TECHNICAL DATA SHEET

Boric Acid Powder 99% Acs Grade

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Boric Acid Powder 99% Acs Grade
CAS Number: 10043-35-3
Molecular Formula: BH_3O_3
Molecular Weight: 61.84 g/mol
Grade: ACS Grade
Purity / Concentration: 99%
Synonyms: Boric Acid, Boracic Acid

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Boric Acid Powder in ACS Grade, meeting the rigorous standards required for precision laboratory and industrial applications. With an assay of 100.0% and exceptionally low trace metal levels, such as 0.1 ppm for both iron and heavy metals, this fine white powder serves as a reliable boron source for sensitive formulations.

Grade Significance: ACS Grade signifies that the product meets the strict purity standards set by the American Chemical Society, ensuring it is suitable for analytical and research-grade applications where high consistency is critical.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	100.0	99.5	—	Titration
Residue After Ignition	%	0.0050	—	0.025	Gravimetric
Heavy Metals (as Pb)	ppm	0.1	—	0.0010	Spectrophotometry
Iron (Fe)	ppm	0.1	—	0.0010	Spectrophotometry
Chloride (Cl^-)	ppm	1	—	0.0010	ISE
Phosphate (PO_4^{3-})	ppm	0.5	—	5	Spectrophotometry
Sulfate (SO_4^{2-})	ppm	1	—	0.0050	Turbidimetry
Insoluble In Alcohol	%	0.0010	—	0.0050	Gravimetric

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Fine white crystalline powder, soft texture	**Odor**	Odorless
Form	Solid	**Boiling Point**	300°C (572°F)
Melting / Freezing Point	171°C (339.8°F)	**Flash Point**	No data
Specific Gravity	1.435	**Solubility**	High water solubility, moderate alcohol
Molecular Formula	BH_3O_3	**Molecular Weight**	61.84 g/mol
Density (25°C)	1.435 g/mL		

APPLICATIONS

1. **Glass Manufacturing** — Boric acid is utilized in the production of specialized glass to improve its overall durability and resistance to thermal shock.
2. **Agriculture** — It serves as a vital micronutrient source of boron in fertilizers, which is essential for healthy plant growth and development.
3. **Pharmaceuticals** — This high-grade powder acts as a precise preservative in select pharmaceutical formulations, ensuring product stability.
4. **Chemical Processing** — It is widely used across various industrial processes to act as a buffer for maintaining stable pH levels in chemical solutions.

STORAGE & HANDLING

Boric acid should be stored in a cool, dry, and well-ventilated area in a tightly sealed container to prevent moisture absorption and clumping. Proper containment is essential to minimize the risk of accidental exposure, as this substance is classified as a reproductive hazard.

- Store in a cool, dry place away from moisture.
- Use containers made of HDPE or glass to prevent contamination.
- Avoid contact with strong acids or bases.
- Ensure proper ventilation when handling to avoid inhalation of dust.
- Wear appropriate personal PPE such as gloves and goggles.

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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