



# SAFETY DATA SHEET

Revision Date 10-Aug-2015

Version 1

## 1. IDENTIFICATION

**Product Name** Boric Acid  
**Product Code** 2266  
**CAS No.** 10043-35-3  
**Chemical Formula**  $H_3BO_3$   
**Recommended Use** For laboratory, scientific, R&D or manufacturing use.  
**Company** E K Industries, Inc.  
1403 Herkimer St.  
Joliet, IL 60432  
Tel. (800) 283-4244  
**Emergency Telephone** Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                       |             |
|-----------------------|-------------|
| Reproductive toxicity | Category 1B |
|-----------------------|-------------|

### Label elements

#### **Signal word**

Danger

#### **Hazard statements**

May damage fertility or the unborn child.



#### **Precautionary Statements - Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

#### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.

#### **Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name | CAS No.    | Weight-% |
|---------------|------------|----------|
| Boric Acid    | 10043-35-3 | >99      |

**4. FIRST AID MEASURES****Description of first aid measures**

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Eye contact</b>  | Flush eyes with plenty of water, removing contact lenses if present. Get medical attention if irritation develops.      |
| <b>Skin contact</b> | Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops. |
| <b>Inhalation</b>   | Remove to fresh air. Get medical attention for any breathing difficulty.                                                |
| <b>Ingestion</b>    | Rinse mouth. Drink 1 or 2 glasses of water. Call a physician or poison control center immediately.                      |

**Most important symptoms and effects, both acute and delayed**

|                 |                           |
|-----------------|---------------------------|
| <b>Symptoms</b> | No information available. |
|-----------------|---------------------------|

**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous combustion products**

Oxides of boron.

**Protective equipment and precautions for firefighters**

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

|                    |                         |                       |                      |                                           |
|--------------------|-------------------------|-----------------------|----------------------|-------------------------------------------|
| <b><u>NFPA</u></b> | <b>Health hazards</b> 2 | <b>Flammability</b> 0 | <b>Instability</b> 0 | <b>Physical and Chemical Properties</b> - |
|--------------------|-------------------------|-----------------------|----------------------|-------------------------------------------|

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b>      | Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. |
| <b>Environmental precautions</b> | Prevent entry into waterways, sewers, basements or confined areas.                                        |

**Methods and material for containment and cleaning up**

|                                |                                                       |
|--------------------------------|-------------------------------------------------------|
| <b>Methods for containment</b> | Prevent further leakage or spillage if safe to do so. |
|--------------------------------|-------------------------------------------------------|

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** Acid anhydrides. Potassium. Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

| Chemical Name            | ACGIH TLV                                                                                   | OSHA PEL | NIOSH IDLH |
|--------------------------|---------------------------------------------------------------------------------------------|----------|------------|
| Boric Acid<br>10043-35-3 | STEL: 6 mg/m <sup>3</sup> inhalable fraction<br>TWA: 2 mg/m <sup>3</sup> inhalable fraction | -        | -          |

### Appropriate engineering controls

**Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                                       |                          |
|---------------------------------------|--------------------------|
| <b>Physical state</b>                 | Solid                    |
| <b>Appearance</b>                     | White, crystalline       |
| <b>Odor</b>                           | odorless                 |
| <b>Odor threshold</b>                 | No information available |
| <b>pH</b>                             | No information available |
| <b>Melting point / freezing point</b> | 169 C                    |
| <b>Boiling point / boiling range</b>  | 300 C                    |
| <b>Flash point</b>                    | No information available |
| <b>Evaporation rate</b>               | No information available |
| <b>Flammability (solid, gas)</b>      | No information available |
| <b>Flammability Limit in Air</b>      |                          |
| Upper flammability limit:             | No information available |
| Lower flammability limit:             | No information available |
| <b>Vapor pressure</b>                 | No information available |
| <b>Vapor density</b>                  | No information available |
| <b>Relative density</b>               | 1.44                     |
| <b>Water solubility</b>               | Soluble in water         |
| <b>Solubility in other solvents</b>   | No information available |
| <b>Partition coefficient</b>          | No information available |
| <b>Autoignition temperature</b>       | No information available |
| <b>Decomposition temperature</b>      | No information available |
| <b>Kinematic viscosity</b>            | No information available |

## 10. STABILITY AND REACTIVITY

**Stability** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions** None under normal processing.

**Conditions to avoid** Extremes of temperature and direct sunlight. Moisture.

**Incompatible materials** Acid anhydrides. Potassium. Strong oxidizing agents.

**Hazardous Decomposition Products** Boron oxides.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Inhalation** No data available.

**Eye contact** No data available.

**Skin contact** No data available.

**Ingestion** No data available.

| Chemical Name            | Oral LD50            | Dermal LD50             | Inhalation LC50         |
|--------------------------|----------------------|-------------------------|-------------------------|
| Boric Acid<br>10043-35-3 | = 2660 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 0.16 mg/L ( Rat ) 4 h |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP

**Reproductive toxicity** Contains a known or suspected reproductive toxin

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

| Chemical Name            | Algae/aquatic plants | Fish                                                   | Crustacea                                  |
|--------------------------|----------------------|--------------------------------------------------------|--------------------------------------------|
| Boric Acid<br>10043-35-3 | -                    | 1020: 72 h Carassius auratus mg/L<br>LC50 flow-through | 115 - 153: 48 h Daphnia magna<br>mg/L EC50 |

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

| Chemical Name            | Partition coefficient |
|--------------------------|-----------------------|
| Boric Acid<br>10043-35-3 | -0.757                |

**Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

| Chemical Name            | California Hazardous Waste Status |
|--------------------------|-----------------------------------|
| Boric Acid<br>10043-35-3 | Toxic                             |

**14. TRANSPORT INFORMATION**

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

**DOT** Not regulated

**IATA** Not regulated

**15. REGULATORY INFORMATION****US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

|                                   |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire hazard                       | No  |
| Sudden release of pressure hazard | No  |
| Reactive Hazard                   | No  |

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

This chemical does not contain any substances regulated by state right-to-know regulations

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**16. OTHER INFORMATION**

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**Prepared By**

EKI Regulatory Affairs (Email: reg@eki-chem.com)

**Revision Date**

10-Aug-2015

**Disclaimer**

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**End of Safety Data Sheet**