

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Roots Fe 6% Plus**Recommended use

This product is a concentrated liquid fertilizer 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:

H315: May cause skin irritation with prolonged contact. (Category 2)

H320: Causes eye irritation on contact (Category 2B)

May irritate the digestive tract if ingested.

Pictogram: Exclamation Point

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

P264: Wash hands thoroughly after handling.

P305, P351, P338, P337: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If irritation persists, seek medical attention.

P352: IF ON SKIN: Wash with plenty of soap and water.

P332: If skin irritation occurs and persists, seek medical advice.

P362: Take off contaminated clothing and wash before reuse to avoid irritation.

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 %
Seaweed extract solution (aqueous)	84775-78-0	46.8
Ferrous sulfate heptahydrate	7782-63-0	26.8
Urea	57-13-6	14.7
Tetrasodium EDTA	64-02-8	4
Citric Acid	77-92-9	2
Fulvic Acids	479-66-3	1.5
Water	7732-18-5	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

Liquid product is not a fire hazard, and will not 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:	None
Sensitivity to static discharge:	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 mist.
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
Ferrous sulfate (Iron salts, as Fe)	1 mg/m ³ TWA	None established	None established
Aerosol mist, nontoxic	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 diluted mist is likely.

Skin and Body Protection Gloves and normal work coveralls recommended.

Respiratory Protection Dust/mist mask recommended for 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 Aqueous Liquid

Appearance Solution

Color Mixed, various

Odor Slight

Odor Threshold No information available

pH 6 to 7.5

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) Will not burn

Flammability Limit in Air

Upper flammability limit: Will not burn

Lower flammability limit: Will not burn

Vapor pressure Similar to water

Vapor density No information available

Specific Gravity 1.27 g/cc

Water solubility Fully soluble in water

Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	Will not burn
Decomposition temperature	No information available
Oxidizing properties	No information available

10. STABILITY AND REACTIVITY

Reactivity

Stable.

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. May irritate skin with prolonged contact.
Sensitization	Citric acid has been known to cause allergic sensitization in susceptible individuals. (Note that citric acid is often used as an approved food additive and flavoring.)
Germ cell mutagenicity	No information available. Not expected to be mutagenic.
Carcinogenicity:	This product does not contain any carcinogens or potential carcinogens as listed by /ARC, NTP, ACGIH or OSHA. However, substances similar to EDTA (Nitrilotriacetic acid [NTA] and its salts) were determined to be "possibly carcinogenic to humans" (Group 2B) by IARC, a compound which "may reasonably be anticipated to be a carcinogen" by NTP and a "select carcinogen" by OSHA. EDTA may contain trace amounts of NTA.
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	Mild skin irritant.
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	Partially biodegradeable
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: Fertilizer, liquid 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.
Marine Pollutant:	Not a marine pollutant.

15. REGULATORY INFORMATION

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

SARA 311/312 Hazard Categories

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

Clean Air Act: No information is available.

Clean Water Act: No information is available.

CERCLA: EDTA: RQ = 5000 Lbs (= 125,000 Lbs of this product)
 Ferrrous sulfate (anhydrous): RQ = 1000 Lbs (= 6825 Lbs of this product)

State Regulations – General: This product is not regulated by any State as a hazardous material.
Component Analysis – State None of this product’s components are on the state lists from CA, FL, MA, MN, NJ, or PA.

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

California Proposition 65: This product contains Tetrasodium EDTA. A related product, Trisodium NTA, is known to the state of California to cause cancer. EDTA may contain trace amounts of NTA.

16. OTHER INFORMATIONDisclaimer

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.