

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Boric Acid
- English Name: Boric Acid; Orthoboric Acid
- CAS Number:10043-35-3
- Formula:H₃BO₃
- Molecular Weight:61.83 g/mol
- Product Characteristics: White crystalline powder with no obvious odor. High-purity weak acid with mild antiseptic and flame-retardant properties. Low-toxic, non-flammable, soluble in water. Suitable for glass production, ceramics, pharmaceuticals, and laboratory research.

2. Technical Specifications

Item	Specification
Appearance	White crystalline powder
Purity (HPLC)	≥ 99.5%
Melting Point	169-171 °C
Water Content	≤ 0.5%
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Iron (Fe)	≤ 1 ppm
pH Value (1% aqueous solution, 25°C)	4.5-5.5
Solubility (25°C)	5.7 g/100 mL water
Flame-Retardant Property	Effective flame retardant for polymers

3. Product Advantages

1. High Purity: Meets pharmaceutical/industrial standards with low impurity content.
2. Mild Reactivity: Ideal for applications requiring weak acid properties.
3. Multi-Functional: Flame-retardant, antiseptic, and buffering properties.
4. Low Toxicity: Safe for controlled use in pharmaceuticals and consumer products.

4. Application Fields

- Glass Industry: Production of heat-resistant glass and optical glass.
- Ceramic Industry: Glaze component for ceramics and enamels.
- Pharmaceutical: Antiseptic and astringent in topical medications.
- Laboratory Research: Analytical reagent and buffer component.
- Industrial Processing: Flame retardant for polymers and textiles.

5. Usage Methods

- Dosage: 5-20% concentration (adjust by application).
- Application: Dissolve in water before use; mix evenly with other ingredients.
- Optimal Conditions: Operate in well-ventilated areas; avoid contact with strong bases.

6. Packaging & Storage

- Packaging: 1kg/5kg HDPE bags, 25kg cardboard drums, 50kg steel drums (UN-approved).
- Storage: Cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); sealed, away from heat/moisture.
- Shelf Life: 24 months (unopened, specified conditions).
- Transportation: Non-hazardous; transport by ordinary vehicles.

7. Safety & Protection

- Low-toxic and non-flammable; avoid dust inhalation and prolonged skin contact.
- Wear dust mask, nitrile rubber gloves, and safety glasses during handling.
- In case of eye contact, rinse with plenty of water for 5-10 minutes.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch comes with a COA for compliance verification.
- Provide technical support for application optimization and formulation design.