

## Material Safety Data Sheet

Ferti-Bor 10%  
Issue Date: 5/05

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

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#### CHEMICAL PRODUCT

Ferti-Bor 10%

Common Name: Micronutrient Solution – Boron (B)  
Chemical Description: Boric acid (H<sub>3</sub>BO<sub>3</sub>) compound with 2-aminoethanol; Aqueous polyborate solution.  
TCSA/CAS No.: This product is a mixture – there is no specific CAS number

#### MANUFACTURED FOR

Fertilizer Company of Arizona, Inc.  
2850 South Peart Road  
Casa Grande, Arizona 85222

#### Emergency Phone Numbers

Emergency Telephone: 520.836.7477  
CHEMTREC (24-hour Emergency Number): 800.424.9300  
EPA National Response Center: 800.424.8802

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### SECTION 2. HAZARDOUS INGREDIENTS

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<u>CHEMICAL</u>	<u>CAS NO.</u>	<u>%</u>	<u>TLV OR PEL</u>	<u>RQ (lbs.)</u>
Boron sulfate	7758-98-7	19.8	Not pertinent	10

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### SECTION 3. EMERGENCY/HAZARDS OVERVIEW

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Dark brown viscous liquid with slight lignin odor. Mild irritant to eyes and skin. If ingested, may cause stomach cramps and/or nausea. High temperatures (575°C) may result in sulfur trioxide fumes. Contain any liquid runoff. Not a D.O.T. hazardous material.

HEALTH: 1	REACTIVITY: 0	FLAMMABILITY: 0	ENVIRONMENT: 1
(0=Insignificant)	1=Slight	2=Moderate	3=High
			4=Extreme)

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### SECTION 4. FIRST AID

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Eyes: Immediately flush eyes with large quantities of water for at least 15 minutes, occasionally lifting the lower and upper lids. Seek medical attention.

Skin: Immediately wash skin with plenty of water while removing contaminated clothing and shoes. If irritation persists, seek medical attention. Clean contaminated clothing and shoes before reuse.

Ingestion: Call a physician or Poison Control Center. If conscious and alert, drink 1 or 2 glasses of water or milk to dilute, and then induce vomiting. If so advised by a physician or Poison Control Center, induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation: Move to fresh air. If breathing becomes difficult, call a physician.



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### SECTION 5. FIRE AND EXPLOSION HAZARDS

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Flash Point:	> 200° F
Test Method:	ASTM D-56
LEL Flammable Limits:	Not pertinent
UEL Flammable Limits:	Not pertinent
Autoignition Temperature:	Not pertinent
Flammability Classification:	Noncombustible
Known Hazardous Products of Combustion:	Thermal degradation at > 575° C (1067° F) may produce sulfur trioxide
Properties that Initiate/Contribute to Intensity of Fire:	None
Potential for Dust Explosion:	None
Reactions that Release Flammable Gases or Vapors:	Not known
Potential for Release of Flammable Vapors:	None
Unusual Fire & Explosion Hazards:	None
Extinguishing Media:	Not pertinent
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and goggles. Contain any liquid runoff.

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### SECTION 6. SPILLS AND LEAKS

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Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Absorb with an inert material such as sand, soil or vermiculite; sweep up and dispose in accordance with federal, state, and local regulations. Wash area with water until dark color is gone. Collect wash water for disposal.
Evacuation:	Not necessary

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### SECTION 7. STORAGE AND HANDLING

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Storage:	Store in tightly closed original labeled containers in a cool, well ventilated, dry place at temperatures above 40° F, but less than 120° F. Do not store in contact with brass. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Keep out of reach of children. Avoid contact with eyes, skin, and clothing. Avoid inhalation of spray mists. Wash thoroughly after handling. Remove contaminated clothing and wash thoroughly before reuse. Do not contaminate feed and foodstuffs.
Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.

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### SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

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Personal hygiene is important exposure control measure. The following general measures should be taken when working with or handling this material.

Personal Protection:	These recommendations provide general guidelines for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application.
Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Recommended but no TLV established.

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### SECTION 9. PHYSICAL AND CHEMICAL DATA

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Appearance:	Dark brown, viscous liquid
Odor:	Slight lignin odor
pH:	4.0
Specific Gravity (H <sub>2</sub> O = 1)	Not known
Vapor Pressure:	760 (mm Hg)
Vapor Density (Air=1):	< 1.0
Boiling Point:	100° C (212° F)
Freezing Point:	Not available
Melting Point:	Not known
Water Solubility:	Completely miscible
Density:	8.72 lbs./gal.
Evaporation Rate (Butyl Acetate = 1):	Same as water
Viscosity:	Not available
% Volatile:	Not available
Octanol/Water Partition Coefficient:	Not available
Saturated Vapor Concentration:	Not available

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### SECTION 10. STABILITY AND REACTIVITY

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Stability:	Stable under normal conditions.
Conditions To Avoid:	None known
Incompatibility:	Contact with brass or strong oxidizing agents.
Hazardous Decomposition Products:	Thermal degradation at high temperatures above 575° C (1067° F) may produce sulfur trioxide.
Hazardous Polymerization:	Will not occur

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### SECTION 11. POTENTIAL HEALTH EFFECTS

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#### Acute Effects:

Eyes:	Mild irritant. May cause redness.
Skin:	Mild irritant, especially from prolonged exposure. May cause redness.
Ingestion:	May cause stomach cramps and/or nausea.
Inhalation:	None expected, but inhalation of aerosol mist may cause mild irritation of nasal mucous membranes.
<b>Subchronic Effects:</b>	None known
<b>Chronic Effects:</b>	None known

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### SECTION 12. ECOLOGICAL INFORMATION

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Algal/Lemna Growth Inhibition:	Not known
Toxicity to Fish and Invertebrates:	Not known
Toxicity to Plants:	Not known
Toxicity in Birds:	Not known

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### SECTION 13. DISPOSAL

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Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

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### SECTION 14. TRANSPORTATION

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D.O.T. Proper Shipping Description:	Not D.O.T. Regulated
Other Shipping Information:	Fertilizing Compounds (Manufactured), Liquid. (NMFC Item 68140 Sub 6, LTL Class 70)

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### SECTION 15. REGULATORY INFORMATION

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CERCLA:	Boron sulfate is listed as priority pollutant under the Clean Water Act and, as such, falls under the CERCLA spill reporting requirements of 40 CFR 302.
SARA TITLE III, Section 313 Toxic Chemicals:	Boron compounds (19.8%).

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### SECTION 16. OTHER

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All information appearing in this document was based on data provided by third party sources and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date, but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.