# Safety Data Sheet

**Issue Date:** 02-Feb-2015 **Revision Date:** 11-May-2016 **Version** 2

## 1. IDENTIFICATION

**Product Identifier**

**Product Name** PolyAmine Boron

**Other means of identification** FFN 00008
**SDS #** VLS-131

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Soil (No Additives, Fertilizers, or Inhibitors).

**Details of the supplier of the safety data sheet**

**Supplier Address**
Verdesian Life Sciences, U.S., LLC.
1001 Winstead Drive, Suite 480
Cary, NC 27513

**Emergency Telephone Number**

**Company Phone Number** Business Phone: (800) 868-6446
Fax: (919) 535-3652

**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Colorless to pale yellow liquid **Physical state** Liquid **Odor** Fishy

**Classification**

| | |
|---|---|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |

**Signal Word**
**Warning**

**Hazard statements**
Causes skin irritation
Causes serious eye irritation

**Precautionary Statements - Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**
If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation occurs: Get medical advice/attention

**Other hazards**
Harmful to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|---|---|---|
| Boric Acid | 10043-35-3 | Proprietary |
| Monoethanolamine | 141-43-5 | Proprietary |

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

## 4. FIRST-AID MEASURES

**First Aid Measures**

**General Advice** Provide this SDS to medical personnel for treatment.

**Eye Contact** If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes lifting upper and lower eyelids occasionally. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin Contact** Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if irritation develops or persists.

**Inhalation** Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.

**Ingestion** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Most important symptoms and effects**

**Symptoms** Causes skin irritation. Causes serious eye irritation. May cause irritation to the mucous membranes and upper respiratory tract.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically and supportively.

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**
Emits toxic fumes under fire conditions.

**Hazardous Combustion Products** Carbon oxides.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Evacuate personnel to safe areas. Ventilate affected area. Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an absorbent material.

**Methods for Clean-Up** Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on Safe Handling** Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place.

**Incompatible Materials** Strong oxidizing agents. Strong acids. Strong alkalis.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Boric Acid<br>10043-35-3 | STEL: 6 mg/m$^3$ inhalable fraction<br>TWA: 2 mg/m$^3$ inhalable fraction | - | - |
| Monoethanolamine<br>141-43-5 | STEL: 6 ppm<br>TWA: 3 ppm | TWA: 3 ppm<br>TWA: 6 mg/m$^3$<br>(vacated) TWA: 3 ppm<br>(vacated) TWA: 8 mg/m$^3$<br>(vacated) STEL: 6 ppm | IDLH: 30 ppm<br>TWA: 3 ppm<br>TWA: 8 mg/m$^3$<br>STEL: 6 ppm<br>STEL: 15 mg/m$^3$ |

| | | | |
|---|---|---|---|
| | | (vacated) STEL: 15 mg/m$^3$ | |

**Appropriate engineering controls**

**Engineering Controls** Maintain eye wash fountain and quick-drench facilities in work area.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Use safety goggles, safety glasses with side shields and/or a full face shield as described by OSHA's eye and face protection regulations in 29CFR 1910.133.

**Skin and Body Protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection** Refer to 29 CFR 1910.134 for respiratory protection requirements.

**General Hygiene Considerations** Wash with soap and water before meals and at the end of each work shift. Good manufacturing practices require amounts of any chemical be removed from the skin as soon as practical, especially before eating or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | | |
| **Appearance** | Colorless to pale yellow liquid | **Odor** | Fishy |
| **Color** | Colorless to pale yellow | **Odor Threshold** | Not determined |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | 8.1 | |
| **Melting Point/Freezing Point** | Not determined | |
| **Boiling Point/Boiling Range** | 94 °C / 201 °F | |
| **Flash Point** | Not determined | |
| **Evaporation Rate** | Not determined | |
| **Flammability (Solid, Gas)** | Not determined | |
| **Flammability Limits in Air** | | |
| **Upper Flammability Limits** | Not determined | |
| **Lower Flammability Limit** | Not determined | |
| **Vapor Pressure** | Not determined | |
| **Vapor Density** | Not determined | |
| **Relative Density** | Not determined | |
| **Water Solubility** | Miscible in water | |
| **Solubility in other solvents** | Not determined | |
| **Partition Coefficient** | Not determined | |
| **Auto-ignition Temperature** | Not determined | |
| **Decomposition Temperature** | Not determined | |
| **Kinematic Viscosity** | Not determined | |
| **Dynamic Viscosity** | Not determined | |
| **Explosive Properties** | Not determined | |
| **Oxidizing Properties** | Not determined | |

## 10. STABILITY AND REACTIVITY

**Reactivity**
Not reactive under normal conditions.

**Chemical Stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to Avoid**
Keep out of reach of children.

**Incompatible Materials**
Strong oxidizing agents. Strong acids. Strong alkalis.

**Hazardous Decomposition Products**
Thermal decomposition produces oxides of phosphorus, nitrogen and carbon.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Eye Contact** Causes serious eye irritation.

**Skin Contact** Causes skin irritation.

**Inhalation** Do not inhale.

**Ingestion** Ingestion may cause irritation to mucous membranes.

**Component Information**

| Chemical Name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|---|---|---|---|
| Boric Acid<br>10043-35-3 | = 2660 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 0.16 mg/L ( Rat ) 4 h |
| Monoethanolamine<br>141-43-5 | = 1720 mg/kg ( Rat ) | = 1 mL/kg ( Rabbit ) = 1000 mg/kg ( Rabbit ) | - |

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Harmful to aquatic life with long lasting effects.

**Component Information**

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|---|---|---|---|
| Boric Acid<br>10043-35-3 | | 1020: 72 h Carassius auratus mg/L LC50 flow-through | 115 - 153: 48 h Daphnia magna mg/L EC50 |

| | | | |
|---|---|---|---|
| Monoethanolamine<br>141-43-5 | 15: 72 h Desmodesmus subspicatus mg/L EC50 | 3684: 96 h Brachydanio rerio mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 227: 96 h Pimephales promelas mg/L LC50 flow-through 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static | 65: 48 h Daphnia magna mg/L EC50 |

**Persistence/Degradability**
Not determined.

**Bioaccumulation**
Not determined.

**Mobility**

| Chemical Name | Partition Coefficient |
|---|---|
| Boric Acid<br>10043-35-3 | -0.757 |
| Monoethanolamine<br>141-43-5 | -1.91 |

**Other Adverse Effects**
Not determined

## 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods**

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

| Chemical Name | California Hazardous Waste Status |
|---|---|
| Boric Acid<br>10043-35-3 | Toxic |

## 14. TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT** Not regulated

**IATA** Not regulated

**IMDG**
**Marine Pollutant** This material may meet the definition of a marine pollutant

## 15. REGULATORY INFORMATION

**International Inventories**

| Chemical Name | TSCA | DSL/NDSL | EINECS/ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|---|---|---|---|---|---|---|---|---|
| Yeast Extract | X | X | X | | X | Present | X | X |
| Boric Acid | X | X | X | Present | X | Present | X | X |
| Monoethanolamine | X | X | X | Present | X | Present | X | X |

**Legend:**

***TSCA*** *- United States Toxic Substances Control Act Section 8(b) Inventory*

***DSL/NDSL*** *- Canadian Domestic Substances List/Non-Domestic Substances List*

***EINECS/ELINCS*** *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

***ENCS*** *- Japan Existing and New Chemical Substances*

***IECSC*** *- China Inventory of Existing Chemical Substances*

***KECL*** *- Korean Existing and Evaluated Chemical Substances*

***PICCS*** *- Philippines Inventory of Chemicals and Chemical Substances*

***AICS*** *- Australian Inventory of Chemical Substances*

**US Federal Regulations**

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute Health Hazard** | Yes |
| **Chronic Health Hazard** | No |
| **Fire Hazard** | No |
| **Sudden Release of Pressure Hazard** | No |
| **Reactive Hazard** | No |

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| Boric Acid<br>10043-35-3 | X | | |
| Monoethanolamine<br>141-43-5 | X | X | X |

## 16. OTHER INFORMATION

| | | | | |
|---|---|---|---|---|
| **NFPA** | **Health Hazards** | **Flammability** | **Instability** | **Special Hazards** |
| | 1 | 0 | 0 | Not determined |
| **HMIS** | **Health Hazards** | **Flammability** | **Physical hazards** | **Personal Protection** |
| | 2 | 0 | 0 | B |

**Issue Date:** 02-Feb-2015
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**Revision Note:** GHS Reclassification

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**