



Safety Data Sheet

Keylamax™ Boron

## 1. Identification:

<b>Name:</b>	Keylamax™ Boron
<b>Chemical Description:</b>	Liquid amino acid boron complexed micronutrient.
<b>Recommended Use:</b>	Foliar applications on commercial agricultural crops. Please follow appropriate mixing instructions.
<b>Producer/Importer</b>	Mil Agro, Inc.
<b>Address:</b>	875 W. 300 N., Hyrum, UT 84319 USA
<b>Phone:</b>	+1 (435) 994-2476
<b>Contact Person:</b>	Todd Edwards

## 2. Hazard Identification:

<b>Physical Hazards:</b>	Flammable liquids Category 4- H227. Skin corrosion/irritation Category 1A- H314. Reproductive toxicity Category 1B- H360
<b>Environmental Hazards:</b>	Hazardous to the aquatic environment
<b>Hazard(s) not otherwise classified (HNOC):</b>	None known.
<b>Supplemental information:</b>	2% of mixture of ingredient(s) of unknown acute and environmental toxicity.

**Hazard Pictograms:**



GHS05

Signal Word (GHS-US): Danger



GHS08

Contains: boric acid; 2-aminoethanol

Hazard Statements (GHS-US): H227-Combustible liquid. H314- Causes severe skin burns and eye damage. H360- May damage fertility or the unborn child.

Precautionary Statements (GHS-US): P201- Obtain special instructions before use. P202- Do not handle until all safety precautions have been read and understood. P210- Keep away from heat, hot surfaces, sparks, open flames and no smoking. P260- Do not breath mist, spray. P264- Wash hands, forearms and face thoroughly after handling. P280- Wear Protective gloves, eye protection, face protection. P301+P330+P331- if swallowed, rinse mouth, Do Not induce vomiting. P303+P361+P353- if on skin or hair, take off immediately all contaminated clothing, rinse skin with water/shower. P304+P340- If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a doctor. P321 - Specific treatment (see the first aid section on this label). P363 - Wash contaminated clothing before reuse. P370+P378 - In case of fire: Use dry sand, dry extinguishing powder, foam to extinguish. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 3. Composition of Product

Proprietary Organic acids, chelating agents and other non-toxic excipients.

Proprietary blend of Boron derived from Boron amino acid complex. Approximate % by Weight: 100%

Boric Acid:	CAS no: 10043-35-3	%: 56-58
2-Aminoethanol	CAS no: 141-43-5	%: 17-20

### 4. First Aid Measures

<b>General:</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 10 minutes. Continue rinsing. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention.
<b>Skin Contact:</b>	Wash with mild soap and water. Seek medical attention if discomfort occurs.
<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Ingestion:</b>	Rinse mouth. Do NOT induce vomiting. If swallowed, call a POISON CENTER or doctor/physician if you feel unwell.
<b>Over Exposure:</b>	Not applicable.

### 5. Fire-Fighting Measures

**Suitable extinguishing media:** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).  
**Unsuitable extinguishing media:** None known  
**Specific hazards arising from the chemical:** None known  
**Fire-fighting equipment/instructions:** Move containers from fire area if you can do so without risk.  
**Specific methods:** Move containers from fire area if you can do so without risk.  
**General fire hazards:** No unusual fire or explosion hazards noted. Keep away from sources of ignition, sparks, and open flames.

## 6. Accidental Release Measures

**Safety measurements to protect persons:** Wear appropriate protective clothing.  
**Proper methods for damage limitation and cleanup:** Small Spills: Sweep up spillage and wash affected area. Large Spill: Vacuum or sweep up material and place in a disposal container. Dispose of in a manner according to local regulations.  
**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and Storage

**Precautions for safe handling:** Wear protective clothing and wash areas of contact after handling.  
**Storage:** Store in dry, cool place and out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place.

## 8. Exposure Control and Personal Protection

**Occupational exposure limits:** No exposure limits noted for ingredients.  
**Biological limit values:** No biological exposure limits noted for the ingredients.  
**Appropriate engineering controls:** Ventilation should be sufficient to effectively remove and prevent buildup of fumes that may be generated during handling or thermal processing. Provide eyewash station.  
**Eye/Face protection:** Use tight fitting goggles.  
**Hand Protection:** Gloves should be worn when handling.  
**Other:** Wear suitable protective clothing.  
**Respiratory protection:** Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fume at levels exceeding the exposure limits.  
**General hygiene**

**considerations:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and Chemical Properties

<b>Appearance:</b>	Aqueous Solution
<b>Physical State:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Brown
<b>Odor:</b>	None
<b>Solubility:</b>	100% water soluble
<b>Salt out/Crystallization temp/ Freezing Point:</b>	32 °F (0 °C)
<b>Expl. Limit LEL-UEL. %-%:</b>	Not determined
<b>Vapor Pressure:</b>	Not determined
<b>Decomposition temp.:</b>	Not determined
<b>pH value:</b>	6.5-9
<b>pH in aqueous solution:</b>	6.5-9 (1% Solution)
<b>Flash point:</b>	Not determined
<b>Molecular weight:</b>	Not determined
<b>Ignition temp:</b>	Not determined
<b>Rel. Vapor Density (air=1):</b>	Not determined
<b>Air Reactive:</b>	Not applicable
<b>Percent Volatile (by Volume):</b>	Not applicable
<b>Bulk Density:</b>	1.3-1.38 g/cm <sup>3</sup>
<b>Solubility in Water:</b>	100% Soluble
<b>Saturation Conc.:</b>	Not determined
<b>Rel. Density Sat. Air (Air=1):</b>	Not determined
<b>Boiling Point/Range:</b>	Not determined
<b>Smelling Limits lo-hi:</b>	Not determined
<b>Rel. Evap. Velocity:</b>	Not determined
<b>Water Reactive:</b>	Not applicable
<b>Shelf Life:</b>	<2 Years

## 10. Stability and Reactivity

<b>Reactivity:</b>	Product is stable.
<b>Chemical Stability:</b>	Product is stable. Oxidants and acids may cause degradation.
<b>Conditions to avoid:</b>	Contact with incompatible materials. Heat or freezing.
<b>Hazardous decomposition products:</b>	Not applicable.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. Toxicological Information

<b>Skin Corrosion/Irritation:</b>	Causes Severe Skin Burns and eye damage. pH: 8.7 (6.5-9)
<b>Serious eye damage/irritation:</b>	Not classified
<b>Respiratory or skin sensitization:</b>	Not Classified
<b>Germ Cell Mutagenicity:</b>	Not Classified
<b>Carcinogenicity:</b>	Not Classified
<b>Reproductive Toxicity:</b>	May damage fertility or the unborn child
<b>Specific Target Organ Toxicity (Repeated Exposure):</b>	Not classified
<b>Aspiration hazard:</b>	Not Classified
<b>Symptoms/Injuries after skin Contact:</b>	Burns
<b>Symptoms/Injuries after eye Contact:</b>	Serious damage to eyes
<b>Symptoms/Injuries after Ingestion:</b>	Burns
<b>10% Boron</b>	
LD50 oral rat	> 2000 mg/kg Estimated based on components
<b>boric acid (10043-35-3)</b>	
LD50 oral rat	2660 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >2600 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg Rabbit; Experimental value; FIFRA (40 CFR)
ATE US (oral)	2660.000 mg/kg body weight
<b>2-aminoethanol (141-43-5)</b>	
LD50 oral rat	1720 mg/kg (Rat)
LD50 dermal rabbit	1018 mg/kg (Rabbit)
ATE US (oral)	1720.000 mg/kg body weight
ATE US (dermal)	1018.000 mg/kg body weight
ATE US (dust, mist)	1.500 mg/l/4h

## 12. Ecological Information

<b>Breakdown:</b>	Biodegradable. Product presents minimal environmental impact.
<b>Ecotoxicity:</b>	
<b>boric acid (10043-35-3)</b>	
LC50 fish 1	100 ppm (96 h; <i>Salmo gairdneri</i> ( <i>Oncorhynchus mykiss</i> ); Soft water)
EC50 Daphnia 1	658 - 875 mg/l (48 h; <i>Daphnia magna</i> )
LC50 fish 2	79 ppm (96 h; <i>Salmo gairdneri</i> ( <i>Oncorhynchus mykiss</i> ); Hard water)

EC50 Daphnia 2	19.7 mg/l (336 h; Daphnia magna)
TLM fish 1	1800 ppm (24 h; Gambusia affinis)
Threshold limit algae 1	5 mg/l (672 h; Elodea sp.)
Threshold limit algae 2	0.4 - 0.8,336 h; Chlorella sp.; Growth
<b>2-aminoethanol (141-43-5)</b>	
LC50 fish 1	150 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	140 mg/l (24 h; Daphnia magna)
LC50 fish 2	329.16 mg/l (96 h; Lepomis macrochirus)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	0.97 mg/l (192 h; Scenedesmus quadricauda; Inhibitory)
Threshold limit algae 2	35 mg/l (72 h; Algae)

### 13. Disposal Considerations

**Disposal instructions:** Chemical residues are classified as special waste and as such are covered by regulations which vary in accordance to location. Contact your local waste disposal authority for advice or pass to a chemical disposal company.

**Waste from residues/unused**

**Products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues.

### 14. Transport Information

Non-hazardous material according to transport regulation. No special precautions are necessary.

### 15. Regulatory Information

This product is not regulated by any known government agency as hazardous.

### 16. Other Information

**Issue Date:** 5/15/2017

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but it is always advisable for customers to satisfy themselves, by consultation with our technical department and small-scale testing if necessary, that product, which they have selected, is suitable for their purpose under their conditions of use.