MATERIAL SAFETY DATA SHEET

Last Revision: January 5, 2000 Emergency Phone #: 1-800-342-6173

PRODUCT IDENTIFICATION

NAME: **m-ROOTS™ (3-3-3)**

CHEMICAL DESCRIPTION: Powdered mixture of organic composts humic and seaweed extracts, vitamins and beneficial spores.

HAZARDOUS COMPONENT(S):	CAS #	APPROXIMATE %
Ferrous Sulfate	[7782-63-0] 8 Hr TWA 1 mg Fe/M^3	2
Vitamin B1 (Thiamine)	[532-43-4]	<1
Vitamin C (Ascorbic Acid)	[50-81-7]	1
Vitamin E (a-Tocopherol)	[7695-91-2]	<1

NFPA/HMIS RATING (0-4): HEALTH 0 FIRE **0** REACTIVITY **0**
(0 = INSIGNIFICANT; 4 = EXTREME) SPECIFIC HAZARD **NONE**

PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT:	Not Applicable
VAPOR PRESSURE:	Not Applicable
VAPOR DENSITY:	Not Applicable
EVAPORATION RATE:	Not Applicable
MELTING POINT:	Decomposes > 400 F
SPECIFIC GRAVITY/DENSITY (H20=1):	0.8 Bulk Density
pH:	10% Solution – 7.0
SOLUBILITY IN WATER:	Very slightly soluble
APPEARANCE:	Dark brown coarse granular solid
ODOR:	Slight ammonia

FIRE AND EXPLOSION INFORMATION

FLASH POINT:	Not Applicable
FLAMMABLE LIMITS:	Chars; smolders, but does not burn
EXTINGUISHING MEDIA:	Water may be used to keep fire-exposed containers cool.
SPECIAL FIRE FIGHTING PROCEDURES:	No special methods required

SPECIAL FIRE AND EXPLOSION HAZARDS: May emit toxic/corrosive fumes when charred by intense heating.

REACTIVITY DATA

STABILITY: Stable at ordinary temperatures.

CONDITIONS TO AVOID: Contact with strong oxidizers.

INCOMPATIBILITY: Strong alkalis will release ammonia fumes

HAZARDOUS DECOMPOSITION: Ammonia, SOx and NOx may be formed if product is strongly heated or oxidized.

HAZARDOUS POLYMERIZATION: Will not occur.

HEALTH EFFECTS/FIRST AID INFORMATION

ROUTES OF ENTRY: EYES ☒ SKIN ☒ INGESTION ☒ INHALATION ☒

HEALTH HAZARDS:
Eyes: Can irritate on contact – wash out quickly
Skin: Brief contact is non-hazardous. Repeated or prolonged contact may stain and dehydrate skin.
Ingestion: Not toxic, but in large amounts can cause upper G.I. Tract disturbances and concern of vitamin overdose.
Inhalation: Dust can cause irritation of mucus membrane, coughing, sneezing and difficulty with breathing. Persons allergic to spores may be sensitive.

SIGNS/SYMPTOMS OF EXPOSURE: Eye irritation, sneezing, coughing or difficulty breathing.

CARCINOGENICITY: Ingredients not listed as carcinogenic in NTP or IARC listings. Not OSHA regulated.

EMERGENCY AND FIRST AID PROCEDURES:
Eyes: Flush immediately with water for 15 minutes, lift lids. See physician if irritation persists.
Skin: Wash gently with mild soap/detergent and flowing water. Wash contaminated clothing.
Ingestion: For small amounts drink plenty of water. More than a mouthful should be purged by vomiting, but only if victim is conscious. Get medical help.
Inhalation: Help victim to fresh air. If breathing difficult, administer oxygen. Consult physician.

PRECAUTIONS FOR SAFE HANDLING AND USE

RESPIRATORY PROTECTION: Not normally needed. If dusting occurs use dust mask to eliminate exposure.

VENTILATION: Exhaust fan recommended to control any dusting.

PROTECTIVE GLOVES/CLOTHING: Rubber or plastic recommended if repeated or prolonged contact expected.

EYE PROTECTION: Chemical splash goggles recommended where dusting is expected. Safety glasses suffice otherwise.

WORK PRACTICES: Use good housekeeping practices. Keep containers closed.

SPILLS: Avoid creating dust when cleaning up. Scoop, shovel or sweep to labeled containers for recycling/salvage if not contaminated by other material.

WASTE DISPOSAL METHOD: Ferrous sulfate is listed as CERCLA Hazardous Substance, requiring reporting of spills/disposals greater than 1,000 lb. However, with less than 50 lb. $FeSO_4$ per ton of product, it is unlikely reporting will be necessary. Package material for removal to approved landfill.

PRECAUTIONS IN STORING AND HANDLING: Avoid storage in hot or moist areas.