

SAFETY DATA SHEET

FILE NO.: BPTNS-2016Q4

NAME OF PRODUCT: **NutriSolve™**

Preparation Date: 12/13/2016

Revision: 12/13/2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODES: BPT-NS
PRODUCT NAME: NutriSolve
SYNONYMS: plant micronutrient blend

MANUFACTURER: BioPro Technologies, LLC
ADDRESS: 4060 SE 45th Court, Ocala, FL 34480

EMERGENCY PHONE: (888) 545-6307

CHEMTREC PHONE:

OTHER CALLS: (352) 620-2020

FAX PHONE: (352) 620-0312



PRODUCT USE: Turf management

PREPARED BY: E.F. Wilson III

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health: Eye Effects: Category 2(a) Skin Irritation: Category 2 Acute Toxicity, Oral: Category 4	Environmental: Acute Aquatic Toxicity: Unknown	Physical: No Physical Hazards Present
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GHS Pictogram: 	ANSI/Old Pictogram: 	Signal Word: Warning
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Hazard Statements: H302 - Harmful if swallowed. H315 – Causes Skin Irritation H319 - Causes serious eye irritation.	Precautionary Statements: P101: If medical advice is needed, have product container or label at hand P102: Keep out of reach of children P103: Read label before use P261: Avoid breathing mist/spray P262: Do not get in eyes, on skin, or on clothing P271: Use only outdoors or in a well ventilated area P280: Wear protective gloves/protective clothing/eye protection/face protection P281: Use personal protective equipment as required P353: Rinse skin with water/shower P363: Wash contaminated clothing before reuse. If swallowed: Call a poison center and/or doctor if you feel unwell. Rinse Mouth. (P301+P312+P330) If inhaled: Remove person to fresh air and keep comfortable for breathing. (P304+P340) If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and able to do so. Continue rinsing eyes. Seek medical attention if eye irritation persists. (P305+P313+P337+P351+P338)
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SECTION 2 NOTES:

Physical Description (also see Section 9): Dark brown liquid; earthy odor.

Medical Conditions Aggravated by Long-Term Exposure: Persons with existing skin lesions should exercise caution when using or handling this product. These individuals should also avoid all contact with possible spray mist.

Chronic Effects: Prolonged or repeated skin contact may cause dermatitis. Ingestion may irritate gastrointestinal tract.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:

Copper Sulfate – CAS# 7758-99-8
Ferrous Sulfate – CAS# 7720-78-7
Manganese Sulfate – CAS# 7785-87-7
Sodium Borate – CAS# 1303-96-4
Sodium Molybdate – CAS# 7631-95-0

*Contains organic acid chelating agents

*AS PER 29 CFR §1910.1200, THE SPECIFIC CHEMICAL IDENTITY AND/OR EXACT PERCENTAGE (CONCENTRATION) OF COMPOSITION HAS BEEN WITHHELD AS A TRADE SECRET.

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

IF INHALED: Remove victim from contaminated atmosphere.

IF ON SKIN (OR HAIR): Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Continue rinsing. Obtain medical attention if irritation occurs. Wash clothing before reuse.

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention.

IF SWALLOWED: Give 2 or 3 glasses of water to drink. Induce vomiting by touching back of throat with finger. Get immediate medical attention.

SECTION 4 NOTES: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). No specific antidote; treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES: NON-FLAMMABLE

FLASH POINT: SAMPLE BEGINS TO BOIL BUT NO FLASH IS OBSERVED

AUTOIGNITION TEMPERATURE: NOT APPLICABLE, MIXTURE WILL NOT AUTOIGNITE

NFPA HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
OTHER: 0

EXTINGUISHING MEDIA: Water spray, dry chemical, carbon dioxide, or foam.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS: Fire fighters should wear full protective equipment and self-contained breathing apparatus. Prevent runoff from entering water systems. Keep non-essential personnel out of fire area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heating (flames) of closed or sealed containers may cause violent rupture of container due to thermal expansion of compressed gases. Keep containers cool with water spray.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and sulfur, hydrogen sulfide.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. If spill is of major proportions soil may need to be evacuated.

CONTAINMENT METHODS AND CLEANUP: Stop the flow of material, if this is without risk.

Large Spills: Dike to prevent spill from entering water systems.

Small Spills: Wear protective equipment. Prevent spill from entering water systems. Absorb spill on inert material such as clay, vermiculite, or kitty litter. Place absorbed material into labeled container for proper disposal. Dispose of in accordance with local, State, and Federal laws and regulations; see Section 13.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Do not ingest. Avoid breathing mist or vapor. Avoid contact with skin and eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Store in a cool, dry, locked area out of reach of children and animals.

OTHER PRECAUTIONS: THIS PRODUCT IS FOR AGRICULTURAL AND HORTICULTURAL USE ONLY AND IS NOT INTENDED FOR OTHER APPLICATIONS. USE NORMAL SAFE HANDLING PROCEDURES AS WITH ALL CHEMICALS. SEE LABEL FOR APPLICATION INSTRUCTIONS AND DIRECTIONS FOR USE.

SECTION 7 NOTES: Store locked up. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use in open, outdoor areas only.

VENTILATION : Provide adequate ventilation.

RESPIRATORY PROTECTION: In confined areas, NIOSH/MSMA approved respirator.

EYE PROTECTION: Safety glasses/goggles/face shield recommended to prevent splash from concentrated material.

SKIN PROTECTION: Impervious gloves (ex. Nitrile 0.11mm thickness), clothing and boots suggested.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear suitable protective clothing. Wash contaminated clothing prior to reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

WORK HYGIENIC PRACTICES: When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

EXPOSURE GUIDELINES:

[Numbers represent mg/M3 unless otherwise indicated].

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Copper Sulfate	1 (as Cu)	NA	1 (as Cu)	NA	NA	NA	NA
Ferrous Sulfate	NA	NA	1	NA	1	2	NA
Manganese Sulfate	NA	NA	5	NA	NA	NA	NA
Sodium Borate	NA	NA	5	NA	NA	NA	NA
Sodium Molybdate	5	NA	5	NA	NA	NA	NA

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Dark brown

ODOR: Earthy odor

PHYSICAL STATE: Liquid

pH AS SUPPLIED: 1.28 @ 21.1C

WEIGHT: 10.21 lbs. per gal.

BOILING POINT:

F: 212

C: 100

MELTING POINT/FREEZING POINT:

F: 32

C: 0

VAPOR PRESSURE (mmHg): Unknown

VAPOR DENSITY (AIR = 1): Unknown

DENSITY (g/cm³): 1.2

SPECIFIC GRAVITY (H₂O = 1): 1.200

EVAPORATION RATE: Not determined.

BASIS (=1):

SOLUBILITY IN WATER: Soluble

PERCENT VOLATILE: NO VOLATILITY PRESENT

VOLATILE ORGANIC COMPOUNDS (VOC): NONE

MOLECULAR WEIGHT: NO DATA PRESENT

VISCOSITY: Not determined

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID (STABILITY): Avoid extreme heat. Do not freeze.

INCOMPATIBILITY (MATERIAL TO AVOID): None known.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides of carbon and sulfur, hydrogen sulfide.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Temperatures above 120°F (49°C) and below 32°F (0°C).

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Not determined; no data available.

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SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Accidental spills of undiluted product may cause vegetation kills. Keep out of any body of water; may harm aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

HAZARDOUS WASTE CODE: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

RCRA HAZARD CLASS: NOT APPLICABLE

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: NutriSolve
HAZARD CLASS: Not regulated
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

OCEAN/WATER TRANSPORTATION
PROPER SHIPPING NAME: NutriSolve

AIR TRANSPORTATION
PROPER SHIPPING NAME: NutriSolve

OTHER AGENCIES:

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

EPA Regulations: Not regulated by EPA under FIFRA or FQPA.

OSHA Regulations: Refer to Sections 2 & 8.

State Regulations: Ferrous sulfate & sodium borate appear on the CA & NJ RTK Chemical Lists; manganese sulfate and zinc sulfate appears on the CA RTK Chemical List. Check with specific state authorities since regulations vary within the states.

Other Regulations: Ferrous sulfate & Zinc sulfate are Section 304 Chemicals; (CERCLA RQ= for each=1,000 lbs.).

SARA Title III; Sections 311/312: Sudden Release of Pressure (N), Reactivity (N), Fire (N), Immediate (Acute) Health (Y), Delayed (Chronic) Health (N).

SECTION 15 NOTES:

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SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

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