

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: EXSODIS (5-0-0)

MSDS No.: 99-57056, 57057, 57059

Date of Preparation: 07/19/97

Date of Revision: 11/25/02

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: Blend of Calcium and Nitrogen compounds, proprietary additives and water.

Intended Use: Turf Management.

Manufacturer 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

Ingredients in this product are not considered hazardous under OSHA Hazardous Communication Standard 29CFR1910.1200.

TRACE IMPURITIES: Alkaline earth metal hydroxides, oxides and carbonates, and ammonia.

Section 3-HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Potential Health Effects: **Primary Entry Routes:** Eyes, skin, ingestion, inhalation. **Target Organs:** Eyes, skin, gastrointestinal tract, respiratory tract. **Acute Effects:** *Inhalation:* Mists may be irritating to the respiratory tract or mucous membranes. Additional effects may include sneezing, coughing or shortness of breath. *Eye:* May cause eye irritation or redness. Additional effects may include tearing. *Skin:* May cause skin irritation, redness or rash. Additional effects may include blisters or sores. *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:** May cause perforation of nasal septum and nosebleeds. May cause some damaging effects on lungs. Prolonged or repeated skin contact may cause dermatitis. Ingestion may irritate gastrointestinal tract.

Section 4-FIRST AID MEASURES

Inhalation: Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately. **Eye Contact:** Flush eyes with large amounts of water for at least 15 minutes, occasionally lifting upper and lower eyelids until no evidence of chemical remains (at least 15-20) minutes. Get medical attention immediately. **Skin Contact:** Remove any contaminated clothing and shoes immediately. Wash affected area with mild soap and flush with large amounts of water until no evidence of chemical remains (at least 15-20 minutes). In case of burns, cover area with sterile, dry dressing. Bandage securely, but not too tightly. Get medical attention immediately. Launder contaminated clothing before reuse.

Ingestion: Treat symptomatically and supportively. Get medical attention immediately. Do not induce vomiting. If vomiting occurs, keep head lower than hips to prevent aspiration. **Note to Physicians:** No specific antidote. Treat symptomatically and supportively. May cause corneal injury. **Special Precautions/Procedures:** None known.

Section 5-FIRE FIGHTING MEASURES

Flash Point: NA. **Flammability Classification:** Non-flammable. **Extinguishing Media:** Dry chemical, carbon dioxide, water spray or regular foam. For larger fires, use water spray, fog or regular foam. **Unusual Fire or Explosion Hazards:** Containers exposed to fire may rupture violently. Keep containers cool with water spray. Move containers from fire area if it can be done without risk. Extinguish fire-using agent suitable for type of surrounding fire and/or chemicals. Do not use water directly on material. Avoid breathing corrosive vapors; keep upwind. Dike area to prevent runoff and contamination of water sources. **Hazardous Combustion Products:** Thermal decomposition products may include very small amounts of toxic and corrosive fumes of chlorine, hydrogen chloride, ammonia or nitrogen oxides. Product may react with some metals (aluminum, zinc, tin, etc.) to release some flammable hydrogen 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

Occupational Spill: Avoid contact with spilled material. Stop leak if it can be done without risk. For small spills, take up with sand or other absorbent material and place into labeled container(s) for disposal. Move containers from spill area. For larger spills, dike far ahead of spill for later disposal. Deny entry of nonessential personnel and isolate hazard area. **Soil Spill:** Dig holding area such as lagoon, pond or pit for containment. Dike flow of spilled material using soil or sandbags or foamed barriers such as polyurethane or concrete. Use cement powder or fly ash to absorb liquid mass.

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Section 7- HANDLING and STORAGE

Handling Precautions: Observe all federal, state and local regulations when storing this product. 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 tightly closed container. Store in a cool, dry area preferably locked and out of reach of children and animals. Store away from incompatible substances.

Section 8-EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: No occupational exposure limits established by OSHA/ACGIH/NIOSH. **Ventilation:** Provide local exhaust ventilation system. **Eye Protection:** Must wear safety glasses with splash shields or safety goggles to prevent contact with this product. **Emergency Wash Facilities:** Where there is any possibility that an individual's eyes and/or skin may be exposed to this product, an eye wash fountain and quick drench shower within the immediate work area should be available for emergency use. **Clothing:** wear impervious clothing and equipment to prevent repeated or prolonged skin contact. Leather, work boots and /or leather products will rehydrate with resultant shrinkage and possible destruction. **Gloves:** Wear appropriate protective gloves, such as rubberized or latex coated canvas gauntlets, to prevent contact with product. **Respirator:** The respirator selected must be based on contamination levels found in the workplace and specific to the job assignment. Do not exceed the working limits of the respirator. The National Institute must jointly approve respirators for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA). These respirators are ranked from minimum to maximum respiratory protection as follows: Any *dust and mist respirator with a full face piece*; Any *air-purifying full face piece respirator with a high-efficiency particulate filter*; Any *powered air-purifying respirator with a tight-fitting face piece and high-efficiency particulate filter*; Any *Type "C" supplied-air respirator with a full face piece operated in pressure-demand or other positive pressure mode or with a full face piece, helmet or hood operated in continuous-flow mode*; Any *self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode*.

For Fire Fighting And Other Immediately Dangerous To Life Or Health Conditions: Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode; Any supplied air-respirator that has a full face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Section 9-PHYSICAL/CHEMICAL PROPERTIES

Physical State: Liquid. **Appearance & Odor:** Odorless; clear to slightly yellow or amber. **Water Solubility:** Miscible with water in all proportions. **Solvent Solubility:** Miscible in alcohol, acetic acid and acetone. **Density:** 11.4 lbs. per gal. **Specific Gravity (@ 25°C):** 1.37
pH (@ 25°C): 6.0-8.0. **Boiling Point:** 234°F (112°C).

Section 10-STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use and storage. DO NOT FREEZE. **Polymerization:** NO. **Chemical Incompatibilities:** *Boric Oxide & Calcium Oxide: Possible violent incandescent reaction; Bromide Trifluoride, Sodium Nitrite, Phosphorus Pentachloride: Possible violent reaction; Furan-2-Peroxyacetic Acid: Explodes; Metals: Corrosive in the presence of moisture; Methyl Vinyl Ether: May initiate exothermic polymerization; Aluminum & Zinc: Corrodes, releasing flammable hydrogen gas; Sodium Hypochlorite & Calcium Hypochlorite: Can react to form explosive Nitrogen Trichloride.* **Conditions to Avoid:** Extreme heat. Do not freeze. Product is corrosive to mild steel & aluminum. **Hazardous Decomposition Products:** Thermal decomposition products may include very small amounts of toxic and corrosive fumes of chlorine, hydrogen chloride, ammonia, or nitrogen oxides. Flammable, poisonous gases may accumulate in tanks and hopper cars.

Section 11-TOXICOLOGICAL INFORMATION

TOXICITY DATA: TD_{Lo}: 110 g/kg, oral, 20 weeks, rat; LD_{Lo}: 274 mg/kg, subcutaneous, dog; LD₅₀: 1000 mg/kg, oral, rat; LD₅₀: 264 mg/kg, intraperitoneal, rat. **LOCAL EFFECTS:** Liquid product is an eye, skin and mucous membrane irritant. **ACUTE TOXICITY LEVEL:** Moderately toxic by ingestion; slightly toxic by dermal absorption. **TARGET EFFECTS:** No data available. **AT INCREASED RISK TO EXPOSURE:** Persons with skin, eye, respiratory or kidney disorders. **INHALATION:** *Acute exposure:* Inhalation of mist may cause irritation with coughing and shortness of breath. *Chronic exposure:* Possible mutagen. **SKIN CONTACT:** *Acute exposure:* Single, short exposure not likely to cause significant skin irritation. However, direct contact with mist or solution may cause severe irritation, erythema, blistering, exfoliation, ulceration, necrosis and scarring. The degree of irritation depends on the concentration and duration of contact. *Chronic exposure:* Effects depend on concentration and duration of exposure. Repeated or prolonged contact with corrosive substances may result in dermatitis or effects similar to those in acute exposure. **EYE CONTACT:** *Acute exposure:* Direct contact with mist or solution may cause irritation with redness and pain and superficial injury. Tearing and eye discharge may also occur. *Chronic exposure:* Repeated or prolonged exposure may result in conjunctivitis. **INGESTION:** *Acute exposure:* May cause abdominal spasms and nausea. Overdoses may cause gastrointestinal tract or cardiovascular irregularities. The fatal dose is estimated to be 100 grams.

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Chronic exposure: No data available.

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: Observe all local, state or federal regulations 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): DOT Shipping Name: not regulated.

Section 15-REGULATORY INFORMATION

EPA Regulations: Not regulated by EPA under FIFRA or FQPA. **TSCA STATUS:** Yes. **WHMIS CLASSIFICATION:** D.2B. **CA PROP. 65:** No. **40CFR302.4 CERCLA Sec. 103:** No. **40CFR355.30 SARA Sec. 302:** No. **40CFR355.40 Sec.304:** No. **40CFR372.65 SARA Sec. 313:** No. **20CFR1910.119 OSHA Process Safety:** No. **State Regulations:** Urea appears on the CA & MN RTK Chemical Lists; Calcium Chloride appears on the CA RTK Chemical List. Check with specific state authorities since regulations vary within the states. **(40CFR370.21) 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

DISCLAIMER: The information on this MSDS was obtained from current and reliable sources intended for persons having related technical skills. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. It is the users responsibility to determine safe conditions for use of the product and to assume liability for loss, injury, damage, or expense resulting from improper use.

ND= Not Determined; NA= Not Applicable; NIA= No Information Available