

## TECHNICAL DATA SHEET

|                             |   |
|-----------------------------|---|
| <b>Product:</b>             | Boric Acid Normal Sulfate (Granular and Powder)   |
| <b>Synonyms:</b>            | Boracic acid, Boronic Acid  |
| <b>CAS#</b>                 | 10043-35-3  |
| <b>Formula:</b>             | H <sub>3</sub> BO <sub>3</sub>  |
| <b>Product Description:</b> | Boric acid is a granular or powder, white crystalline solid with a slippery or soapy feel.  |
| <b>Packaging:</b>           | Boric acid is available in 25 kg (55 lb.) multi-wall paper or plastic bags, 1000 kg (2200 lb.) bulk bag packaging.  |
| <b>Applications:</b>        | <ul style="list-style-type: none"><li>- Synthesis of various boron derivatives</li><li>- Glass and ceramics</li><li>- Textile fiberglass</li><li>- Cellulose Insulation</li><li>- Agriculture</li><li>- Nuclear reactors</li><li>- Lubrication</li><li>- Pyrotechnics</li><li>- Wood preservation</li><li>- Insecticide</li><li>- Pharmaceuticals</li><li>- Adhesives</li></ul> |
| <b>Precautions:</b>         | Boric acid is chemically stable under normal condition of storage, however, it is advised to store Boric acid under dry, cool and steady temperature conditions. During storage and transport avoid any wide variation in temperature. With temperature cycling and exposure to humid environment, Boric acid shows tendency for caking.  |

### Typical properties of Boric Acid:

| Property                                    | Typical Value  |
|---|--|
| Appearance                                  | Granular slippery white powder                                       |
| Bulk Density                                | 50-60lb/ft <sup>3</sup> (Granular); 35-40lb/ft <sup>3</sup> (Powder) |
| Angle of repose                             | 32-34°   |
| Solubility in water at 20°C, 50°C and 100°C | 4.7%, 10.3% and 27.5% respectively                                   |
| Solubility in Glycerol at 20°C              | 19.9%  |
| Solubility in Ethylene Glycol at 25°C       | 13.6%  |
| Solubility in Ethanol at 25°C               | 11.96  |

### Chemical Analysis

| Component                     | Unit | Specification (min-max) | Typical Value Granular | Specification (min-max) | Typical Value Powder |
|-------------------------------|------|-------------------------|------------------------|-------------------------|----------------------|
| B <sub>2</sub> O <sub>3</sub> | %    | 56.25-56.9%             | 56.5                   | 56.25-56.8%             | 56.5                 |
| SO <sub>4</sub>               | ppm  | 300 max.                | 250                    | 300 max.                | 250                  |
| Fe                            | ppm  | 4 max.                  | 3                      | 4 max.                  | 3                    |
| Cl                            | ppm  | 5 max.                  | 5                      | 5 max.                  | 5                    |
| Water Insoluble               | ppm  | -                       | 60                     | -                       | 60                   |
| Purity                        | %    | 99.92-101.07%           | 100                    | 99.92-101.07%           | 100                  |

### Dry Sieve Analysis

| Size        | US Mesh | Unit | Specification Granular | Typical Value Granular | Specification Powder | Typical Value Powder |
|-------------|---------|------|------------------------|------------------------|----------------------|----------------------|
| (+)1.000 mm | +18     | %    | 4 max.                 | 2.0                    | 0 max.               | 0.0                  |
| (+)0.841 mm | +20     | %    | -                      | 5.5                    | -                    | -                    |
| (+)0.420 mm | +40     | %    | -                      | 14.0                   | -                    | -                    |
| (+)0.149 mm | +100    | %    | -                      | 65.0                   | -                    | -                    |
| (-)0.125 mm | -120    | %    | -                      | -                      | 45 min.              | 75.0                 |
| (+)0.074 mm | +200    | %    | -                      | 10.0                   | -                    | -                    |
| (-)0.063 mm | -230    | %    | 4 max.                 | 2.0                    | -                    | -                    |
| (+)0.044 mm | +325    | %    | -                      | 1.0                    | -                    | -                    |
| (-)0.044 mm | -325    | %    | -                      | 0.5                    | -                    | -                    |

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