

### 1: IDENTIFICATION

<b>Chemical Name</b>	Boric acid, 2-aminoethan-1-ol	<b>Trade Name</b>	<b>NANOVITA BORON</b>
<b>Synonyms</b>	Boric acid, Ethanolamine	<b>Molecular Formula</b>	H <sub>3</sub> BO <sub>3</sub> + C <sub>2</sub> H <sub>7</sub> NO
<b>Uses</b>	Crop Nutrition		
<b>Manufacturer/ Supplier</b>	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
<b>Emergency Contact</b>	9503095030	<b>E-mail</b>	<a href="mailto:info@agrostar.in">info@agrostar.in</a>

### 2: COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Boric Acid	10043-35-3	56 -58 %
Monoethanolamine	141-43-5	19 -21 %
Other Ingredients	-	-

### 3: HAZARD IDENTIFICATION

**Human Health Hazard:** Acute inhalation Toxicity 4; Skin Irritant category 2; Eye Irritant category 2A;  
 Reproductive toxicity 2; Specific organ toxicity - Repeated exposure 2

### 4: FIRST AID MEASURES

**General:** Have the product container, label or safety data sheet while seeking medical attention, a poison control center or physician, or going for treatment.

**Inhalation:** Move person to fresh air and keep warm and at rest in a position comfortable for breathing. Immediately seek medical attention if symptoms are severe or persist.

**Ingestion:** Rinse mouth with water thoroughly. Do not induce vomiting unless told by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention immediately and show this container or label.

**Skin Contact:** In case of contact with product, wash immediately skin area with plenty of water and soap. Speed in removing material from skin is extremely important. Remove and isolate contaminated clothing and shoes. Seek medical attention.

**Eye Contact:** Rinse immediately with plenty of water for several minutes. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15-20 minutes. Seek medical attention if irritation develops.

**Note to physician:** No specific Antidote. Treat symptomatically.

### 5: FIRE FIGHTING MEASURES

**Extinguishing Media:** Use media suitable to the surrounding fire

**Specific Hazard:** If water is used to fight fire or cool containers, contain run-off by diking to prevent contamination of water supplies.

**Hazardous Thermal (de)composition:** Toxic gases may be formed in a fire situation. Carbon monoxide and other asphyxiates may form as well.

**Special Procedures:** Do not discharge extinguishing water into the drain or water bodies. If risk of water pollution occurs, notify appropriate authorities. Move containers away from area if it can be done without risk. If possible without risk, remove containers from fire zone, cool with water spray. Dike area to prevent water runoff. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products.

**Protection of Fire Fighters:** Do not breathe a fumes. Wear a self contained breathing apparatus and complete protective clothes.

### 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Ventilate spillage area. Avoid breathing fume. Use personal protective equipment including suitable protective clothing, gloves and eye or face protection. Evacuate personnel to safe areas.

**Environmental Precaution:** Do not allow runoff to enter drains and public waters. Notify the authorities if product enters.

**Methods for Cleaning-up:** Contain spilled liquid by diking area with sand or earth. 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.

### 7: HANDLING & STORAGE

**Handling:** Do not smoke, drink, or eat during handling. Immediately clean up spills that occur during handling. Wash hands and other exposed areas with soap and water before and after handling the product. Wear protective equipments to avoid contact and/or inhalation with the product. Remove contaminated clothing and shoes. Wash clothing and equipment before reuse. Good personal hygiene procedures must be practiced.

**Storage:** Store in dry, cool and well-ventilated area away from heat. Keep in original container and tightly closed when not in use. Keep product away from seeds, fertilizer, foods and animal feeds. Galvanized steel, copper, and copper-based alloys (e.g. brass or bronze) should not be used in contact with this material. Minimum Storage Temperature: 0 °C

### 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**Engineering Measures:** Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

**General Protection:** Avoid contact with eyes and skin. While handling the product wear waterproof pants, coat, hat, rubber boots or shoes. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

**Personal Protection:** Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

**Respiratory Protection:** Always use NIOSH/MSHA approved respiratory protection equipment .

**Skin Protection:** Wear suitable protective clothing, including long sleeved shirt, waterproof long pants, shoes, gloves, or cover all to avoid skin contact. Any clothing or other absorbent material which has been drenched or heavily contaminated must be discarded.

**Hand Protection:** Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or Viton.

**Eye Protection:** Safety goggles, chemical splash goggles or face shield for eyes protection should be used. Safety showers and eyewash should be easily available.

**Others:** Wash clothing before reusing.

## 9: PHYSICAL/CHEMICAL PROPERTIES

**Appearance:** Clear, slightly yellow liquid

**Physical State:** Liquid

**Odour :** Fishy amine-like odor

**Colour:** Yellow

**pH:** 7.8 - 8.4

**Solubility in Water:** Miscible

**Melting Point/ Freezing point [°C]:** 0

**Boiling Point [°C]:** > 93.3

**Specific Gravity (water= 1):** 1.32 - 1.34

## 10: STABILITY & REACTIVITY

**Stability:** Stable under normal circumstances. **Conditions to Avoid:** Extreme heat

**Hazardous Decomp. Products:** The decomposition products may include carbon monoxide, carbon dioxide and oxides of boron

**Hazardous Reactions:** None expected to occur. **Material to Avoid:** Strong oxidizing agents, strong bases and acids

## 11: TOXICOLOGICAL INFORMATION

### Acute Toxicity:

Eye Effects: May cause serious eye irritation based on component data.

Skin Effects: Estimated LD50 = 2,070 mg/kg (based on component data); May cause skin irritation based on component data

Acute Inhalation Effects: May cause respiratory irritation and effects on the central nervous system based on component data

Acute Oral Effects: Estimated LD50 = 2,882 mg/kg (based on component data)

Specific Target Organ Toxicity: Components have demonstrated toxicity to the central nervous system, kidneys and liver upon repeated doses. No data is available on the mixture.

### Chronic Toxicity:

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.

## 12: ECOLOGICAL INFORMATION

### Ecotoxicity:

Fish Acute and Prolonged Toxicity: Not determined

Aquatic Plant Toxicity: Not determined

Honeybee Toxicity: Not determined

Aquatic Invertebrate Acute Toxicity: Not determined

Bird Acute and Prolonged Toxicity: Not determined

### Environmental Effect:

Bio-accumulation potential: Not determined

Persistence, Degradability and Mobility in soil: Not determined

## 13: DISPOSAL CONSIDERATION

**Waste-disposal Procedures:** Dispose of this product only according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated Packaging:** Empty remaining contents and the rinse containers before disposal thrice. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## 14: TRANSPORT INFORMATION

This product is not regulated for transport by the Transportation of Dangerous Goods as a hazardous material.

## 15: REGULATORY INFORMATION

**Hazard Symbol:** GHS07, GHS08

**H- Statement:** H332 - Harmful if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H361/H361f/H361d - Suspected of damaging fertility or the unborn child. Suspected of damaging fertility.

Suspected of damaging the unborn child.

**WHMIS Classification:** D2A

## 16: OTHER INFORMATION

**DISCLAIMER OF LIABILITY** The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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