



ULTRA GRO  
Ag is Life

**ULTRA GRO, LLC**  
**SAFETY DATA SHEET**

DATE PREPARED: 9/7/2018

CURRENT AS OF: 9/7/2018

**SECTION 1: PRODUCT / SUPPLIER IDENTIFICATION**

PRODUCT NAME: ULTRA GRO ZMB

PRODUCT USE: FERTILIZER

Other Means of Identification: Fertilizer solution with chelated Zn, n, Fe, Cu & B micronutrients

Restrictions on Use: None

MFR INFO: Ultra Gro, LLC  
1043 S. Granada Drive  
Madera, CA 93637

FOR EMERGENCY: (559) 661-0977

CHEMTREC: (800) 424-9300

**SECTION 2: HAZARDS IDENTIFICATION**

**GHS Classification** Acute oral toxicity 4, Skin corrosion/irritation 2, Serious eye damage/eye irritation 2B. Reproductive toxicity 2, Acute inhalation toxicity 4, Acute dermal toxicity 4, STOT SE3 (irritation to respiratory system)

**GHS Label Elements** Signal Word: Warning



<b>Hazard Statement(s)</b>	H227: Combustible Liquid	H332: Harmful if inhaled
	H302: Harmful if swallowed	H335: May cause respiratory irritation
	H312: Harmful in contact with skin	H336: May cause drowsiness or dizziness
	H315: Causes skin irritation	H361: Suspected of damaging fertility or the unborn

**Precautionary statement(s)**

**Precautionary statement(s) Prevention Response, Storage, Disposal**

- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat, sparks, open flames, hot surfaces and other ignition sources. No smoking
- P261: Avoid breathing fume/mist/vapours/spray.
- P264: Wash skin thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P280: Wear protective gloves / protective clothing / eye protection / face protection.
- P301+P312+P330: IF SWALLOWED: Call a poison control center or doctor if you feel unwell. Rinse mouth.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P332+P313: IF SKIN IRRITATION OCCURS: Get medical advice/attention.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P337+P313: If eye irritation persists: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash it before reuse.

P370+P378: In case of fire: Use water, dry powder, carbon dioxide foam to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to an approved waste disposal plant in accordance with local/regional, national regulations.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity: 1.9% Zn, 1.9% Mn, 1.9% B, 0.5% Cu, 0.25% Fe

CAS#:	Common Name / Synonyms:	% by Wt.
60-00-4	Ethylenediaminetetraacetic acid	20% - 24%
141-43-5	Monoethanolamine	20% - 22%
10043-35-3	Boric Acid	10% - 12%
7773-01-5	Manganese (II) chloride	4% - 5%
1314-13-2	Zinc Oxide	2% - 4%
10025-77-1	Iron (III) chloride, hexahydrate	1% - 2%
12069-69-1	Copper (II) carbonate basic	0.5% - 1%

### SECTION 4: FIRST AID MEASURES

#### Description of first aid measures

**General Advice:** Remove contaminated clothing and shoes. Seek medical advice immediately and show safety data sheet or label to the doctor, if possible.

**If Inhaled:** Remove person from contaminated area to fresh air. If not breathing, give artificial respiration. Seek medical attention if irritation or dizziness occurs.

**In Case of Skin Contact:** 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.

**In Case of Eye Contact:** 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 immediately.

**If Swallowed:** 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.

**Most important symptoms and effects, both acute and delayed:** the most important known symptoms and effects are described in section 2. Further symptoms are possible.

**Indications of any immediate medical attention and special treatment needed:** No additional information available.

### SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing Media:** Suitable extinguishing media; water, dry powder, carbon dioxide, foam.

**Specific Hazards arising from the substances or mixture:** Hydrogen chloride, manganese oxides, copper oxides, boron oxides may be formed in a fire situation. Carbon oxides and nitrogen oxides may form as well.

**Advice for Firefighters:** Fire fighters should wear appropriate protective equipment and self contained breathing apparatus with full face piece operated in a positive pressure mode.

**Further Information:** Dispose of fire debris contaminated extinguishing water in accordance with official regulations.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:** As outlined in section 8, wear appropriate respiratory, protection. Avoid breathing fume, vapors, spray, mist or gas. Use personal protective clothing. Ensure adequate ventilation. Evacuate personnel to safe area.

**Environmental Precautions:** Do not allow spilled product to enter water supplies. Discharge into the environment must be avoided.

**Methods and Materials for Containment and Cleaning Up:** Spills should be contained by diking area with sand or soil. Cover contained spill with and inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop, or sweep up material and place in a container for disposal.

## SECTION 7: HANDLING AND STORAGE

**Precautions for Safe Handling:** Do not eat, drink or smoke when using this product. Wash hands and other exposed areas thoroughly after handling. Provide adequate ventilation. Protect packages against physical damage. Reseal containers immediately after use. Immediately remove and dispose of any spilled material.

**Conditions for Safe Storage, Including any Incompatibilities:** Keep container tightly closed in dry and well ventilated area.

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

### Control Parameters:

Chemical Identity:	CAS#	Values		OSHA PEL		NIOSH REL	
		TWA	STEL	TWA	STEL	TWA	STEL
Ethylenediaminetetraacetic acid	60-00-4	NDA	NDA	NDA	NDA	NDA	NDA
Monoethanolamine	141-43-5	2 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	15mg/m <sup>3</sup>	8mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Boric Acid	10043-35-3	2 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	NDA	NDA	NDA	NDA
Manganese (II) chloride	7773-01-5	.02mg/m <sup>3</sup>	NDA	NDA	NDA	1mg/m <sup>3</sup>	3mg/m <sup>3</sup>
Zinc oxide	1314-3-2	2mg/m <sup>3</sup>	10mg/m <sup>3</sup>	5-15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	5mg/m <sup>3</sup>	10mg/m <sup>3</sup>
Iron (III) nchloride, hexahdrate	10025-77-1	1mg/m <sup>3</sup>	NDA	NDA	NDA	NDA	NDA
Copper (II) carbonate basic	12069-69-1	1mg/m <sup>3</sup>	NDA	NDA	NDA	NDA	NDA

### Appropriate Engineering Controls:

Provide sufficient ventilation to maintain airborne concentrations below the recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

### Individual Protection Measures, Such as Personal Protective Equipment:

**Eye Protection:** Tightly fitting safety goggles or face shield if a spashing hazard exists. Use of equipment for eye protection tested and aproved under appropriate government standards such as NIOSH.

**Skin Protection:** Handle with chemical resistant protective gloves. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Wash and dry hands.

**Body Protection:** Body protection must be chosen depending on activity and possible exposure, i.e. apron, chemical resistant footwear plus socks, long sleeved shirt, long pants, chemical protection suit.

**Respiratory Protection:** Respiratory protection is not typically required if airborne concentrations are maintained below established exposure limits. Wear a NIOSH certified (or equivalent) organic vapor/particulate respirator. Do not exceed the maximum use cncentration for the respirator face piece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full face piece pressure demand self contained breathing apparatus (SCBA) or a full face piece pressure demand supplied ari respirator (SAR) with escape provisions. Observe OSHA regulations for respirator use (29CFR 1910.34)

**General Safety and Hygiene Measures:** Eye wash fountains and safety showers must be easily

accessible. Employees should wash their hands and face before eating, drinking or using tobacco products.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	<b>Blue/green liquid</b>
<b>Odor:</b>	<b>Yeast</b>
<b>Odor Threshold:</b>	<b>None</b>
<b>pH:</b>	<b>7.6-8.4</b>
<b>Melting point:</b>	<b>No data available</b>
<b>Freezing point:</b>	<b>No data available</b>
<b>Initial boiling point:</b>	<b>No data available</b>
<b>Boiling range:</b>	<b>No data available</b>
<b>Flash point:</b>	
<b>Evaporation rate:</b>	<b>No data available</b>
<b>Flammability (solid, gas):</b>	<b>No data available</b>
<b>Upper/lower flammability or explosive limits:</b>	<b>No data available</b>
<b>Vapor pressure:</b>	<b>No data available</b>
<b>Vapor density:</b>	<b>No data available</b>
<b>Relative density:</b>	<b>No data available</b>
<b>Solubility:</b>	<b>Soluble</b>
<b>Partition coefficient; n-octanol water:</b>	<b>No data available</b>
<b>Auto-ignition temperature:</b>	<b>No data available</b>
<b>Decomposition temperature:</b>	<b>No data available</b>
<b>Viscosity:</b>	<b>No data available</b>
<b>Specific gravity:</b>	<b>1.28</b>

## SECTION: 10 STABILITY AND REACTIVITY

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Product is stable at ambient temperature and pressure, under normal storage and handling conditions.
<b>Possibility of Hazardous Reactions:</b>	No data available
<b>Conditions to avoid:</b>	No data available
<b>Incompatible Materials:</b>	Strong oxidizing agents, strong bases and acids.
<b>Hazardous decomposition products:</b>	No data available

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Likely Routes of Exposure:</b>	Inhalation, ingestion, skin and eye contact
<b>Symptoms related to physical, chemical and toxicological characteristics and delayed and immediate effects and chronic effects from short and long term exposure.</b>	
<b>Acute Toxicity:</b>	
<b>Acute oral-</b> Ethanolamine: Est. LD50 = 1,515 mg/kg. Manganese chloride: Est. LD50 = 250 mg/kg. Zinc oxide: Est. LD50 = 7,950 mg/kg. EDTA: Est. LD50 = 4,500 mg/kg. Boric acid: Est. LD50 = 2,660 mg/kg. Copper (II) carbonate basic: Est. LD50 = 1,350 mg/kg. Ferric chloride: Estimated LD50: 1,822 mg/kg. <b>Acute Inhalation -</b> Ethanolamine: Estimated LC50 = >1.3 mg/l. Zinc oxide: Estimated LC50 = 2,500 mg/m <sup>3</sup> .	
<b>Acute dermal:</b> Ethanolamine: Estimated LD50 = 2,504 mg/kg.	
<b>Skin Corrosion/Irritation:</b>	Immediate contact may cause irritation. Repeated exposure may lead to itch, rash, dermatitis or other reaction>
<b>Serious Eye Damage/Eye Irritation:</b>	

May cause eye irritation, including redness and inflammation based on component data.

**Respiratory or Skin Sensitization:**

No data available

**Carcinogenicity:**

No data available

**Germ Cell Mutagenicity:**

No data available on mixture. Zinc Oxide: Hamster embryo - unscheduled DNA synthesis, morphological transformatin, sister chromatid exchange.

**Reproductive Toxicity:**

No data available. Boric acid has been demnonstrated to have an effect on male fertility and the development of an unborn child.

**Specific target organ toxicity - single or repeated exposure:**

No data available for this mixture. Single exposure: Ethanolamine: After repeated exposure, the prominent effect is local irritation. The substance may cause damage to the upper respiratory tract after repeated inhalation, as shown in animal studies.

**Aspiration Hazard:**

No data available

**Symptoms After Inhalation:**

Harmful if inhaled. Can cause irritation of upper respiratory tract with potential effects on central nervous systems.

**Symptoms After Skin Contact:**

May cause skin irritation

**Symptoms After Eye Contact:**

May cause eye irritation including redness and inflammation

**Symptoms After Ingestion:**

Harmful if swallowed. Ingestion could have negative effects on the kidneys and liver.

**SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity (Aquatic and Terrestrial, Where Available):**

No data available for the mixture. Individual component data reported. **EDTA:** LC50: 41mg/l, exposure time: 96h, species: Lepomis macrochirus (Bluegill sunfish), test type: static test. **Manganese chloride:** LC50: 51 mng/l, exposure time 96 h, species: Orconectes limosus macrochirus (Bluegill sunfish). **Ethanolamine:** LC50: 349 mg/l, exposure time: 96 h, species: Cyprinus carpio (Carp), test type: semi-static test. Literature data. Chronic: NOEC: 1.2 mg/l, exposure time 30 d, species: Oryzias latipes (orange-red killifish), method OECD test guideline 210. Literature data. **Zinc oxide:** LC50: 1.1 mg/l, exposure time: 96 h, species: Oncorhynchus mykiss (Rainbow Trout). **Ferric chloride hexahydrate:** LC50: 26 ppm iron, exposure time: 96 h, species: Pisces, LC50: 75.6 mg/l anhydrous form, exposure time: 96 h, species: Gambusia affinis. **Boric acid:** LC50: 279 mg/l, exposure time: 96 h, species: Ptychocheilus lucius. LC50: >1,201 mg/l, exposure time: 96 h, species: Lepomis macrochirus (Bluegill).

**Toxicity to Daphnia and Other Aquatic Invertebrates (Acute and Chronic):**

No data available for the mixture. Individual component data reported. **Boric Acid:** EC50: 133 mg/l, exposure time: 48 h, species: Daphnia magna (water flea). **EDTA:** EC50: 625 mg/l, exposure time: 48 h, species: Daphnia magna (water flea). **Manganese chloride:** EC50: > 11 mg/l, exposure time 48 h, species: Daphnia magna (water flea). **Ethanolamine:** EC50: 65mg/l, exposure time 48 h, species: Daphnia magna (water flea), test type: static test, method: 84/449/EEC C.2, Literature data. Chronic: NOEC: 0.85 mg/l, exposure time: 21 d, species: Daphnia magna (water flea), method: OECD test guideline 211. Literature data. **Zinc oxide:** EC50: 0.098 mg/l, exposure time: 48 h, species: Daphnia magna (water flea). **Ferric chloride, hexahydrate:** EC50: 9.6 mg/l, anhydrous form, exposure time: 48 h, species: Daphnia magna (water flea). EC50: 296-424 mg/l, exposure time: 96 h, species: Crangon sp.

**Toxicity to Algae:**

No data available for the mixture.

**Ethanolamine:** ErC50: 2.5 mg/l, exposure time: 72 h, species: Pseudokirchneriella subcapitata (green algae), test type: OECD test guideline 201.

**Persistence and Degradability:**

No data available

**Bioaccumulative Potential:** No data available

**Mobility in the Soil:** No data available

**Other Adverse Effects:**

No data available on the mixture: however, zinc oxide is very toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods - Product:**

Dispose in accordance with all local, state and federal regulations. In unused condition, this product is not considered to be a RCRA defined hazardous waste by character/listings. It is the responsibility of the waste generator to evaluate whether the waste is hazardous by characteristic/listing.

**Waste Treatment Methods - Container:**

Containers should be cleaned of residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations. Chemical additions, processing or otherwise inappropriate.

**SECTION 14: TRANSPORT INFORMATION - US DOT, IATA, IMO, ADR:**

<b>Proper shipping Name:</b>	Fertilizing Compound, NOI, Liquid-ZMB		
<b>D.O.T. Hazard Class:</b>	Not regulated by D.O.T.	<b>UN#:</b>	N/A
<b>Label Requirement:</b>	None	<b>RQ:</b>	N/A
<b>Placard:</b>	None	<b>CAS:</b>	Mixture
<b>Packing Group:</b>	N/A	<b>ERG Book Information:</b>	Guide#171
<b>Environment Hazards:</b>	No	<b>Marine Pollutant:</b>	No
<b>Special Precutions:</b>	No	<b>IATA:</b>	No

**U.S. Federal-OSHA Status:**

This product is hazardous under the criteria or the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**TSCA Status:** Listed/Reportable

**SARA Title III Section 302-EXTREMELY HAZARDOUS SUBSTANCES:**

This product does NOT contain ingredients listed in Appendix A and B as extremely hazardous substances.

**SARA TITLE III Sections 311-312**

Immediate (acute) health hazard, Delayed (chronic) health hazard

**SARA Section 313 Toxic Chemicals:**

This product contains the following toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community rights to Know Act.:

<b>CAS#:</b>	<b>Chemical Name:</b>
	This material does NOT contain any chemical components with know CAS numbers that exceed the threshold reporting levels.

**SARA Superfund Section 110:**

This product does NOT contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

**CERCLA, 40 CFR 117,302:**

This product does NOT contain ingredients specified in the list of Extremey Hazardous Substances.

**CERCLA Listed Substance Are:**

Ethylendiamine tetraacetic Acid RQ 5000lbs

## SECTION 15: REGULATORY INFORMATION

### Other Federal Reporting Requirements:

- CAA:** This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act
- CWA:** No chemicals in product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.
- RCRA:** Not a hazardous waste under RCRA

### CALIFORNIA PROPOSITION 65:

This product does NOT contain a chemical or chemicals subject to California Proposition 65.

## SECTION 16: OTHER INFORMATION

**NOTE SECTION 3:** Any concentration shown as a range is to protect confidentiality or is due due to batch variation.

**NOTICE:** OSHA STANDARD 29 CFT 1910.1200 requires that information to be provided to employees regarding the hazards of chemicals by means of a Hazard Communication Program including training, labeling, Safety Data Sheets, and access to written records. We request that you and it is your legal duty, to make all information in this Safety Data Sheet available to your employees.

**Revisions:** This SDS was reformatted to comply with the new Hazard Communication Standard dated September 7, 2018.

PREPARED BY: Ultra Gro, LLC

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