

## SAFETY DATA SHEET

Preparation Date: 7/6/2015

Revision Date: 6/19/2018

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** BO110  
**Product Name:** BORIC ACID, POWDER, NF

**Other means of identification**

**Synonyms:** Basilit B  
 Boracic acid  
 Boron trihydroxide  
 Borsauere (German)  
 Borofax  
 Orthoboric acid  
 Trihydroxyboroneborique (French)  
 Ácido bórico (Spanish)

**CAS #:** 10043-35-3  
**RTECS #** ED4550000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Weatherproofing Wood. In the manufacturer of cements, crockery, procelain, enamels, glass, borates (inorganic borate salts), leather, carpets, hats, soaps, artificial gems; in painting; in photography; flame retardant in wood and textiles; additive for glass fibers; catalyst for alcohol production; insecticidal.

**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300

**Contact Person:** Martin LaBenz (West Coast)

**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Serious eye damage/eye irritation	Category 2B
Reproductive toxicity	Category 2

**Label elements**

**Warning****Hazard statements**

Causes eye irritation  
Suspected of damaging fertility or the unborn child

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

May be harmful in contact with skin  
May be harmful if swallowed

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

*IF exposed or concerned: Get medical advice/attention*

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: 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**

Components	CAS-No.	Weight %
Boric Acid	10043-35-3	100

**4. FIRST AID MEASURES****First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:**

Flush eyes with water for 15 minutes. Get medical attention.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

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

**Symptoms** Causes eye irritation  
It may cause "Borism" which is characterized by dry skin, skin eruptions, eczema, and gastric disturbances such as nausea, vomiting, hypermotility, diarrhea, and anorexia and weight loss, central nervous system effects

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** No information available.

**Specific hazards:** A mixture of potassium and boric acid may explode on impact. A mixture of boric acid and acetic anhydride will explode when heated to 58-60 °C.

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

#### **Incompatible Materials:**

Potassium  
Acetic anhydride  
Alkalis

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Boric Acid	10043-35-3	None	None	6 mg/m <sup>3</sup> STEL inhalable particulate matter 2 mg/m <sup>3</sup> TWA inhalable particulate matter	None

##### **Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Boric Acid	10043-35-3	None	2 mg/m <sup>3</sup> TWA inhalable 6 mg/m <sup>3</sup> STEL inhalable	6 mg/m <sup>3</sup> STEL	None

### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Boric Acid	10043-35-3	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

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

#### Personal Protective Equipment

##### Eye protection:

Goggles or Safety glasses with side-shields.

##### Skin and body protection:

Long sleeved clothing  
Gloves  
Chemical resistant apron

##### Respiratory protection:

Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

##### Hygiene measures:

Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical state:

Solid

#### Appearance:

Powder.

#### Color:

White.

#### Odor:

Odorless.

#### Taste

Bitter. Slight.

#### Formula:

H3BO3

#### Molecular/Formula weight (g/mole):

61.83 g/mole

#### Flammability:

No information available

#### Flashpoint (°C/°F):

No information available.

#### Flash Point Tested according to:

Not available

#### Autoignition Temperature (°C/°F):

No information available

#### Lower Explosion Limit (%):

No information available

#### Upper Explosion Limit (%):

No information available

#### Melting point/range(°C/°F):

169-17°C (336.2-339.8°F)

#### Decomposition temperature(°C/°F):

No information available

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**Boiling point/range(°C/°F):**  
300°C (572°F)

**Bulk density:**  
No information available

**Density (g/cm3):**  
No information available

**Specific gravity:**  
1.435-1.5

**pH:**  
5.2

**Vapor pressure @ 20°C (kPa):**  
No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
0.175

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Soluble in hot water  
Soluble in Methanol  
Partially soluble in cold water  
Very slightly soluble in Acetone

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with alkalis

Mixture of potassium and boric acid may explode on impact. Mixture of boric acid and acetic anhydride will explode when heated to 58-60°C

Reacts with basic materials to form borate salts

### Chemical stability

**Stability:** Hygroscopic. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Incompatible materials. Exposure to moist air. Exposure to moisture.

**Incompatible Materials:** Potassium  
Acetic anhydride  
Alkalis

**Hazardous decomposition products:** No information available.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Inhalation. Ingestion. Eyes.

### Acute Toxicity

### Component Information

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Boric Acid	
CAS-No.	10043-35-3

**LD50/oral/rat** = 2660 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 3450 mg/kg Oral LD50 Mouse  
**LD50/dermal/rabbit** = >2000 mg/kg Dermal LD50Rabbit  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = >0.16 mg/L Inhalation LC50 Rat 4 h  
>2.03 mg/L Inhalation LC50 Rat 4 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

## Product Information

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = 2660 mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = 3450 mg/kg

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = > 2000 mg/kg

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = >0.16 mg/l (4-hr.)

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

## Symptoms

**Skin Contact:** May cause skin irritation. It can be absorbed through damaged (broken) or abraded skin. It may be harmful if absorbed through skin. If absorbed through skin, it may cause system effects similar to acute ingestion and affect behavior/central nervous system, the gastrointestinal tract, and respiratory (respiratory depression).

**Eye Contact:** Causes eye irritation.

**Inhalation** Inhalation of dust can cause respiratory tract and mucous membrane irritation. Symptoms may include, nasal and throat irritation, dryness of throat, dry or productive cough, nose bleeds, shortness of breath, chest pain/chesttightness.

**Ingestion** Severe and fatal poisonings have rarely been reported following acute ingestion. However acute ingestion can cause digestive/gastrointestinal tract irritation with nausea, vomiting, diarrhea, dehydration. This may be followed by lowered body temperature(hypothermia) or fever (hyperthermia), red skin rash and affects on behavior/brain/Central Nervous System/nervous system (excitement, wakefulness or depression, restlessness, lethargy, weakness, somnolence, headache, dizziness, lightheadedness, drowsiness, nervousness, extreme irritability, delirium, altered reflexes, confusion, alteration in consciousness (described as "clouded"), convulsions, collapse, unconsciousness, coma), cardiovascular

system(hypotension, dysrhythmia, arrythmias), blood (anemia, leukopenia), liver(hepatomegaly, jaundice, transient elevation in liver function tests), urinary system (kidneys - acute renal faillure, oliguria) and endocrine system. Metabolic acidosis, coughing, and cyanosis acompanied by a weak, rapid pulse may also occur.

**Aspiration hazard** No information available.

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

**Chronic Toxicity** It can cause borism. Borism is a sign of systemic uptake of boron-containing compounds and is characterized by dry skin, skin eruptions, eczema, and gastric disturbances such as nausea, hypermotility, vomiting, and anorexia and weight loss. Prolonged or repeated dermal application and chronic ingestion may also cause other symptoms similar to acute ingestion, and skin absorption. Chronic ingestion of Boric acid may also cause red tongue, patchy alopecia, cracked lips, conjunctivitis.Prolonged or repeated skin contact may also cause dermatitis.Prolonged or repeated inhalation may cause an increase in phlegm production and chronic bronchitis.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Boric Acid	10043-35-3	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organs:** No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

**Product code:** BO110

**Product name:** BORIC ACID, POWDER, NF



Boric Acid - 10043-35-3

**Freshwater Fish Species Data:** 1020 mg/L LC50 Carassius auratus 72 h flow-through 1

**Water Flea Data:** 115 - 153 mg/L EC50 Daphnia magna 48 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Boric Acid	10043-35-3	None	None	None	None

### 14. TRANSPORT INFORMATION

#### DOT

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Class:** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

#### TDG (Canada)

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No Information available  
**Description:** No information available

#### ADR

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available

**IMO / IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No information available

**RID**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**ICAO**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions** No information available

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Boric Acid</i>	10043-35-3	PresentACTIVE	Present KE-03499	Present	Present (1)-63	Present	Present	Present 233-139-2

**U.S. Regulations***Boric Acid***FDA - 21 CFR - Total Food Additives** 175.105, 176.180, 178.2010, 181.30**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Boric Acid</i>	10043-35-3	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA****Product code:** BO110**Product name:** BORIC ACID,  
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Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Boric Acid	10043-35-3	None	None	None	None	None

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) - Health and Safety Reporting
Boric Acid	10043-35-3	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Boric Acid  
10043-35-3 ( 100 )

WHMIS 2015 Hazard Classification  
Reproductive Toxicity - Category 1: H360 May damage fertility or the unborn child.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**WHMIS 1988 Hazard Class**  
D2A Very toxic materials

**Components**  
Boric Acid

WHMIS 1988  
D2A

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Boric Acid	1 %

## Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Boric Acid	10043-35-3	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Boric Acid	10043-35-3	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Boric Acid	10043-35-3	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Boric Acid	10043-35-3	Reproductive Toxicity - Repr. 1B: H360FD May damage fertility. May damage the unborn child. (C >= 5.5 %)005-007-00-2

### EU - CLP (1272/2008)

Product code: BO110

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**R-phrase(s)**

R60 - May impair fertility.

R61 - May cause harm to the unborn child.

**S -phrase(s)**

S53 - Avoid exposure - obtain special instructions before use.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Boric Acid	10043-35-3	Repr.Cat.2; R60-61	5.5%<=C Repr.Cat.2; R60-61	S53 S45

**The product is classified in accordance with Annex VI to Directive 67/548/EEC****Indication of danger:**

T - Toxic

T

**16. OTHER INFORMATION**

**Preparation Date:** 7/6/2015  
**Revision Date:** 6/19/2018  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**