

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: BioPro EnviroPro 12-3-6 Date of Preparation: 04/28/98 Model: 57957 and 57092
NFPA HAZARD RATINGS: Health(1), Fire(0), Reactivity(0). (0)least (1)slight (2)moderate (3)high (4)extreme.

Section 1-CHEMICAL PRODUCT and COMPANY IDENTIFICATION

General Product Composition: Proprietary Polymerous Hydrosol Leachate with Nitrogen, Phosphoric Acid and Zinc. Intended Use: Turf Management. Manufactured for: **Spindler Enterprises, Inc. P.O. Box 6112, Lakeland, FL 33807** Phone: (863) 619-9822.
Emergency Telephone: CHEMTREC 1-800-424-9300.

Section 2-COMPOSITION/INFORMATION on INGREDIENTS

HAZARDOUS INGREDIENT NAME	FORMULA	CAS No.
Anhydrous Ammonia	NH ₃	7664-41-7
Citric Acid	C ₃ H ₅ O(COOH) ₃ H ₂ O	77-92-9
Phosphoric Acid	H ₃ PO ₄	7664-38-2
Potassium Chloride	KCl	7447-40-7
UreaAmmonium Nitrate	CO(NH ₂) ₂ +NH ₄ NO ₃	15978-77-5
Zinc Sulfate	ZnSO ₄	7733-02-0

TRACE IMPURITIES: organic acids and biostimulants derived from leonardite. **EXPOSURE LIMITS:** ((REFER TO SECTION 8))

Section 3-HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Potential Health Effects: **Primary Entry Routes:** Eyes, skin, ingestion. **Target Organs:** Eyes, skin, gastrointestinal tract. **Acute Effects:** *Inhalation:* May cause irritation of respiratory tract. *Eye:* May cause irritation, redness and/or burning. *Skin:* May cause irritation, redness and/or burning. *Ingestion:* May be harmful if swallowed. May cause abdominal cramps, nausea, vomiting and/or diarrhea. **Carcinogenicity:** IARC: NO; NTP: NO; OSHA: NO. **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 4-FIRST AID MEASURES

Inhalation: Remove to fresh air. **Eye Contact:** Flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists or develops. **Skin Contact:** 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. **Ingestion:** Give 2 or 3 glasses of water to drink. Induce vomiting by touching back of throat with finger. Get immediate medical attention. *After first aid, get appropriate in-plant, paramedic, or community medical support.*
Note to Physicians: No specific antidote. Treat symptomatically. **Special Precautions/Procedures:** None known.

Section 5-FIRE FIGHTING MEASURES

Flash Point: NA **Flammability Classification:** Non-flammable. **Extinguishing Media:** Water spray, dry chemical, carbon dioxide, foam.
Unusual Fire or Explosion Hazards: Containers exposed to fire may rupture violently. Keep containers cool with water spray.
Hazardous Combustion Products: Oxides of nitrogen, phosphorus and carbon; ammonia gas. **Fire-Fighting Instructions:** 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.

Section 6-ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures: 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. **Large Spills:** Dike to prevent spill from entering water systems. **Cleanup:** If spill is of major proportions, soil may need to be excavated.

Section 7- HANDLING and STORAGE

Handling Precautions: Avoid contact with skin, eyes and clothing. Do not take internally. Wash after handling. Do not contaminate water by disposal of equipment wash waters. **Storage Requirements:** Store in a cool, dry area preferably locked and out of reach of children and animals.

Section 8-EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use in open, outdoor areas only. **Respiratory Protection:** In confined areas, NIOSH/MSMA approved respirator. **Protective Clothing/Equipment:** Safety glasses/goggles/face shield recommended. Impervious gloves, protective clothing and impervious boots suggested.

EXPOSURE GUIDELINES: {Numbers represent mg/M³ unless otherwise indicated}.

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Anhydrous Ammonia	50ppm	NA	17	24	18	27	300ppm
Phosphoric Acid	1	NA	1	3	1	3	1,000
Ammonium Nitrate	5*	NA	NA	NA	NA	NA	NA

*as respirable dust, if generated; also CA OSHA limit.

Section 9-PHYSICAL/CHEMICAL PROPERTIES

Physical State: Liquid. **Solubility in Water:** Soluble. **Density:** 10.1 lbs. per gal. **Specific Gravity (@ 68°F):** 1.20. **pH:** °ND.

Section 10-STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use and storage. DO NOT FREEZE. **Polymerization:** NO. **Chemical Incompatibilities:** None known. **Conditions to Avoid:** Extreme heat. Do not freeze. **Hazardous Decomposition Products:** Oxides of nitrogen, phosphorus and carbon; ammonia gas.

Section 11-TOXICOLOGICAL INFORMATION

No lab tests for this product for the following: Eye Effects, Skin Effects, Acute Inhalation Effects, Chronic Effects, Carcinogenicity, Mutagenicity & Teratogenicity.

Section 12-ECOLOGICAL INFORMATION

Ecotoxicity: Accidental spills of undiluted product may cause vegetation kills. **Environmental Fate:** Keep out of any body of water.

Section 13-DISPOSAL CONSIDERATIONS

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

Section 14-TRANSPORT INFORMATION

DOT Transportation Data (49 CFR 172.101): **Shipping Name:** Other regulated substances, liquid, n.o.s. (ammonia, ammonium nitrate, phosphoric acid). **Shipping Symbols:** AD. **Hazard Class:** 9 **ID No.:** NA3082 **Packing Group:** III **Label:** CLASS 9. **Packaging Authorizations:** a) **Exceptions:** 155, b) **Non-bulk Packaging:** 203, c) **Bulk Packaging:** 241. **Quantity Limitations:** a) **Passenger, Aircraft, or Railcar, Special Provisions (172.102):** no limit, b) **Cargo Aircraft Only:** no limit. **Vessel Stowage Requirements:** a) **Vessel Stowage:** A.

Section 15-REGULATORY INFORMATION

EPA Regulations: Not regulated by EPA under FIFRA or FQPA. **OSHA Regulations:** Refer to Sections 2 & 8. **State Regulations:** The following appear on state RTK Chemical Lists: Ammonia: CA, FL, MN, NJ; Phosphoric acid: CA, FL, NJ & MN; ammonium nitrate: FL & NJ; urea: CA & MN; zinc sulfate & citric acid: CA. Check with specific state authorities since regulations vary within the states. **Other Regulations:** Phosphoric acid is a section 313 chemical. Section 304 Chemicals: phosphoric acid (CERCLA RQ= 5,000 lbs); zinc sulfate: CERCLA RQ=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 16-OTHER INFORMATION