



## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION

**PRODUCT NAME:** TURF EXCELLENCE™ MICROS

**PRODUCT USE:** Inorganic Fertilizer

**MANUFACTURER / SUPPLIER**

Carolina Eastern, Inc., Turf Excellence™

347 McAllister Mill Road, Scranton, SC 29591 USA

(843) 389-2761

**EMERGENCY CONTACT:** ChemTel (800) 255-3924

### 2. HAZARDS IDENTIFICATION SUMMARY

<b>Signal Word:</b>	Warning
<b>Skin Irritation:</b>	Prolonged or repeated contact may irritate slightly.
<b>Eye Irritation:</b>	Contact with liquid may irritate eyes.
<b>Acute Toxicity Oral:</b>	Not tested. Components are not considered to be acutely toxic.
<b>Acute Toxicity Dermal:</b>	No data available
<b>Hazard Categories:</b>	Oral/Dermal/Inhalation Toxicity - 5/3/5; Eye Irritation - 2B; Skin Irritation - 3
<b>Hazard Statement:</b>	May be harmful if swallowed. May be harmful in contact with skin. Causes serious eye irritation. Causes mild skin irritation. May cause damage to aquatic life. May be harmful if inhaled. May cause damage to organs through repeated ingestion.



### 3. COMPOSITION, INFORMATION ON INGREDIENTS

**COMPONENT:** Blend of plant nutrients derived from Magnesium Sulfate, Boric Acid, Copper Glucoheptonate, Iron Glucoheptonate, Manganese Glucoheptonate, Zinc Glucoheptonate and Sodium Molybdate.

**GUARANTEED ANALYSIS:**

Magnesium (Mg): 1.00%

Sulfur (S): 3.50%

3.50% Combined Sulfur (S)

Boron (B): 0.02%

Copper (Cu): 0.25%

0.25% Chelated Copper (Cu)

0.25% Water Soluble Copper (Cu)

Iron (Fe): 4.00%

4.00% Chelated Iron (Fe)



4.00% Water Soluble Iron (Fe)  
Manganese (Mn): 1.00%  
    1.00% Chelated Manganese (Mn)  
    1.00% Water Soluble Manganese (Mn)  
Zinc (Zn): 0.60%  
    0.60% Chelated Zinc (Zn)  
    0.60% Water Soluble Zinc (Zn)  
Molybdenum (Mo): 0.005%

**CAS Number:** Proprietary  
**Weight%:** 100%

**4. FIRST AID MEASURES**

**Eye:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.  
**Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation continues.  
**Inhalation:** Move to fresh air. Obtain medical attention if irritation develops.  
**Ingestion:** Drink large volumes of water. Call a physician or poison control center.

**Indication of Immediate Medical Attention and Special Treatment Needed:**  
In the event of an adverse response, treatment should be directed toward control of the symptoms and the clinical condition of the patient.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media:** Non-combustible product. Use extinguishing media for underlying cause of fire.  
**Specific Hazards Arising from the Chemical:** Product may release toxic irritating fumes.  
**Special Fire Fight Proc:** Wear positive-pressure self-contained breathing apparatus and full protective clothing. Use water spray to keep fire-exposed containers cool.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Avoid contact with skin and eyes. Keep unnecessary personnel out of area.  
**Protective Equipment:** NIOSH-approved respirator for ammonia gas if mist or spray is present, impervious gloves, splash-proof goggles, impervious apron, and footwear. Safety shower and eyewash should be available.  
**Emergency Procedures:** Do not contaminate water supplies, lakes, streams, ponds, or drains with spilled product.  
**Methods and Materials for Containment and Cleanup:** Contain spill. If uncontaminated, collect and reuse product. If contaminated, absorb on sand or clay and place in a recovery drum for proper disposal.



## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Do not contaminate water sources by runoff from cleaning of equipment, disposal of equipment wash water or spray waste. Avoid containers, piping or fittings made of copper-containing alloys or galvanized metals.  
**Conditions for Safe Storage:** Keep out of reach of children. Do not store with food, feed or other material to be used or consumed by humans or animals. Use within 6 months of purchase date. Store unblended in original containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**TLV/PEL:** Not established.

**Appropriate Engineering Controls:** Local exhaust should be sufficient.

**Personal Protective Equipment:** NIOSH-approved respirator for ammonia gas if mist or spray is present, impervious gloves, splash-proof goggles, impervious apron, and footwear. Safety shower and eyewash should be available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Odor/Appearance:** Brownish liquid

**Flash Point, °F:** Not flammable

**Boiling Point, °F:** Not applicable

**Melting Point (Freezing point), °C:** <32 Degrees F

**Vapor Pressure, mm Hg @ 20° C:** Not applicable

**Vapor Density:** Not applicable

**Solubility in Water:** Soluble

**Molecular Formula:** Not applicable, formulated mixture.

**Specific Gravity:** 1.8

**pH:** 10.4

**Flammable Limits (approximate volume % in air):** Not applicable

**Auto-ignition Temperature:** Not applicable

**Decomposition Temperature:** No information found.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No information found

**Chemical Stability:** Stable

**Hazardous Decomposition Products:**

Product may release ammonia and carbon dioxide under fire conditions.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Avoid high temperatures above 105 Degrees F., or greater acid contamination.

**Incompatible Materials:** Avoid mixing or intimate contact with strongly acidic materials.



## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity (Oral LD50):** No information found.

**Acute Toxicity (Dermal LD50):** No information found.

**Acute Toxicity Inhalation LC50:** No information found.

**Likely Routes of Exposure:** Skin, eyes, inhalation

**Skin Irritation:** Prolonged or repeated contact may irritate slightly.

**Eye Irritation:** Liquid contact may irritate slightly. If mist is formed, it may also irritate slightly.

**Skin Sensitization:** No information found.

**Carcinogenic:** Not listed by IARC, NTP or OSHA.

**Chronic Effects:** None currently known.

**Other Hazards:** None currently known.

## 12. ECOLOGICAL INFORMATION

**Eco-toxicity:** No information found.

**Persistence and Degradability:** No information found.

**Bio-accumulative Potential:** No information found.

**Mobility in Soil:** No information found.

**Other Adverse Effects:** May promote eutrophication in waterways if large spills occur.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

## 14. TRANSPORT INFORMATION

**UN Proper Shipping Name:** Not regulated by DOT, IATA or IMDG.

**Transport Hazard Class:** Not designated as a dangerous substance.

**UN Identification Number:** None

**Packaging Group:** None

**Environmental Hazards:** No information found.

**Transport in Bulk:** No information found.

**Special Precautions for Transportation:** No information found.

**Freight Classification:** Fertilizing Compound, (Manufactured Fertilizer), Liquid, NOIBN (NMFC Item 68140, Sub 6, Class 70)



**15. REGULATORY INFORMATION**

**National Fire Protection Association Rating:**

**Health: 1    Fire: 0    Reactivity: 0**

Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

**S.A.R.A Title III Hazard Classification (Yes/No): N**

**Immediate (Acute) Health: Y**

**Delayed (Chronic) Health: N**

**Sudden Release of Pressure: N**

**Fire: N**

**Reactive: N**



**16. OTHER**

Date of Preparation/Revision: March 10, 2023

**Disclaimer and Limitation of Liability:** The information contained in this SDS is by way of general comment only. Because conditions of use, suitability of product, and application conditions are beyond the control of Carolina Eastern, Inc. this SDS does not offer any advice in respect to any product. The authors and Carolina Eastern, Inc. hereby disclaim any liability to any person, property, or thing in respect of any consequence of anything done or omitted to be done by any person in reliance, whether wholly or in part, upon whole or part of the contents of this SDS.

**END OF SDS**