

PRODUCT IDENTIFICATION



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

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Technical Grade Boric Acid, a versatile crystalline powder essential for industrial chemical processes. With a 99.8% assay and strictly controlled trace impurities like iron and chloride, this product provides reliable performance for manufacturing and agricultural applications.

Grade Significance: Technical grade indicates a product manufactured for industrial efficiency, balancing high purity with cost-effectiveness for non-pharmaceutical or non-food applications.

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. **Chemical Manufacturing** — Acts as a critical buffering agent to maintain stable pH levels in various synthesis reactions.
2. **Agriculture** — Used as a micronutrient additive to enhance soil quality and promote healthy plant growth.
3. **Wood Treatment** — Functions as a preservative to protect timber from fungal decay and wood-boring insect infestations.
4. **Flame Retardants** — Integrated into materials to reduce flammability and improve safety profiles in consumer and industrial goods.

STORAGE & HANDLING

Proper storage in a cool, dry, well-ventilated area is essential to prevent moisture absorption and clumping. Because of its classification as a reproductive toxin, containers must be kept tightly sealed and stored away from incompatible substances to ensure workplace safety and maintain product integrity.

- 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 [Danger Reproductive toxicity]

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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