

# Safety Data Sheet

## Boric Acid

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Boric Acid  
**Recommended Use:** Science education applications  
**Synonyms:** Boracic Acid, Borofax, Trihydroxyborane  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



May damage fertility or the unborn child.

**GHS Classification:**  
Reproductive Toxicity Category 1B

**Other Safety Precautions:** IF exposed or concerned: Get medical advice/attention.

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Boric Acid	10043-35-3	100

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Boron Compounds

### Section 6 Spill or Leak Procedures

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## Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.  
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7 Handling and Storage

**Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid contact with skin and eyes.  
**Storage:** Store locked up. Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Boric Acid	2 mg/m3 TWA (inhalable fraction, listed under Borate compounds, inorganic)	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	N/A	N/A

### Control Parameters

**Engineering Measures:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.  
**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.  
**Respiratory Protection:** No respiratory protection required under normal conditions of use.  
**Respirator Type(s):** NIOSH approved air purifying respirator with dust/mist filter.  
**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.  
**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.  
**Gloves:** No information available

## Section 9 Physical Data

<b>Formula:</b> BH3O3	<b>Vapor Pressure:</b> 2.6 @ 20°C
<b>Molecular Weight:</b> 61.84	<b>Evaporation Rate (BuAc=1):</b> No data available.
<b>Appearance:</b> White Crystals	<b>Vapor Density (Air=1):</b> No data available.
<b>Odor:</b> None	<b>Specific Gravity:</b> 1.435 @ 15°C
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Slightly Soluble
<b>pH:</b> No data available	<b>Log Pow (calculated):</b> -0.757
<b>Melting Point:</b> 168 - 171 C	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> 300 C	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> No data available.	<b>Percent Volatile by Volume:</b> No data available.

## Section 10 Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** None known.  
**Incompatible Materials:** Acetic anhydride, Alkali Carbonates, Hydroxides, Alkali and Alkaline Metals  
**Hazardous Decomposition Products:** Boron Compounds  
**Hazardous Polymerization:** Will not occur

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## Section 11

## Toxicity Data

**Routes of Entry:** Ingestion.  
**Symptoms (Acute):** Seizures, Dermatitis, Respiratory Irritation, Central Nervous System Disorders  
**Delayed Effects:** Dermatitis  
Alopecia  
Erythema

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Boric Acid	10043-35-3	Oral LD50 Rat 2660 mg/kg	Not determined	Not determined

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Boric Acid	10043-35-3	Listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** Evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** Evidence of negative reproductive effects in males.  
**Target Organ Effects:**  
**Acute:** Toxic effects are amplified in infants.  
**Chronic:** Reproductive systems

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Boric Acid	10043-35-3	48 HR EC50 DAPHNIA MAGNA 115 - 153 MG/L

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:** Not regulated for transport by US DOT.  
**Air - IATA Proper Shipping Name:** Not regulated for air transport by IATA.

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Boric Acid	10043-35-3	No	No	No	No	No

## Section 16

## Additional Information

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# Safety Data Sheet

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

## Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health