AGROTAIN International L.L.C.
5914 Highway 145
Corydon, KY 42406
888-425-8732
Issue Date: January 2003

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION
Product Identifier: **UMAXXTM**
General Use: Fertilizer
Common Name: Urea with Dicyandiamide and NBPT
Product Identification Number: Not applicable

EMERGENCY TELEPHONE NUMBERS:
CHEMTREC: 800-424-9300

COMPONENT CAS No. % OSHA PEL ACGIH TLV
N-(n-Butyl)-thiophosphoric triamide 94317-64-3 Proprietary None None
Urea 57-13-6 >95 None None
Organic nitrogen (dicyandiamide) 461-58-5 Proprietary None None
Other trace impurities and solvents Mixture >1 None None

2. HAZARDS IDENTIFICATION
EMERGENCY OVERVIEW: Blue-Green granules. At high dust concentrations, may cause eye, skin, and mucous membrane irritation.
Avoid contact with skin, eyes or clothing.

POTENTIAL HEALTH EFFECTS: INHALATION: High dust concentrations may cause irritation resulting in coughing or scratchiness.
Other possible effects include headache, nausea, vomiting, and disorientation.
EYE CONTACT: Dust may be irritating to the eyes at high concentrations.
SKIN CONTACT: Dust may be irritating to the skin at high concentrations.
INGESTION: May cause nausea, vomiting and electrolyte depletion.
CHRONIC: None known.
CARCINOGENICITY: None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

3. EMERGENCY AND FIRST AID MEASURES
INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
SKIN CONTACT: If irritation occurs wash thoroughly with soap and water immediately. Get medical attention if irritation persists.
EYE CONTACT: In cases of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation continues.
INGESTION: If swallowed, drink 1 or 2 glasses of water. Immediately call a physician or a Poison Control Center and follow their advice.
Do not induce vomiting or give anything by mouth to an unconscious person.

4. FIRE-FIGHTING MEASURES AND EXPLOSION HAZARD DATA
FLASH POINT and METHOD: Not applicable
AUTOIGNITION TEMPERATURE: Not available
FLAMMABLE LIMITS - Lower: Not applicable Upper: Not applicable
EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires; alcohol foam for large fires.
SPECIAL FIRE-FIGHTING PROCEDURES: Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus and full protective equipment.
UNUSUAL FIRE and EXPLOSION HAZARDS: None
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will produce oxides of carbon, nitrogen and sulfur.

5. ACCIDENTAL RELEASE MEASURES
GENERAL: Consult an expert on the disposal of recovered material. Ensure disposal is in compliance with government requirements.
and ensure conformity of local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill.

**SPECIFIC:** Spilled materials, wet or dry can cause slippery conditions. Sweep or shovel materials into containers for recovery. Scrub contaminated area with detergent and water. Prevent clean-up liquid from entering sewers, waterways or low areas. Soak up with sand or other absorbent material.

# 7. HANDLING and STORAGE

Long term storage at temperatures above 100° F (36° C) can result in significant decomposition of the N-(n-butyl) thiophosphoric triamide.

Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Wear protective clothing and equipment such as safety glasses; rubber gloves. See Section 8. Clean protective clothing, as needed.

# 8. EXPOSURE CONTROLS and PERSONAL PROTECTION

Use only with adequate ventilation. Keep container tightly closed. Do not consume food, drink or tobacco in the areas where they may become contaminated with this material. Exposure limits should not exceed 10 mg/m3 (nuisance dust)

**PERSONAL PROTECTION: RESPIRATORY:** Use with adequate ventilation. Respiratory protection not required under normal use.

**PROTECTIVE GLOVES:** Use rubber gloves, if skin irritation is observed. **EYE PROTECTION:** Wear safety glasses or goggles, when appropriate, to prevent contact with eyes. **OTHER:** Washing facilities should be available. Use long sleeves or other clothing to avoid excessive contact.

# 9. PHYSICAL and CHEMICAL PROPERTIES

**APPEARANCE:** Blue-Green granules.

**ODOR:** Slight Sulfurous

**ODOR THRESHOLD:** Not available

**VAPOR PRESSURE:** Not available

**SPECIFIC GRAVITY:** 1.32

**SOLUBILITY in water:** Soluble

**EVAPORATION RATE:** Not applicable

**MELTING POINT:** approx. 275°F

**BOILING POINT:** decomposes at 275°F

**VAPOR DENSITY:** Not applicable

Density (lbs/ft): Packed 48.6, Unpacked 47.5

**pH:** 7.2 (10%)

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

# 10. STABILITY and REACTIVITY

**STABILITY:** Stable at normal temperatures. **HAZARDOUS POLYMERIZATION:** Will not occur.

**INCOMPATIBILITY:** Incompatible with acids, strong oxidizing agents; reducing agents.

**HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:** Thermal decomposition will produce oxides of carbon, nitrogen, and sulfur.

# 11. TOXICOLOGICAL DATA

The toxicological effects of this product have not been tested. The following data is for urea:

**ACUTE INHALATION:** No data available **ACUTE SKIN:** No data available **ACUTE ORAL:** LD₅₀ = 14,300 mg/kg

**NOTE:** Toxicity has been observed in cattle not previously exposed to urea.

**IRRITATION:** **EYES:** Minimal irritation (mechanical) **SKIN:** Minimal irritation

**SUBCHRONIC EFFECTS:** No data **CHRONIC EFFECTS / CARCINOGENICITY:** No data.

**MUTAGENICITY:** No data

# 12. ECOLOGICAL INFORMATION

This product has not been tested. However, both urea and NBPT have a very low toxicity to aquatic organisms. Specific values are available from the supplier.

# 13. DISPOSAL CONSIDERATIONS

Treatment, storage, transportation and disposal must be in accordance with applicable federal, state/provincial, and local regulations. Do not flush to surface water or sanitary sewer system.

# 14. TRANSPORT INFORMATION (not meant to be all inclusive)

**D.O.T.:** Not regulated **AIR TRANSPORT:** Not regulated
15. REGULATORY INFORMATION (not meant to be all inclusive)

**UNITED STATES:** TSCA (Toxic Substance Control Act): In compliance with all applicable sections of TSCA. N-(n-butyl) thiophosphoric triamide is subject to a Section 5(e) consent order based on the anticipated large scale exposure. As a consequence it is also subject to Section 12(b) export notification obligations. CERCLA (Comprehensive Emergency Response Compensation, and Liability Act): Not listed. SARA TITLE III (Superfund Amendments and Reauthorization Act): 311/312 Hazard Categories: None 313 Reportable Ingredients: None

**CANADA:** WHMIS: Class D, 2B CEPA: All components are on the DSL. Fertilizer Act: NBPT is in the process of being reviewed for registration under this Act

16. OTHER INFORMATION

The information is believed to be accurate and represents the best information currently available to AGROTAIN International L.L.C., However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.
PRODUCT SAFETY INFORMATION

Address:
New York Organic Fertilizer Company
1108 Oak Point Avenue
Bronx, NY 10474

EMERGENCY ASSISTANCE

Alexis Vitone
Environmental Health & Safety Director
(718) 991-7417

PRODUCT IDENTIFICATION

Product Trade Name: Granulite
Common Name: Heat-Dried Biosolids, Organic Fertilizer
Chemical Name/CAS Number: None

This product is not a hazardous chemical per OSHA definitions in 29 CFR 1910.12000 ("Hazard Communication") and consequently, a Material Safety Data Sheet (MSDS) is not required.

Heat-dried biosolids in pellet form are produced exclusively from naturally occurring substances without the addition of hazardous or nonhazardous chemicals. This product Safety Information Sheet consisting of 11 parts has been developed to inform manufacturers' employees, distributors and users of the product of its physical characteristics and precautions that need to be observed during processing, storage and use.
PART 1 – INGREDIENTS

Granulite/Terrence is made from wastewater treatment biosolids. Biosolids are produced during waste/water treatment through natural, physical and biological processes. Flocculated organic matter is withdrawn from tanks, dewatered using a polymer coagulant and dried in rotary dryers in direct contact with hot air or vertical dryers using indirect heating.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>% By Weight</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat dried organic solids from Wastewater treatment</td>
<td>90%-98%</td>
<td>PEL Total Dust - 15mg/M3 Respirable Dust – 5mg/M3</td>
</tr>
</tbody>
</table>

Trace metals can be detected in the finished product in quantities less than 1.0% most less than 0.1%

PART 2—PHYSICAL AND CHEMICAL INFORMATION (See also Part 6 –Fire and Explosion Data)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Density lb/cf:</td>
<td>35-45</td>
</tr>
<tr>
<td>Appearance and Color</td>
<td>Brown to black pellets typically 1.0-3.3 mm in diameter with an Earthy odor</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Slight</td>
</tr>
<tr>
<td>Incompatibilities</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>% Volatile:</td>
<td>Negligible</td>
</tr>
<tr>
<td>Decomposition Products:</td>
<td>Oxides of carbon, sulfur, and nitrogen may be generated when Granulite/Terrene burns</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur</td>
</tr>
</tbody>
</table>

PART 3 – HEALTH EFFECTS

No specific health hazards are known. The dust that can be created should be treated as a nuisance dust

<table>
<thead>
<tr>
<th>PRIMARY ROUTES OF ENTRY</th>
<th>SIGNS AND SYMPTOMS OF OVEREXPOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause short-term nasal and throat irritation. Chronic Overexposure may result in a cough</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>May cause irritation</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>May cause irritation for sensitive individuals</td>
</tr>
<tr>
<td>Skin Absorption</td>
<td>Skin absorption is not likely</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Not an expected route of exposure during processing or Customary use</td>
</tr>
</tbody>
</table>

Individuals with respiratory ailments such as asthma may be particularly sensitive to dust
### PART 4 – PERSONAL PROTECTION INFORMATION

Avoid inhalation. Respiratory protection recommended whenever dust levels cause symptoms of irritation or sensitivity. NIOSH/OSHA-approved respirators for nuisance dust should then be used.

| Protective Gloves:  | Recommended |
| Eye Protection:     | Safety glasses should be used to minimize dust exposure. Tight-fitting goggles may be needed to ensure greater protection. |
| Skin Protection:    | Special equipment is not required. Clean body-covering clothing should be worn. |
| Work Practice Controls: | Ventilation and good housekeeping procedures should be maintained to minimize dust accumulation on indoor surfaces. Potential heat and ignition sources should be excluded from high dust areas. These sources include welding, smoking, and open flame. Good personal hygiene practices should be followed. |

### PART 5 – FIRST AID AND EMERGENCY CARE

| Inhalation: | Remove to fresh air. Use oxygen and obtain medical attention if breathy difficulty continues. |
| Eye Contact: | Flush eyes with clean water for at least 15 minutes. Remove contact lenses and lift eyelids while flushing. Seek medical attention if pain or redness persists after flushing. |
| Skin Contact: | Not an expected route of exposure. If necessary, consult with a physician. |
| Ingestion:   | Not an expected route of exposure. |

### PART 6 – FIRE AND EXPLOSION DATA

| Fire: | Combustible solid. Oxides of carbon, sulfur and nitrogen may be generated. |
| Explosion: | Dust dispersed in air in sufficient concentrations in confined spaces or enclosed areas may create an explosion hazard in the presence of direct ignition sources (heat or open flames). |
| Extinguishing Media: | Water. For large quantities, spread out on ground and allow to cool. |
| Special Firefighting Procedure: | Full protective gear including self-contained breathing apparatus in positive pressure mode should be worn. |
PART 7- PROCESSING AND STORAGE PRECAUTIONS

Granulite/Terrene in the presence of oxygen and water undergoes a slow exothermic oxidation. If stored in bulk silos for a long period of time, temperatures may rise to the point where autocombustion may occur. A nitrogen blanket for storage silos is recommended. If stored in other than a silo, controls need to be in place to keep the product from getting wet.

Enclosed vessels that process, convey or store dried biosolids need to be equipped with explosion relief vents designed to vent a worst-case dust explosion.

Engineering controls may be needed to maintain dust levels below the exposure limits. Suspensions of biosolids dust are to be avoided to minimize any explosion hazard. With the exception of minimizing dense dust accumulation, no special precautions are necessary for routine blending operations.

PART 8 – SPILL OR LEAK PROCEDURES

Spill Clean-Up: Clean up all quantities
Large Bulk Quantities: Remove all possible sources of ignition.
(Enclosed Areas) Material should be picked up in such a manner that Minimizes dispersion of dust into the air. Clean up Material should wear respiratory protection against dust
Waste Disposal: Material should be saved for recycling whenever possible
If spilled material is not to be recycled, consult state and Local regulations regarding proper disposal

PART 9 – ENVIRONMENTAL INFORMATION

This product is comprised of treated, processed biosolids. Its composition is closely regulated by the EPA under the Water Quality Act of 1987 and by state laws. Ingredients are closely monitored and strict limitations have been placed on the quantity of metals and other substances that may be found in the product.

When applied to land in accordance with the guidelines of accepted agronomic practices, there is no known adverse effects on plants, animals or aquatic life. Entry into surface water systems should be avoided, since the nutrient content of this product may cause excessive growth of aquatic vegetation.

PART 10 – REGULATORY INFORMATION


CERCLA Hazardous Substance (40 CFR 302.4) Not Listed
SARA Extremely Hazardous Substance (40 CFR 355): Not Listed
SARA Toxic Chemical (40 CFR 372.65): Not Listed
PART 11 – USER’S RESPONSIBILITY

This Product Safety Information Sheet provides safety, health and environmental information compiled from product analysis and standard toxicological and regulatory references. This product should be used in applications consistent with our product labeling.

Abbreviations:
EPA: Environmental Protection Agency
NIOSH: National Institute of Occupational Safety and Health
PEL: Permissible Exposure Limit
N/A: Not Applicable

DISCLAIMER:
To the best of our knowledge, the information contained herein is accurate. However, because the conditions of use of this product are beyond our control, we disclaim any and all liability arising out of the use of this product or the information provided herein. Final determination of the suitability of this product for specific applications is the sole responsibility of the user.