

### 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 (wt%)	%	99.8	99.5	—	Titration
Residue After Ignition	%	0.02	—	0.1	Gravimetric
Water Content	%	0.2	—	0.5	Karl Fischer
Iron (Fe)	ppm	1	—	5	Spectrophotometry
Chloride (Cl <sup>-</sup> )	ppm	2	—	10	Turbidimetry
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	5	—	20	Turbidimetry

ND = Not Detected. Values are typical and may vary by lot.

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	White fine crystalline powder, lightweight texture	<b>Odor</b>	Odorless
<b>Form</b>	Solid	<b>Boiling Point</b>	300°C (572°F)
<b>Melting / Freezing Point</b>	170°C (338°F)	<b>Specific Gravity</b>	1.435
<b>Solubility</b>	High water solubility	<b>Molecular Formula</b>	$BH_3O_3$
<b>Molecular Weight</b>	61.84 g/mol	<b>Vapor Pressure (20°C)</b>	0.0001 mmHg
<b>Refractive Index (20°C)</b>	1.47	<b>Density (25°C)</b>	1.44 g/mL
<b>Decomposition Temp.</b>	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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