

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Roots Total Tree 20-4-10**Recommended use

This product is a concentrated water soluble, dry fertilizer and root zone inoculant for landscape use.

Supplier/ManufacturerLebanon Seaboard Corporation
1600 East Cumberland Street
Lebanon PA 17042
Tel: 800-233-0628
(717-273-1685)Supplier Email: customerservice@lebsea.comEmergency telephone numbers

Chemtrec (Spill) 1-800-424-9300

Prosar (Health) 888-208-1368

2. HAZARDS IDENTIFICATION

Signal Word: Warning

Hazard Statements:

H316: Causes skin irritation with prolonged contact. (Category 2)

H319: Causes serious eye irritation on contact (Category 2A)

H335: May cause respiratory irritation if inhaled.

**Precautionary Statements:**

P261: Avoid breathing dust or spray mist.

P332: If skin irritation occurs: Wash with soap and water.

P264: Wash hands and exposed skin thoroughly after handling.

P305, P351: If in eyes, rinse cautiously with water for several minutes.

P337: If eye irritation persists: seek medical attention.

P271: Use only outdoors or in a well-ventilated area.

P340: If inhaled and breathing becomes difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P233, P403, P405: Keep container tightly closed. Store locked up a well-ventilated place. 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 %
Urea	57-13-6	3
Ferrous sulfate heptahydrate	7782-63-0	4
Iron citrate	2338-05-8	0.9
Nonhazardous fertilizer ingredients and fillers	Various	Balance

4. FIRST AID MEASURES

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	Wash with soap and water. If injury occurs, or if discomfort or irritation persists 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 discomfort occurs, seek medical attention. Do not induce vomiting of an unconscious person.

Self-protection of the first aider: When spraying, use dust/mist mask or any appropriate personal protective equipment as required.

Most important symptoms and effects, both acute and delayed:

Symptoms: Mist inhalation can result in irritation with nasal discomfort; skin irritation possible, but not likely with normal use.

Indication of any immediate medical attention and special treatment needed: Treat Symptoms.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Product is not a fire hazard, but may burn. Use extinguishing media suitable to local circumstances and the surrounding environment. Options in this case include water, CO₂, ABC Dry Chemical extinguisher, or foam.

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: Low to none
 Sensitivity to static discharge: Low to none

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 gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Personal Precautions	Use reasonable personal protective equipment as required to prevent contact with eyes or skin, and to avoid breathing dust.
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 reasonable personal protective equipment as required. Soak up excess with inert absorbent material, or take up mechanically, placing in appropriate containers for disposal. Avoid creating mist. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Safe Handling Use personal protective equipment during use as required to prevent contact with eyes or skin, and to avoid breathing mist. 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 REL
Iron salts, soluble, as Fe	1 mg/m ³ TWA	Not established	Not established
Nuisance Dusts	5 mg/m ³ TWA	5 mg/m ³ TWA	5 mg/m ³ TWA 10 mg/m ³ STEL

Engineering controls: Avoid creating fine, inhalable mists during application.

Individual protection measures

Eye protection Safety glasses, or goggles if eye contact with concentrated product or dust or spray mist is likely.

Skin and Body Protection Gloves and normal work coveralls recommended.

Respiratory Protection Dust/mist 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 Water soluble powder mix

Appearance powder mix

Color Mixed, various

Odor Slight

Odor Threshold No information available

pH not applicable

Melting point/freezing point No information available

Boiling point / boiling range No information available

Flash point Not applicable

Evaporation rate No information available

Flammability (solid, gas) Some ingredients can burn

Flammability Limit in Air

 Upper flammability limit: No information available

 Lower flammability limit: No information available

Vapor pressure Similar to water

Vapor density No information available

Specific Gravity Not applicable

Water solubility	Mostly soluble in water
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

No data available

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

None known

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), mist inhalation

Symptoms May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea.
 Skin irritation with redness, itching, possible rash.
 Eye irritation with redness, burning, tearing, and possible eye damage if contact is prolonged.

Sensitization Not known to be a sensitizer.

Germ cell mutagenicity Not expected

Carcinogenicity: No known carcinogens present at reportable levels.

Reproductive toxicity	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Chronic toxicity	No information available
Target Organ Effects	No information available
Aspiration hazard	No information available

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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 Not expected to persist based on composition
 Bioaccumulation Not expected to bioaccumulate based on composition
 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 Description: Liquid fertilizer, N.O.S

This product is not a hazardous material and is not regulated by the United States Department of Transportation (D.O.T).

IMDG: Not a dangerous good.

ICAO/IATA: Not a dangerous good.

15. REGULATORY INFORMATION

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

Clean Air Act: No information is available.

Clean Water Act: No information is available.

SARA 311/312 Hazard Categories

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

CERCLA: Ferrous sulfate- RQ = 1000 Lbs

State Regulations – General: This product is not regulated by any State as a hazardous material.

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS#	CA	MA	MN	NJ	PA	RI
Ferrous sulfate	7720-78-7	Yes	Yes	No	Yes	Yes	No

California Proposition 65: None of the components are listed California Proposition 65.

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.