boric acid has antiseptic properties and can be used as a preservative, such as wood preservation. It is used in metal welding, leather, photography and other industries, as well as in the manufacture of dyes, heat-resistant and fire-resistant fabrics, artificial gems, capacitors, and cosmetics. It can also be used as insecticide and catalyst. Agricultural fertilizers containing boron trace elements are effective for many crops and can improve crop quality and yield.

Boric acid is also one of the basic raw materials for the production of other borides. The boron compounds produced by it are widely used in national defense and other industrial departments and scientific research units. Used as a PH regulator, antibacterial preservative.

Storage and transportation matters

It should be stored in a dry and clean warehouse, and should not be stacked in the open, and should be protected from rain or moisture. It should be transported in a boxcar, a cabin or a car with a shed. It should not be stacked with damp objects and colored materials. The means of transport must be dry and clean.

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