

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Emerald Isle NutriRational True Foliar N 19-1-6**Recommended use

This product is a concentrated aqueous liquid fertilizer for landscape use.

Supplier/ManufacturerLebanon 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

The hazards addressed in this document deal mainly with the undiluted product.

Signal Word: WarningHazard 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.**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):** None

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

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Urea	57-13-6	27.8
Ferric ammonium EDTA	68413-60-5	19.4
Seaweed extract solution	8001-22-7	14.1
UAN Solution (Urea ammonium nitrate)	15978-77-5	10.7
Potassium citrate	6100-05-6	9.6
EDTA tripotassium salt	17572-97-3	4.7
Triazone (tetrahydro-1,3,5-triazin-2(1H)-one)	7098-14-8	3.1
Ammonium polyphosphate	68333-79-9	3.1
Glycine	56-40-6	0.9
Magnesium nitrate	10377-60-3	0.7
Manganese nitrate	10377-66-9	0.7
Copper sulfate	7758-98-7	0.44
Zinc sulfate	7733-02-0	0.44
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	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. 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, CO₂, ABC Dry Chemical extinguisher, or foam.

Specific hazards arising from the chemical

Contains nitrates in solution. Do not allow concentrated product to evaporate to dryness, as nitrates pose a fire/explosion hazard. 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. Goggles or face shield recommended. Do not eat, drink or smoke when using this product. Wash hands after handling.
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. Keep out of the reach of children.
Incompatible materials	Avoid strong acids or alkali, or other reactive substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH*
UAN Solution (Urea ammonium nitrate)	None established	None established	-
Ammonia (in solution)	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 ³ TWA (Mn)	1 mg/m ³ TWA (Mn fume) 5 mg/m ³ Ceiling (Mn)	500 mg/m ³ (Mn)

*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. Remove and wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	Solution
Color	Mixed, various
Odor	Slight
Odor Threshold	No information available
pH	7.3
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	1.3 g/cc
Water solubility	Fully soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	Aqueous solution; will not burn
Decomposition temperature	No information available
Oxidizing properties	Contains small amounts of oxidizers in solution.

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable.

Possibility of Hazardous Reactions

May release heat and fumes, particularly ammonia, when mixed in solution with incompatible reactive materials such as alkaline ingredients.

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 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. 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.

Sensitization Not a sensitizer.

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 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

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: 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

B: 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):

SARA 311/312 Hazard Categories

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

SARA TITLE III (Superfund Amendment and Reauthorization Act of 1986): This product contains the following toxic chemicals subject to the reporting requirements of Section 302 and/or Section 313 of the Emergency Planning and Community Right-to- Know Act of 1986 and of 40 CFR 372:

Chemical Name	CAS No.	302 Threshold Planning Quantity (Lbs)	313 De minimus Concentration (%)
Ammonium nitrate	6484-52-2	Not listed	1.0
Nitrate compounds as nitrate ¹	-	Not Listed	NA
Ammonia from ammonium	7664-41-7	500	1.0

¹A nitrate compound is covered by TRI regulations only when in water and only if dissociated. The complete weight of the nitrate compound is used for threshold determinations. Only the nitrate portion is used for release calculations.

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.

State Regulations – General:

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

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)

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.