

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Roots M-Roots 3-3-3**

Product Identity and use: Mixed granular fertilizer and soil inoculant for landscape use.

Supplier/Manufacturer

Lebanon Seaboard Corporation
1600 East Cumberland Street
Lebanon PA 17042
 1-800-233-0628
 (717-273-1685)

Emergency telephone numbers:

Chemtrec (Spill) 1-800-424-9300
 Prosar (Health) 888-208-1368

2. HAZARDS IDENTIFICATION

Signal Word: Warning

Hazard Statements and Hazard Category:

H320: causes eye irritation (Category 2B)

H333: May be harmful if inhaled repeatedly over prolonged periods. (Category 5)

H351: Suspected of causing cancer by prolonged/repeated inhalation. (Category 2)

Pictogram: Silhouette**Precautionary Statements for handling:** See also Section 7.

P261: Avoid breathing dust.

P264: Wash hands thoroughly after handling.

P281: Use appropriate personal protective equipment as required to avoid breathing dust.

P308: If exposed or concerned, seek medical advice.

P337: In case of eye contact, rinse cautiously with water for several minutes. If eye irritation persists: seek medical attention. Keep out of reach of children.

Precautionary Statements for disposal - Dispose in accordance with all federal, state and local regulations.**Hazards not otherwise classified (HNOC):** None

Unknown acute toxicity: <1% of the mixture consists of ingredients of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Wheat Bran	NA	32.4
Dolomite*	16389-88-1	18
Composted chicken manure	NA	15
Diammonium phosphate	7783-28-0	6.6
Feathermeal	NA	6
Sulfate of Potash	7778-80-5	5.9
Seaweed meal	84775-78-0	5
Ferrous sulfate	7782-63-0	3.5
Calcium lignosulfonate	8061-52-7	2.5
Mycorrhizal fungi propagules	NA	2.36
Ammonium sulfate	7783-20-2	1.5
Humate*	1415-93-6	1
Ascorbic Acid	50-81-7	0.16
Glycine	56-40-6	0.05
Myoinositol	87-89-8	0.025
Thiamine mononitrate	532-43-4	0.015

*Note: Naturally mined minerals like dolomite and humate typically contain silica (sand) at amounts ranging from 1 to 6%. Fine silica particulates are considered as a carcinogen via repeated and prolonged inhalation.

4. FIRST AID MEASURES

Eye Contact	Rinse eyes cautiously with water for several minutes. Remove any contact lenses if easy to do, and continue rinsing. If discomfort or irritation persists contact a physician.
Skin Contact	Wash with soap and water. If injury occurs, or if discomfort or irritation persists or rash occurs, contact a physician.
Inhalation	If inhaled and discomfort occurs, move to fresh air, and keep person at rest in a position comfortable for breathing. If difficulty in breathing occurs and/or persists, administer oxygen and get medical attention. If medical advice is needed, have product container or label on hand.
Ingestion	Rinse mouth. Drink Plenty of water. If you feel unwell, call a poison control center or seek medical attention. Do not induce vomiting of an unconscious person.

Self-protection of the first aider: Use any appropriate personal protective equipment as required for nuisance dusts.

Most important symptoms and effects, both acute and delayed: Nuisance dust irritation may occur with nasal discomfort under highly dusty conditions.

Indication of any immediate medical attention and special treatment needed: Treat Symptoms. Consult physician if discomfort or irritation persists. Get medical advice or attention if you feel unwell.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing media suitable to local circumstances and the surrounding environment. Options in this case include water, CO₂, ABC Dry Chemical extinguisher, or foam. Avoid stirring up dust extinguisher stream.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire, do not breathe fumes.

Explosion data

Sensitivity to mechanical impact: None
Sensitivity to static discharge: None

Note: Excessive amounts of any burnable dusts can produce explosive mixtures if allowed to disperse in the air in confined areas where ignition sources occur. Prevent excessive dust dispersal in areas of use, storage, or production.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and standard protective (bunker) gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Personal Precautions	Use dust mask and gloves as needed or other reasonable personal protective equipment as required to prevent contact with eyes or skin and to avoid breathing dust. Remove ignition sources prior to clean-up.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.
Methods for containment	Prevent further leakage or spillage, if safe to do so.
Methods for clean-up	Use dust mask and/or reasonable personal protective equipment as required to avoid breathing dusts. Moisten or cover powder spill with plastic sheet or tarp to minimize spreading. Take up mechanically, placing in appropriate containers for disposal. Avoid

creating dust. Soak up excess with inert absorbent material. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Safe Handling Read and understand all safety precautions before handling. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required to avoid breathing product dusts or mists, and to prevent eye contact. Wash hands thoroughly after handling.

Storage Conditions Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

Incompatible materials Avoid strong acids or alkali, or other reactive substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH*
Quartz silica	0.025 mg/m ³ (respirable)	(30 mg/m ³) ÷ (%SiO ₂ + 2)	3000 mg/m ³
Iron salts, soluble as Fe	1 mg/m ³	Not Established	Not Established
Nuisance Dusts	10 mg/m ³ (TWA- Total dust)	15 mg/m ³ (TWA total) 50 mppcf (TWA total) 5 mppcf (TWA respirable)	Not Established

*IDLH refers to amounts that are "Immediately Dangerous to Life or Health"

Engineering controls: Use with adequate ventilation and follow safe work practices to prevent dust buildup in air.

Individual protection measures: Use appropriate personal protective equipment as required to avoid breathing dust.

Eye protection Safety glasses, or goggles if eye contact is likely

Skin and Body Protection Gloves and standard work coveralls recommended.

Respiratory Protection Dust mask recommended for dusty or misty conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene When using product, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Appearance	Granules
Color	Mixed, various
Odor	Slight
Odor Threshold	No information available
pH	Not applicable
Melting point/freezing point	Not applicable
Boiling point / boiling range	Not applicable
Flash point	No information available
Evaporation rate	Not applicable
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available

Vapor pressure	Not applicable
Vapor density	Not applicable
Specific Gravity	Not applicable
Water solubility	Mostly Insoluble in water, although some ingredients may dissolve.
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Oxidizing properties	Not an oxidizer

10. STABILITY AND REACTIVITY

Reactivity

Not particularly reactive

Chemical stability

Stable.

Possibility of Hazardous Reactions

May release heat and fumes when mixed in solution with incompatible reactive materials.

Hazardous polymerization

Will not occur.

Conditions to avoid

High heat, sparks and open flames, as some ingredients may be burnable.

Incompatible materials

Strong acids or alkali, or other reactive substances.

Hazardous Decomposition Products

May emit toxic fumes under fire conditions, such as Nitrogen oxides (NOx), Ammonia, Oxides of sulfur, Hydrogen chloride and Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Ingestion, eyes (contact), skin (contact), dust inhalation

Symptoms	May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea.
Sensitization	No information available.
Germ cell mutagenicity	No information available
Carcinogenicity	Potential occupational carcinogen. Naturally mined minerals, like limestone typically contain sand (silica) at amounts ranging from 1 to 6%. Fine silica particulates are considered to be carcinogenic via repeated and prolonged inhalation. (IARC, ACGIH)
Reproductive toxicity	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Chronic toxicity	Lungs- Silicosis, cancer
Target Organ Effects	Lungs- Silicosis, cancer
Aspiration hazard	No information available

12. ECOLOGICAL INFORMATION

Fertilizers may be harmful to aquatic life with short term effects, causing algal bloom and increased BOD, depending on the amount released.

Persistence and degradability No information available

Bioaccumulation No information available
 Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

This material, as supplied is not a hazardous waste according to federal regulations (40 CFR 261).

Disposal of wastes:

This product is a non-hazardous waste material suitable for approved solid waste landfills.
 No EPA Waste Numbers are applicable for this product’s components.
 Dispose of in accordance with Local, State, and Federal regulations.

Contaminated packaging

No US Federal special packaging considerations at the date of this document. Follow local regulations.

14. TRANSPORT INFORMATION

DOT:	Not Regulated	ADR:	Not Regulated
Proper Shipping Name:	Non Regulated	ADN:	Not Regulated
Hazard Class:	Not Applicable	RID:	Not Regulated
IATA:	Not Regulated	IATA:	Not Regulated
Proper Shipping Name:	Non Regulated	TDG:	Not Regulated
Hazard Class:	Not Applicable	ICAO:	Not Regulated
IMDG/IMO	Not Regulated	MEX:	Not Regulated
Hazard Class	Not Applicable		
Marine Pollutant	No		

IMDG: Not a dangerous good.
ICAO/IATA: Not a dangerous good.

15. REGULATORY INFORMATION

TSCA (USA): Complies

General Product Information: This product is not federally regulated as a hazardous material.

Clean Air Act: No information is available.

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

SARA 313 Superfund Amendments: This product contains no chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal regulations, Part 372.

SARA 311/312 Hazard Categories

Acute: Yes
 Chronic: Yes
 Fire: No
 Sudden release of pressure: No
 Reactive: No

CERCLA: Ferrous sulfate - RQ = 1000 Lbs (equivalent to 28,517 Lbs of this product).

State Regulations

Component Analysis – State Crystalline silica: CA, IL, MA, NH, NY, NJ, PA
 Ferrous sulfate: CA, MA, NJ, NY, PA

California Proposition 65: This product may contain detectable quantities of a substance (sand mineral: silica) known to the State of California to cause cancer by prolonged, repeated inhalation over a long period of time (months to years).

International Inventories

Component Analysis – WHMIS IDL No components are listed in the WHMIS IDL.

16. OTHER INFORMATION

Disclaimer

The information provided in this material safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.