

SAFETY DATA SHEET

FILE NO.: BPTMNP0005-2017Q3

NAME OF PRODUCT: **Manganese Plus™ 0-0-0-5Mn**

Preparation Date: 12/3/2002

Revision: 8/31/2017

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODES: BPT-MNP0005
PRODUCT NAME: Manganese Plus (0-0-0-5Mn)
SYNONYMS: plant micronutrient, Manganese

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: H303 – May be harmful if swallowed. H315 – Causes Skin Irritation H320 - Causes 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 If on skin: Rinse skin with water/shower, wash contaminated clothing before reuse. (P353+P363) If swallowed: Call a poison center and/or doctor if you feel unwell. Rinse Mouth. Induce vomiting. (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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS*:

Ferrous Sulfate – CAS# 7720-78-7

Manganese Sulfate – CAS# 7785-87-7

Seaweed extract – Ascophyllum Nodosum – CAS# 84775-78-0

Chelated with organic acids

*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): Remove any contaminated clothing. Wash affected area with mild soap and water. Get medical attention if irritation persists or develops. Launder contaminated 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. Hold eyelids apart during irrigation to ensure thorough flushing of the entire area of the eye and lids with water. If eye irritation persists: Get medical advice/attention if irritation persists.

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: 2

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: Containers exposed to fire may rupture violently. Keep containers cool with water spray.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen 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. Recover as much solution as possible.

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.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin/eyes/clothing. Do not take internally. Wash after handling. Do not dispose of equipment wash waters, contaminating waters. Store in a cool, dry area preferably locked and 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: Occupational limits not established for this product. ACGIH limits for ammonia are TWA 25 ppm and STEL 35 ppm; OSHA limit for ammonia is 35ppm STEL.

EXPOSURE GUIDELINES:

[Numbers represent mg/M3 unless otherwise indicated].

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Ferrous Sulfate	NA	NA	1	NA	1	2	NA
Manganese Sulfate	NA	NA	5	NA	NA	NA	NA

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Dark brown liquid

ODOR: Slight odor

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PHYSICAL STATE: Liquid

pH AS SUPPLIED: 1.4 – 1.6

WEIGHT: 10.47 lbs. per gal. (1.25 kg/L)

BOILING POINT:

F: 212F

C: 100C

MELTING POINT/FREEZING POINT:

F: 32F

C: 0C

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): Unknown

DENSITY (g/cm3): 1.3

SPECIFIC GRAVITY (H2O = 1): 1.25

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: Stable under normal conditions of use and storage. DO NOT FREEZE.

CONDITIONS TO AVOID (STABILITY): Extreme heat. Freezing temperatures.

INCOMPATIBILITY (MATERIAL TO AVOID): None Known.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides of nitrogen 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.

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. Keep out of any body of water.

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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Consult local, state or federal regulatory agencies for acceptable disposal procedures and locations. Disposal in waterways or sewers may be prohibited.

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: Manganese Plus 0-0-0-5Mn

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

OCEAN/WATER TRANSPORTATION

PROPER SHIPPING NAME: Manganese Plus 0-0-0-5Mn

AIR TRANSPORTATION

PROPER SHIPPING NAME: Manganese Plus 0-0-0-5Mn

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: Check with specific state authorities since regulations vary within the states.

Other Regulations: Ferrous sulfate is a Section 304 chemical (CERCLA RQ=1,000 lbs.).

SARA Title III; Sections 311/312: Sudden Release of Pressure (0), Reactivity (0), Fire (0), Immediate (Acute) Health (Y), Delayed (Chronic) Health (N).

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

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