



SAFETY DATA SHEET

Revision Date: 11/20/14

SECTION 1: IDENTIFICATION

- 1.1 Product Name:** T & O™ Micro Nutrient
- 1.2 Other Identification:** Chemical Family
Formula Not applicable - proprietary blend
- 1.3 Recommended Use of Chemical:** Agricultural Liquid Formula
- 1.4 Manufacturer:** ProPlus Products, Inc.
149 County Line Road East
Bowling Green, FL 33834
- Information Number: (863)375-2487
- 1.5 Emergency Contact:** ProPlus Products, Inc. (863)375-2487

SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Hazard Classification:** Health None
Physical None
- 2.2 Signal Word:** Not Applicable
- 2.3 Hazard Statement(s)** Not Applicable
- 2.4 Symbol(s):** Not Applicable
- 2.5 Precautionary Statements(s):** Avoid Contact with eyes.
Use/store in cool, well ventilated areas.
Avoid prolonged/repeated breathing of vapors.
Avoid prolonged/repeated contact with skin.
Keep away from any sources of heat or flames.
Store totes or small containers out of direct sunlight.
Wear protective apron, gloves, and eye/face protection.
Do not allow release to aquatic waterways.
- 2.6 Unclassified Hazard(s)** None
- 2.7 Unknown Toxicity Ingredient(s):** None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Ingredients: (See Section 8 for exposure guidelines)

Chemical	Synonym Common Name	CAS No.
Zinc Sulfate	Zinc Sulfate	7733-02-0
Manganese Sulfate	Manganese Sulfate	10034-96-5
Magnesium Sulfate	Epsom Salt or Bitter Salt	7487-88-9
Iron Sulfate	Ferrous Sulfate	7782-63-0
Sodium Glucoheptonate	Sodium Glucoheptonate	31138-65-5
Sodium Molybdate	Sodium Molybdate	10102-40-6
Boric Acid	Boracic Acid or Boric Acid	10043-35-3

SECTION 4: FIRST AID MEASURES

4.1 Symptoms/Effects:

Acute: Repeated or prolonged skin contact may cause skin irritation. May cause conjunctivitis. Ingestion may temporarily irritate the gastrointestinal tract.

Chronic: Prolonged skin contact may result in dermatitis (drying) or eczema (itching).

4.2 **Eyes:** Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough ensure thorough flushing of the entire area of the eye and lids. Obtain medical attention if irritation occurs.

4.3 **Skin:** Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower and wash affected area with soap. Obtain medical attention if irritation occurs.

4.4 **Ingestion:** If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain medical attention.

4.5 **Inhalation:** Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES: (See section 9, for additional flammable properties)

NFPA: Health - 1 Flammability - 0 Reactivity - 0

Heating this product may evolve ammonia. Avoid strong oxidizers.

5.2 EXTINGUISHING MEDIA:

5.2.1 Suitable Extinguishing Media: Use dry chemical; CO₂, water spray or foam to distinguish fire.

5.2.2 Unsuitable Extinguishing Media: None Known

5.3 SPECIFIC HAZARD(S) ARISING FROM THE CHEMICAL:

5.3.1 Physical Hazards: Heating (flames) of closed or sealed containers may cause rupture of container due to thermal expansion of compressed gases.

5.3.2 Chemical Hazards: Heating causes release of vapors. Vapors are irritating to eyes, skin and respiratory tract. Heating to dryness may cause the release of sulfur dioxide, a hazardous vapor.

5.4 PROTECTION OF FIREFIGHTERS:

5.4.1 Protective equipment and precautions for firefighters: Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear. Keep containers/storage vessels in fire area cooled with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions:

Use personal protective equipment (PPE) specified in Section 8. Isolate the hazard area and deny entry to unnecessary untrained and unprotected personnel.

6.2 Environmental Precautions:

Keep out of "waters of the US" because of potential contribution to aquatic eutrophication.

6.3 Methods of Containment:

Small Release: Confine and absorb small releases with sand, earth or other inert absorbent.

Large Release: Shut off release if safe to do so. Dike spill area with earth, sand or other inert absorbent to prevent runoff into surface waterways (potential aquatic eutrophication).

6.4 Methods for Cleanup:

Small Release: For small areas shovel up the absorbed material and place in drums for disposal as a chemical waste or use water spray to dilute to a weak fertilizer solution, taking care not to let water runoff out of containment area.

Large Release: Recover as much of the spilled product as possible using portable pump and hoses. Treat remaining material as small release (above). Spread diluted fertilizer material over a wide area to avoid over fertilizing effects.

6.5 Other Information: Not applicable.

SECTION 7: HANDLING and STORAGE

7.1 Handling: Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated contact with the skin.

7.2 Storage: Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures (See Section 10.5 for materials of construction).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Guidelines:

OSHA (PELs)		ACGIH (TLVs)	
TWA	STEL	TLV	STEL
None	None	None	None

8.2 Engineering Controls: Use adequate exhaust ventilation to prevent inhalation of product vapors.

8.3 Personal Protective Equipment (PPE):

8.3.1 Eye/Face Protection: Chemical goggles and a full face shield.

8.3.2 Skin Protection: Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

8.3.3 Respiratory Protection: None generally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.

8.3.4 General Hygiene Considerations: There are no known hazards associated with this product when used as recommended, however common good industrial hygiene practices should be followed, such as, washing thoroughly after handling and before eating or drinking.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance/State/Odor:	Clear, light brown odorless liquid
9.2 pH:	4-6 (Typical)
9.3 Freezing Point:	Not Determined
9.4 Boiling Point:	Not Determined
9.5 Flash Point:	Not Applicable
9.6 Evaporation Rate:	Not Determined
9.7 Flammability:	Not Applicable
9.8 Flammability Limits:	Not Applicable
9.9 Vapor Pressure:	Not Determined
9.10 Vapor Density:	Not Determined
9.11 Specific Gravity:	1.32 (11.05 lb/gal) (Typical)
9.12 Solubility: (in water):	Complete
9.13 Partition Coefficient:	Data not available
9.14 Auto-Ignition Temperature:	Not Applicable
9.15 Decomposition Temperature:	Data not available
9.16 Viscosity:	Data not available

SECTION 10: STABILITY AND REACTIVITY

- 10.1 **Reactivity:** Avoid Interaction with heat (flames) or strong oxidizers.
- 10.2 **Chemical Stability:** This is a stable product under normal temperatures [35-120°F (1.667-49°C)].
- 10.3 **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4 **Conditions to Avoid:** Heating above 120°F (49°C), See section 10.1
- 10.5 **Incompatible Materials:** Strong oxidants, easily oxidizable materials
- 10.6 **Hazardous Decomposition Products:** Heating this product may evolve ammonia. Heating to dryness may cause the production of sulfur dioxide, which is hazardous if inhaled. Exposure to high heat can emit toxic odors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Oral:	Data not available
11.2 Dermal:	Data not available
11.3 Inhalation:	Data not available
11.4 Chronic/Carcinogenicity:	Not listed in NTP, IARC or by OSHA
11.5 Eye:	Data not available
11.6 Teratology:	Data not available
11.7 Reproduction:	Data not available
11.8 Mutagenicity:	Data not available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity:	No data available
12.2 Persistence & Degradability:	No data available
12.3 Bioaccumulative potential:	This product is not Bioaccumulative
12.4 Mobility in Soil:	No data available
12.5 Other adverse effects:	None

SECTION 13: DISPOSAL CONSIDERATIONS

Consult federal, state and local regulations for disposal requirements.

SECTION 14: TRANSPORT INFORMATION

14.1 Basic Shipping Description:

14.1.1 Proper Shipping Name:	T & O Micro Nutrient (Not regulated by DOT)
14.1.2 Hazard Class(s):	Not applicable
14.1.3 Identification Number:	Not applicable
14.1.4 Packing Group:	Not applicable
14.1.5 Hazardous Substance:	No
14.1.6 Marine Pollutant:	No

14.2 Additional Information:

14.2.1 Other DOT Requirements:

14.2.1.1 Reportable Quantity:	No
14.2.1.2 Placard(s):	Not applicable
14.2.1.3 Label(s):	Not applicable

14.2.2 USCG Classification: Not determined

14.2.4 Emergency Response Guide: Not applicable

14.2.5 Emergency Response Assistance Plan: Not applicable

14.2.6 Special Precautions: Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations:

15.1.1 OSHA: This product meets the criteria of the Federal OSHA Hazard communication Standard (29 CFR 1910.1200).

15.1.2 TSCA: Product is contained in USEPA Toxic Substance Control Act Inventory

15.1.3 CERCLA: Reportable Quantity - Not Applicable

15.1.4 SARA Title III:

15.1.4.1 Extremely Hazardous Substance (EHS): Not applicable

15.1.4.2 Section 312 (Tier II) Ratings:	Immediate (acute)	Yes
	Fire	No
	Sudden release	No
	Reactivity	No
	Delayed (chronic)	No

15.1.4.3 Section 313 (FORM R): Not applicable

15.1.5 RCRA: Not applicable

15.1.6 CAA (Hazardous Air Pollutants/HAPs): Not applicable

SECTION 16: OTHER INFORMATION

This SDS sheet has been created to comply with current changes to the SDS format using Global Harmonized System guidelines, by Proplus Products, Inc. Revision Date: 11-20-14

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CONTACT INFORMATION

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