

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Boric Acid
EPA Reg No.: 19713-20206-829
CAS NO: 10043-35-3
Formula: H₃BO₃
Company Name: Southern Agricultural Insecticides, Inc.
P.O. Box 218
Palmetto, FL 34220
Synonyms: Orthoboric acid, boracic acid
Identifiers:
EINECS: 233-139-2
RTECS: ED4550000
DOT label: See Section 14 for transportation information.

Emergency Telephone Number:

CHEMTREC
1-800-424-9300
Company Telephone/Fax:
941-722-3285 / 941-723-2974

This product is an EPA FIFRA registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see **Section 15. REGULATORY INFORMATION** for explanation.

2. HAZARDS IDENTIFICATION

GHS Classification	Acute toxicity - inhalation	Category 4	
	Eye damage/irritation	Category 2B	
	Skin corrosion/irritation	Category 2	
	Hazardous to the aquatic environment – acute hazard		Category 3

GHS label elements

Signal word Warning
Hazard Statements Harmful if inhaled.
Causes eye irritation.
Causes skin irritation.
Harmful to aquatic life.



Precautionary Statements

Prevention Avoid breathing dust or vapors. Use only outdoors or in well-ventilated area.
Wash exposed skin thoroughly after handling.
Wear protective gloves
Avoid release to the environment.

Response **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage

Store in a cool, dry, well ventilated and secure area designated specifically for pesticides and away from heat sources.

Disposal

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>% By Wt.</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>
Boric acid	100%	N/Av	5 mg/m ³

4. FIRST AID MEASURES

Have product container or label with you when calling a poison control center or doctor or going for treatment.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious or convulsing person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice if nose or throat irritation is observed.

5. FIRE FIGHTING MEASURES

Fire Hazards: Boron is a flame retardant - fire hazard will involve surrounding materials.

Flammability classification (OSHA 29 CFR 1910.1200): Non-Combustible.

Flash point: N/A

Lower flammable limit (% by volume): N/Av

Upper flammable limit (% by volume): N/Av

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff.

Firefighting media: Use media suitable for surrounding fires including dry foam, dry chemical, carbon dioxide, or water fog when fighting fires involving this product. Do not use water jet, as this may spread burning material. Minimize the use of water to avoid environmental contamination. Contain all runoff.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Hazardous Combustion Products: None from product.

<u>(NFPA):</u>	<u>Health:</u>	<u>Flammability:</u>	<u>Reactivity:</u>
	2	0	0

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if Material is Released or Spilled:

- Avoid dust formation. Contain spilled material if possible. Small spills: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Southern Agricultural Insecticides for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

- Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Ventilate area of spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions:

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN

Handling: **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing dust. Use with adequate ventilation. Wear long-sleeved shirt, long pants and shoes with socks when handling. Keep away from heat, sparks and flame. See Section 8, Exposure Controls and Personal Protection.

Storage: Store in a cool, dry, ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: TLV Boric acid 5 mg/m³

Personal Protection:

Eye/Face Protection: Wear safety glasses with side shields or chemical splash goggles to prevent dust from entering the eyes. If using a full-face shield, always use safety glasses or goggles along with the face shield to ensure adequate protection of the eyes.

Skin Protection: Use long-sleeved shirt, long pants, shoes and socks. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: If environment is excessively dusty, use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of dusts are generated, or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls:

Ventilation: When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Color:	White
Odor	Odorless
Flash point:	N/A
Vapor pressure:	Negligible @ 20°C
Boiling Point:	N/A
Vapor Density (air = 1):	N/A
Bulk Density (H₂O = 1):	N/Av
Freezing Point:	N/A
Solubility in water (wt. %):	Approx. 2.7%
pH:	3.0 – 4.0
Viscosity:	N/A
% Volatiles:	N/A

10. STABILITY AND REACTIVITY

Stability/Instability:	Stable under normal conditions.
Conditions to Avoid:	Keep this product away from moisture.
Incompatible Materials:	Avoid contact with strong reducing agents such as metal hydrides or alkali metals.
Hazardous Polymerization:	Will not occur.
Thermal Decomposition:	Decomposition products can include but are not limited to: Boranes, hydrogen, boron oxides.

11. TOXICOLOGICAL INFORMATION

Data presented for Boric Acid:

Acute Toxicity

Ingestion:

- Oral LD50, (rat): 3500-4100 mg/kg.

Dermal:

- Dermal LD50, (rabbit) : >2,000 mg/kg.

Inhalation:

- LC50, (rat): > 2.0 mg/L.

Eye Irritation (rabbit):

- Mildly irritating.

Skin Irritation (rabbit):

- Non-irritant.

Sensitization Skin (Guinea Pig):

- Non-sensitizer.

Chronic Toxicity:

- No increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust.

Carcinogenicity:

- Not likely to be carcinogenic in humans.

Teratogenicity, mutagenicity, and other reproductive effects: None known at normal exposure.

12. ECOLOGICAL INFORMATION

Boron (B) is the element in boric acid which is used by convention to report borate product ecological effects. It occurs naturally in seawater at an average concentration of 5 mg B/L and generally occurs in freshwater at concentrations up to 1 mg B/L. In dilute aqueous solutions the predominant species present is dissociated boric acid. To convert boric acid into equivalent boron (B) content, multiply by 0.1748.

ENVIRONMENTAL FATE:

Boron is naturally occurring and ubiquitous in the environment. Boric acid decomposes in the environment to natural borate.

Aquatic Toxicity:

- **Rainbow Trout:** 24-day LC50: (150 mg B/L).
- **Daphnia magna:** 24-hour EC50: (133 mg B/L).
- **Green algae:** 96-hour EC10: (24 mg B/L).

13. DISPOSAL CONSIDERATIONS

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT: Non-Regulated

IMDG: Non-Regulated

ICAO/IATA: Non-Regulated

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

EPA FIFRA INFORMATION:

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.

EPA Label Human Hazard Statements: CAUTION: Harmful if swallowed or absorbed through the skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

EPA/CERCLA Reportable Quantity: None Known

SARA/TITLE III:

- **Sec 302: Extremely Hazardous Substance Notification:** This material is not known to contain any Extremely Hazardous Substances.
- **Sec. 311/312. Hazard Categories:**
 - Acute health hazard
 - Chronic health hazard
- **Section 313 Toxic Chemical(s):** This material is not known to contain any Toxic Chemical constituents.
- **RCRA Waste Code:** Not applicable

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

- This product is not listed.

Toxic Substances Control Act (TSCA):

- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. OTHER INFORMATION

Southern Ag recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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