

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**

Product Name: **Emerald Isle Solutions Nutri-Rational TrueFoliar P 6-12-6**

Recommended use

This product is a concentrated liquid fertilizer for landscape use.

Supplier/Manufacturer

Lebanon Seaboard Corporation
1600 East Cumberland Street
Lebanon PA 17042
Tel: 800-233-0628
(717-273-0685)

Supplier Email: customerservice@lebsea.com

Emergency telephone numbers

Chemtrec (Spill) 1-800-424-9300

Prosar (Health) 888-208-1368

2. HAZARDS IDENTIFICATION

Signal Word: Warning

Hazard Statements:

H302: Harmful if swallowed. (Category 4)

H315: Causes skin irritation (Category 2)

H319: Causes serious eye irritation. (Category 2A)

H335: May cause respiratory irritation. (Category 3)

H361: Suspected of damaging fertility or unborn child by ingestion of significant quantities. (re: borates)

May irritate the digestive tract if ingested.

Wear eye and face protection.



Pictogram: Exclamation Point

Precautionary Statements for handling: Also see Section 7.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P261: Avoid breathing dust /mist/spray.

P264: Wash hands thoroughly after handling.

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

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

P281: Use personal protective equipment as required.

P308: If exposed or concerned, seek medical advice.

P310: If ingested, rinse mouth and immediately call a POISON CENTER or doctor/physician.

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

P332: If skin irritation occurs: wash with soap and plenty of water.

P351: If eye contact occurs, rinse cautiously with water for several minutes.

P337: If eye irritation occurs and persists: seek medical attention.

P340: If respiratory discomfort occurs upon inhalation of dust or spray mist, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P362: Take off contaminated clothing and wash before reuse.

P403, P405: Store locked up in a well-ventilated place.

Precautionary Statements for disposal - Dispose in accordance with all federal, state and local regulations.

Hazards not otherwise classified (HNOC): Contains oxidizers in water solution. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become flammable and reactive when dry.

Unknown acute toxicity

<1% of the mixture consists of ingredients of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	%
Ammonium polyphosphate	68333-79-9	31.80
Seaweed Extract solution (aqueous)	84775-78-0	23.15
EDTA tripotassium salt	17572-97-3	10.04
Potassium Citrate	6100-05-6	7.76
Manganese nitrate* (in aqueous solution)	10377-66-9	5.46
Ferrous Sulfate	7782-63-0	5.29
Citric Acid	77-92-9	5.75
Urea	57-13-6	3.74
EDTA Tetrasodium salt	64-02-8	1.76
Diammonium EDTA	304675-80-7	1.67
Water	7732-18-5	1.46
Fulvic acid	479-66-3	0.67
Manganese sulfate	7785-87-7	0.37
Magnesium sulfate	10034-99-8	0.37
Zinc nitrate* (in aqueous solution)	7779-88-6	0.34
Disodium octaborate tetrahydrate	12008-41-2	0.28
Potassium sorbate	590-00-1	0.09

*Component is a strong oxidizer when in dry form.

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: Eye irritation on contact with redness, tearing and burning sensation. 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. Certain ingredients (manganese nitrate, zinc nitrate) are strong oxidizers in dry form, and will contribute to existing fire hazards. Do not boil off liquid. 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. Contains oxidizers in water solution. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become flammable and reactive when dry.

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. Contains oxidizers in water solution. Decon contaminated clothing to prevent fabric oxidation.

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. If clothes are wetted with product, they may become flammable and reactive when dry.

- 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 only outdoors or in a well-ventilated area. 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. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become flammable and reactive when dry.

- Storage Conditions Keep containers tightly closed and locked up in a cool, well-ventilated place. Store away from clothing. 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*
Manganese nitrate	0.2 mg/m ³ TWA (Manganese)	1 mg/m ³ TWA (Manganese fume)	No information
Manganese sulfate	0.2 mg/m ³ TWA (Manganese)	1 mg/m ³ TWA (Manganese fume)	No information
Iron salts, soluble, as Fe	1 mg/m ³	None established	None established

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

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

Individual protection measures

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

Eye protection	Wear eye and face 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. remove and wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	Solution
Color	Mixed, various
Odor	Slight kelp odor
Odor Threshold	No information available
pH	3.4
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	1.318 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	Contains oxidizers in water solution. capable of acting as an oxidizer if evaporated to dryness.

10. STABILITY AND REACTIVITY

Reactivity

Contains oxidizers in water solution. May intensify fire if evaporated to dryness.

Chemical stability

Contains oxidizers in water solution. May intensify fire if evaporated to dryness.

Possibility of Hazardous Reactions

May release heat and fumes when mixed in solution with incompatible reactive materials. Contains oxidizers in water solution. May intensify fire if evaporated to dryness.

Hazardous polymerization

Will not occur.

Conditions to avoid

Avoid evaporating product to dryness.

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	Serious eye irritation with redness, and burning sensation. May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea.
Sensitization	No information available.
Mutagenicity	Potassium Sorbate induced chromosome aberrations in cultured Chinese hamster cells. Cytogenetic Analysis (Hamster-Lung) 10 gm/L; Cytogenetic Analysis (Hamster-Fibroblast) 4 gm/L/48 hours; Sister Chromatid Exchange (Hamster Lung) 10 gm/L. (Note that potassium sorbate is often used as an approved food preservative.)
Carcinogenicity	None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP. However, ingested nitrates that can result in endogenous nitrosation is probably carcinogenic in humans (IARC-Group 2A). Contains EDTA. EDTA is not carcinogenic, but 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	Effects on fertility and testes developmental effects on the fetus, including fetal weight loss and minor skeletal variations (very high oral doses of borates in rat, mouse, rabbits, and dogs).
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Chronic toxicity	See reproductive toxicity
Target Organ Effects	fertility and testes (borates at high oral doses)
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	Mobile in soil

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

Component Related Regulatory Information :

This product may be regulated, have exposure limits or other information identified as the following: Manganese (7439-96-5), Manganese compounds, n.o.s., Manganese compounds, inorganic, Manganese inorganic salts, Water Dissociable Nitrate Compounds.

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4):

Manganese nitrate (10377-66-9) SARA 313:

- 1% *de minimis* concentration (related to Manganese)
- 1% *de minimis* concentration (Chemical Category N511) (related to Water Dissociable Nitrate Compounds)

Zinc Nitrate (7779-88-6)

- 1% *de minimis* concentration (Chemical Category N511) (related to Water Dissociable Nitrate Compounds)

Manganese sulfate (7785-87-7) SARA 313:

- 1% *de minimis* concentration (related to Manganese)

CERCLA: EDTA: RQ = 5000 Lbs
 Ferrous sulfate: RQ = 1000 Lbs
 Zinc nitrate: RQ = 1000 Lbs

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.

State Regulations

Component Analysis - State

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

Component	CAS#	CA	MA	MN	NJ	PA	RI
Manganese Nitrate (related to Mn) ¹	10377-66-9	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes ¹
Ferrous sulfate	7720-78-7	Yes ¹	Yes ¹	No	Yes ¹	Yes ¹	No
EDTA ethylenediamine tetraacetic acid	60-00-4	Yes	No	No	Yes	No	No

Other state regulations may apply. Check individual state requirements.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS#	Minimum Concentration
Manganese Nitrate	10377-66-9	1% (related to elemental manganese, Mn)
Manganese Sulfate	7785-87-7	1% (related to elemental manganese, Mn)

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.