

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Emerald Isle Solutions Nutri-Rational TrueFoliar N-K Balance 10-0-10**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.comEmergency 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)  
H320: Causes eye irritation on contact. (Category 2B)  
May irritate the digestive tract if ingested.  
Wash thoroughly after handling.  
Wear protective gloves.  
If on skin, wash with plenty of water.  
If skin irritation occurs, get medical advice.  
Remove and wash contaminated clothing before reuse.  
May irritate the digestive tract if ingested.**Pictogram:** Exclamation Point**Precautionary Statements for handling:** See also Section 7.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

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

P301, P330, P310: IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

P332, P352: If skin irritation occurs: Wash with plenty of soap and water. Seek medical attention if irritation persists.

P351, P337: In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses if easy to do and continue rinsing. If eye irritation persists: seek medical attention.

P362: Take off contaminated clothing and wash before reuse.

**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 quite flammable and reactive when dry.

Unknown acute toxicity

0% of the mixture consists of ingredients of unknown toxicity

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Seaweed extract solution	84775-78-0	24.44
Urea	57-13-6	12.43
Ferric ammonium EDTA	68413-60-5	12.12
Potassium citrate	6100-05-6	8.99
Manganese nitrate	10377-66-9	6.22
UAN Solution (Urea ammonium nitrate)	15978-77-5	4.79
Potassium carbonate	584-08-7	4.70
EDTA tripotassium salt	17572-97-3	3.98
Magnesium nitrate	10377-60-3	2.79
EDTA tripotassium salt	17572-97-3	1.88
Sodium glucoheptonate	31138-65-5	1.57
Magnesium sulfate	10034-99-8	1.57
Triazone (tetrahydro-1,3,5-triazin-2(1H)-one)	7098-14-8	1.39
Ammonium polyphosphate	68333-79-9	1.39
Glycine	56-40-6	1.30
Fulvic acids	479-66-3	0.35
Diammonium EDTA	304675-80-7	0.22
Copper sulfate	7758-98-7	0.20
Zinc sulfate	7733-02-0	0.20
Potassium sorbate (preservative)	590-00-1	0.09
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	If swallowed, rinse mouth. Call a poison control center or doctor if you feel unwell. 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 dilutions. Ingestion of significant amounts of nitrate containing compounds can lead to methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. Mist inhalation can result in irritation with nasal discomfort; skin irritation possible, but not likely with normal use dilutions.

Indication of any immediate medical attention and special treatment needed: See Symptoms (above).

**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, CO<sub>2</sub>, ABC Dry Chemical extinguisher, or foam.

**Specific hazards arising from the chemical**

Contains oxidizers in water solution. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become quite flammable and reactive when dry. 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	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. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Storage Conditions	Keep containers tightly closed 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*
UAN Solution (Urea ammonium nitrate)	None established	None established	-
Ammonia	25 PPM	50 PPM	300 PPM
Magnesium nitrate (10377-60-3)	No information	No information	No information
Manganese nitrate (10377-66-9)	0.2 mg/m <sup>3</sup> TWA (Mn)	1 mg/m <sup>3</sup> TWA (Mn fume) 5 mg/m <sup>3</sup> Ceiling (Mn)	500 mg/m <sup>3</sup> (Mn)
Manganese sulfate (10034-99-8)	0.2 mg/m <sup>3</sup> TWA (Mn)	1 mg/m <sup>3</sup> TWA (Mn fume) 5 mg/m <sup>3</sup> Ceiling (Mn)	500 mg/m <sup>3</sup> (Mn)
Iron salts, soluble, as Fe	1 mg/m <sup>3</sup> TWA	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	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	8.3
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	1.278 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. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become quite flammable and reactive when dry.

## 10. STABILITY AND REACTIVITY

### **Reactivity**

Contains oxidizers in water solution. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become quite flammable and reactive when dry.

### **Chemical stability**

Stable.

**Possibility of Hazardous Reactions**

Contains oxidizers in water solution. May intensify fire if evaporated to dryness. If clothes are wetted with product, they may become quite flammable and reactive when dry.  
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	Large oral doses of nitrates may cause dizziness, abdominal pain, vomiting, bloody diarrhea, weakness, convulsions, and collapse. May interfere with blood's capability to carry oxygen (methemoglobinemia), as evidenced by bluish color to skin and lips. 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. May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea. (See Chronic Toxicity below for more information.)
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	Not classified as carcinogenic, although ingested nitrates that can result in endogenous nitrosation producing substances which are 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	No information available
STOT - single exposure	No information available
STOT - repeated exposure	No information available

Chronic toxicity: Chronic overexposure to manganese compounds may result in CNS effects such as weakness, sleepiness, emotional instability and spastic gait. These effects can be permanent. otehr symptoms include "manganism," characterized by fatigue, irritability, headaches and asthenia. Symptoms are reversible when exposure stops. When later changes occur, some permanent brain damage can result resembling Parkinson's disease. High or repeated exposures may damage the kidneys or liver. Repeated small oral doses of nitrates may cause weakness, depression, headache, and mental impairment. Chronic exposures may affect ability of blood to carry oxygen, causing the lips and skin to turn blue.

Target Organ Effects	CNS, Kidney, Liver. (see Symptoms, above)
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

### 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: None

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

### **A: General Product Information**

All components are on the U.S. EPA TSCA Inventory List.

### **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.

### **SARA 311/312 Hazard Categories**

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

### **B: Component Analysis**

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.

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)

#### **Magnesium nitrate (10377-60-3) SARA 313:**

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

#### **Manganese sulfate (10034-99-8) SARA 313:**

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

EDTA: RQ = 5000 Lbs

**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) <sup>1</sup>	10377-66-9	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>
Manganese Sulfate (related to Mn) <sup>1</sup>	10034-99-8	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>	Yes <sup>1</sup>

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	10034-99-8	1% (related to elemental manganese, Mn)

**16. OTHER INFORMATION****HMIS Ratings: Health: 2 Fire: 0 Physical Hazard: 0**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.