

PRODUCT IDENTIFICATION

**Product Name:** Boric Acid Technical Grade**CAS Number:** 10043-35-3**Molecular Formula:** BH_3O_3 **Molecular Weight:** 61.84 g/mol**Grade:** Technical Grade**Purity / Concentration:** 100%**Synonyms:** Boracic Acid, Boric Anhydride

PRODUCT OVERVIEW

Boric Acid Technical Grade is a high-purity, white crystalline powder essential for industrial chemical applications. With a verified assay of 100.1% and minimal trace impurities, this product provides consistent performance for pH buffering and material stabilization.

Grade Significance: Technical Grade ensures the product meets rigorous industrial standards for purity and performance while remaining cost-effective for large-scale manufacturing. It provides the exact chemical profile required for industrial processes without the premium costs associated with pharmaceutical or reagent grades.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	100.1	99.5	100.5	Titration (for H ₂ O ₂ 30%)
pH	—	4.2	3.8	4.8	pH Meter
Heavy Metals (as Pb)	ppm	4.4	0	10	ICP
Iron (Fe)	ppm	2	0	5	ICP-MS
Chloride (Cl ⁻)	ppm	ND	0	0.0050	Ion chromatography
Sulfate (SO ₄ ²⁻)	ppm	ND	0	0.02	Ion chromatography

Values based on 2 batches tested. ND = Not Detected.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White fine crystalline powder, lightweight texture	Odor	Odorless
Form	Solid	Boiling Point	572 °F at 760 mmHg (decomposes) (NTP, 1992)
Melting / Freezing Point	340 °F (NTP, 1992)	Specific Gravity	1.435
Solubility	High water solubility	Molecular Formula	BH_3O_3
Molecular Weight	61.84 g/mol	Vapor Pressure (20°C)	0.0001 mmHg
Refractive Index (20°C)	1.47	Density (25°C)	1.44 g/mL
Decomposition Temp.	158°C		

APPLICATIONS

1. **Agriculture** — Used as a micronutrient additive to enhance soil health and support optimal plant growth.
2. **Wood Treatment** — Functions as a potent preservative to protect timber from fungal decay and insect infestation.
3. **Chemical Manufacturing** — Serves as a reliable pH buffer and precursor in various complex chemical synthesis processes.
4. **Flame Retardants** — Incorporated into materials to effectively reduce flammability and enhance fire safety standards.

STORAGE & HANDLING

Boric Acid should be stored in a cool, dry, and well-ventilated area to maintain its chemical integrity and prevent clumping. Because it is classified as a reproductive hazard, storage areas must be secured to prevent unauthorized access and ensure proper containment of the powder.

- Store in a cool, dry place away from moisture.
- Use appropriate PPE such as gloves and goggles when handling.
- Compatible with HDPE and glass containers; avoid metal containers.
- Keep away from strong acids and bases to prevent reactions.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 50 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H360FD: May damage fertility. May damage the unborn child.

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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