


SECTION 1: IDENTIFICATION		
<b>Product Name:</b> Liquid Boron 10% <b>Product ID/Unity #:</b> 1464980, 1464981 <b>Common Name:</b> Liquid Boron Fertilizer <b>Chemical Description:</b> Aqueous polyborate solution <b>Recommended Uses:</b> Fertilizer product – See product label for full directions for use. <b>Restrictions for Use:</b> See product label for any potential restrictions on use.		
Manufactured for: <b>WINFIELD SOLUTIONS, LLC</b> P. O. Box 64589 St. Paul, MN 55164-0589, USA	Initial Supplier: <b>WINFIELD UNITED CANADA, ULC</b> 101-302 Wellman Lane Saskatoon, Saskatchewan S7T-0J1, CAN 1-306-249-5112	<b>MEDICAL EMERGENCY TELEPHONE NUMBER:</b> 1-877-424-7452 (24hrs)
<b>FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:            CHEMTREC 1-800-424-9300 (24 hours)</b>		

SECTION 2: HAZARDS IDENTIFICATION			
<b>EMERGENCY OVERVIEW:</b> Clear, slightly yellow liquid with a fishy amine-like odor. Product may cause oxygen deficiency in enclosed spaces. See health effects below.			
<b>POTENTIAL HEALTH EFFECTS:</b> <b>Eyes:</b> May cause serious eye irritation including redness and inflammation. <b>Skin:</b> Immediate contact may cause irritation. Repeated exposure may lead to itch, rash, dermatitis or other reaction. <b>Inhalation:</b> Inhalation of mist may cause irritation of the upper respiratory tract and have effects on the central nervous system. <b>Ingestion:</b> Harmful if swallowed. Ingestion could have negative effects on the kidneys and liver. <b>Preexisting Conditions:</b> Pre-existing respiratory conditions may be aggravated by exposure to mists. <b>Chronic Health Effects:</b> Ingestion of large amounts could lead to fertility issues or damage to an unborn child. May cause damage to kidneys, liver, or central nervous system through prolonged or repeated inhalation or ingestion.			
<b>Carcinogenicity</b>	NTP: Not listed	IARC: Not listed	OSHA: Not listed
<b>WHMIS 2015 CLASSIFICATION:</b> Acute Inhalation Toxicity Category 4, Skin Irritant Category 2, Eye Irritant Category 2A, Reproductive Toxicity Category 2, Specific Target Organ Toxicity – Repeated Exposure Category 2			
<b>SIGNAL WORD:</b> WARNING			
<b>HAZARD STATEMENTS:</b> Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child through ingestion. May cause damage to kidneys, liver, and central nervous system through prolonged or repeated inhalation or ingestion. <b>Percent of product with unknown toxicity:</b> 0%			
			
<b>PRECAUTIONARY STATEMENTS:</b> <b>Prevention:</b> Do not breathe mist or spray. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection. Read and follow label instructions before use. Do not handle until all safety precautions have been read and understood. <b>Response:</b> <b>If inhaled:</b> Remove person to fresh air and keep comfortable for breathing. Call a poison control center (1-877-424-7452) or doctor for treatment advice if you feel unwell. <b>If in eyes:</b> Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists: Get medical attention. <b>If on skin:</b> Wash with plenty of water. If skin irritation occurs get medical attention. Take off contaminated clothing and wash before reuse. <b>If exposed or concerned:</b> Get medical attention. <b>Storage:</b> Store in a secured area. <b>Disposal:</b> Dispose of contents and/or container in accordance with Federal, provincial and local regulations.			

## Liquid Boron 10% (CAN)

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Boric acid	57.15%	10043-35-3
Monoethanolamine	20.0%	141-43-5
See Section 8 for exposure limits.		

### SECTION 4: FIRST AID MEASURES

<b>Inhalation:</b>	Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation or dizziness occurs.
<b>Ingestion:</b>	Seek medical attention or call a poison control center immediately. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>Eyes:</b>	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.
<b>Skin:</b>	Remove contaminated clothing and wash before re-using. Flush skin with water, and then wash with soap and water. Seek medical attention if irritation persists.

### SECTION 5: FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b> Use media suitable to the surrounding fire.
<b>Special Fire Fighting Procedures:</b> Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.
<b>Hazardous Combustion Products:</b> Toxic gases may be formed in a fire situation. Carbon monoxide and other asphyxiates may form as well.
<b>Unusual Fire and Explosion Hazards:</b> If water is used to fight fire or cool containers, contain run-off by diking to prevent contamination of water supplies.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b> Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
<b>Environmental Precautions:</b> Do not allow spilled product to enter water supplies.
<b>Methods for Containment:</b> Contain spilled liquid by diking area with sand or earth.
<b>Methods for Clean-up:</b> Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop or sweep up material and place in a container for disposal. Do not place spilled material back in original container.
<b>Other Information:</b> None known.

### SECTION 7: HANDLING AND STORAGE

<b>Handling:</b> Ensure adequate ventilation. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.
<b>Storage:</b> Store in a secured well-ventilated area. Keep container tightly closed. Galvanized steel, copper, and copper-based alloys (e.g. brass or bronze) should not be used in contact with this material.
<b>Minimum Storage Temperature:</b> 0°C (32°F)

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Boric acid (CAS #10043-35-3)		2 mg/m <sup>3</sup> (TWA) 6 mg/m <sup>3</sup> (STEL)	
Monoethanolamine (CAS #141-43-5)	3 ppm, 6 mg/m <sup>3</sup> (TWA) 6 ppm, 15 mg/m <sup>3</sup> (STEL)	3 mg/m <sup>3</sup> (TWA) 6 mg/m <sup>3</sup> (STEL)	3 ppm, 8 mg/m <sup>3</sup> (TWA) 6ppm, 15 mg/m <sup>3</sup> (STEL)
<b>Respiratory Protection:</b> Inhalation of this product may cause irritation of the respiratory tract or potentially dizziness or drowsiness. When handling this product where exposure to mist or spray is possible, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for organic vapors.			
<i>Continued on next page</i>			

## Liquid Boron 10% (CAN)

<b>Engineering Controls:</b>	<b>Local Exhaust:</b> Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.
<b>Protective Gloves:</b>	This product may cause skin irritation. Wear chemically protective gloves to prevent exposure to skin.
<b>Eye Protection:</b>	To avoid contact with eyes, wear chemical goggles or safety glasses and full face shield. Contact lenses are not protective devices. An emergency eyewash or water supply should be readily accessible to the work area.
<b>Other Protective Clothing or Equipment:</b>	Wear long-sleeve shirt, long pants and chemical resistant footwear plus socks to prevent skin contact.
<b>Work/Hygienic Practices:</b>	Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid	<b>Specific Gravity (H<sub>2</sub>O=1):</b>	1.32 – 1.34 (typical)
<b>Vapor Pressure (mm Hg):</b>	Not determined	<b>Melting Point/Freezing Point:</b>	0°C (32°F)
<b>Vapor Density (Air=1):</b>	Not determined	<b>Boiling Point/Range:</b>	> 93°C (200°F)
<b>Solubility in Water (wt %):</b>	Miscible	<b>pH:</b>	7.8 – 8.4
<b>Viscosity:</b>	Not determined	<b>Flash Point:</b>	Not determined
<b>Appearance and odor:</b>	Clear, slightly yellow liquid with a fishy amine-like odor.		

### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity:</b>	None known.
<b>Chemical Stability:</b>	Product is stable at ambient temperature and pressure, under normal storage and handling conditions.
<b>Possibility of Hazardous Reactions:</b>	None expected to occur.
<b>Conditions to Avoid:</b>	Extreme heat
<b>Incompatible Materials:</b>	Strong oxidizing agents, strong bases and acids
<b>Hazardous Decomposition Products:</b>	Carbon monoxide, carbon dioxide, oxides of boron

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>ACUTE TOXICITY</b>	
<b>Eye Effects:</b>	May cause serious eye irritation based on component data.
<b>Skin Effects:</b>	Estimated LD50 = 2,070 mg/kg (based on component data); May cause skin irritation based on component data
<b>Acute Inhalation Effects:</b>	May cause respiratory irritation and effects on the central nervous system based on component data
<b>Acute Oral Effects:</b>	Estimated LD50 = 2,882 mg/kg (based on component data)
<b>Specific Target Organ Toxicity:</b>	Components have demonstrated toxicity to the central nervous system, kidneys and liver upon repeated doses. No data is available on the mixture.
<b>CHRONIC TOXICITY</b>	
<b>Chronic Effects:</b>	Boric acid has been demonstrated to have an effect on male fertility and the development of an unborn child. No data is available on the mixture.
<b>Carcinogenicity:</b>	Not anticipated to be a carcinogen based upon component data.
<b>Mutagenicity:</b>	Not anticipated to be a mutagen based upon component data.
<b>Teratogenicity:</b>	Not anticipated to be a teratogen based upon component data.
<b>Reproductive Toxicity:</b>	Boric acid has been demonstrated to have an effect on male fertility and the development of an unborn child. No data is available on the mixture.
<b>POTENTIAL HEALTH EFFECTS:</b>	
<b>Eyes:</b>	May cause serious eye irritation including redness and inflammation.
<b>Skin:</b>	Immediate contact may cause irritation. Repeated exposure may lead to itch, rash, dermatitis or other reaction.
<b>Inhalation:</b>	Inhalation of mist may cause irritation of the upper respiratory tract and have effects on the central nervous system.
<b>Ingestion:</b>	Harmful if swallowed. Ingestion could have negative effects on the kidneys and liver.

**SECTION 12: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** Not determined

**ECOTOXICITY DATA:**

Fish Acute and Prolonged Toxicity: Not determined  
 Aquatic Invertebrate Acute Toxicity: Not determined  
 Aquatic Plant Toxicity: Not determined  
 Bird Acute and Prolonged Toxicity: Not determined  
 Honeybee Toxicity: Not determined

**ENVIRONMENTAL EFFECTS:**

Soil Absorption/Mobility: Not determined  
 Persistence and degradability: Not determined  
 Bioaccumulative Potential: Not determined  
 Other adverse effects: Not determined

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste:** Dispose of in accordance with applicable Federal, state and local laws and regulations.

**Container:** Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.

**SECTION 14: TRANSPORT INFORMATION**

**DOT:** Not regulated

**IMDG:** Not determined

**IATA:** Not determined

**TDG:** Not regulated

**SECTION 15: REGULATORY INFORMATION**

**International Inventories**

**TSCA Inventory:** All components are listed on the TSCA inventory.

**Canadian Domestic Substances List:** All components are listed.

**SECTION 16: OTHER INFORMATION**

<b>NFPA HAZARD RATING</b>	<b>Health</b>	<b>2</b>
	<b>Flammability</b>	<b>1</b>
	<b>Reactivity</b>	<b>0</b>
	4= Severe 3= High 2= Moderate 1= Slight 0= Least	

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