

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: BioPro Turf Special (20-0-5) Date of Preparation: 7/28/99 **Model:** 57979, 57094
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: Urea Ammonium Nitrate, Potassium Chloride, Ferrous Sulfate, and Citric Acid. 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.
Citric Acid	$C_3H_5O(COOH)_3H_2O$	77-92-9
Ferrous Sulfate	$FeSO_4$	7720-78-7
Potassium Chloride	KCl	7447-40-7
Urea Ammonium Nitrate	$CO(NH_2)_2+NH_4NO_3$	15978-77-5

TRACE IMPURITIES: none are known. **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:* Not normally known to present a problem. *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 carbon, nitrogen and sulfur. **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 IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Ferrous Sulfate	NA	NA	1	NA	1	NA	NA
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:** 10.4 lbs. per gal. **Specific Gravity (@ 68°F):** 1.25. **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 carbon, nitrogen, and sulfur.

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:** ammonium nitrate **Shipping Symbols:** (none) **Hazard Class:** 5.1 **ID No.:** UN1942 **Packing Group:** III **Label:** Oxidizer. **Packaging Authorizations:** a) **Exceptions:** 152, b) **Non-bulk Packaging:** 213, c) **Bulk Packaging:** 240. **Quantity Limitations:** a) **Passenger, Aircraft, or Railcar, Special Provisions (172.102):** 25kg, b) **Cargo Aircraft Only:** 100kg. **Vessel Stowage Requirements:** a) **Vessel Stowage:** A; b) **other stowage provisions:** 48, 59, 60, 116.

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: Ammonium nitrate: FL & NJ; urea: CA & MN; citric acid: CA; ferrous sulfate: CA & NJ. Check with specific state authorities since regulations vary within the states. **Other Regulations:** Section 304: ferrous 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