

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY**Product Name: **Roots EcoGuard BioFungicide; Roots Green ReLeaf EcoGuard**

EPA #: 70127-2-961

Recommended use

This product is a concentrated liquid microbial fungicide for landscape use.

**Supplier/Manufacturer**Lebanon 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**

OSHA Signal Word: Warning

EPA Signal Word: Caution

**Hazard Statements:**

H303: Ingestion of large amounts may cause stomach discomfort or pain. (Category 5).

H313: May be harmful if absorbed through cuts in skin. (Category 5).

H315: Causes skin irritation. (Category 2).

H320: Causes eye irritation. (Category 2B).

H335: Prolonged or repeated inhalation may cause injury to respiratory tract.

**Precautionary Statements for handling:**

P261: Avoid breathing spray mist.

P264: Wash hands and exposed skin thoroughly after handling.

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

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

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

P302, P332, 352: IF ON SKIN: Gently wash with plenty of soap and water. Seek medical attention if irritation occurs and persists.

P305, P337, P351: If in eyes, rinse cautiously with water for several minutes. If eye irritation persists: Seek medical advice.

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

P340, 341: If inhaled and breathing difficulty occurs, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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):** The bacteria contained in this product are strains of typically harmless soil and water bacteria, and are not associated with disease or infections under normal circumstances (Biosafety Level 1), and are considered to be non-allergenic, non-irritating and non-sensitizing when used as directed. Exposure to very high levels of airborne microbial spores may result in very rare respiratory impairments or cause an allergic reaction in sensitized individuals. Reasonable precautions are in order. Keep it out of your mouth, eyes, lungs, and broken skin. Wash hands thoroughly after use. Remove and launder heavily soiled clothing separately before reuse. Persons with severely suppressed immune systems, such as those with advanced AIDS, or those taking anti-rejection drugs, or those undergoing chemotherapy should contact their physician before handling ordinary microbial products.

Note: Preservatives used in this product are not appropriate for human consumption. Although present in very low concentrations, they are potent as microbial growth inhibitors, and should not be ingested.

Unknown acute toxicity

&lt;1% of the mixture consists of ingredients of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Content
Iron EDTA	15708-41-5	1 - 3%
<i>Bacillus licheniformis</i> SB3086	68038-70-0	10 <sup>9</sup> cfu/ml (minimum)
Indole-3-butyric acid	60096-23-3	0.00096%
Nonhazardous inert ingredients, or ingredients below reportable levels	Various	Balance

**4. FIRST AID MEASURES**

**Eyes:** Hold open eye and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present and easy to do, then continue rinsing eye. Call a poison control center or doctor for treatment advice if discomfort or irritation occurs.

**Skin:** Take off contaminated clothing. Wash skin thoroughly with soap and water. If discomfort or irritation occurs, call a poison control center or doctor for treatment advice.

**Ingestion:** Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Call a Poison Control Center or doctor for treatment advice if significant amounts are ingested and discomfort occurs. Do not induce vomiting unless told to do so by the poison control center or doctor.

**Inhalation:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth if possible, and call a poison control center or doctor immediately for treatment advice.

**Note to physician:** Employ supportive care. Treatment should be based on the judgment of the physician in response to reactions of the patient.

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

Most important symptoms and effects, both acute and delayed: Mist inhalation can result in irritation with nasal discomfort; skin irritation possible, with redness and itching. Eye irritation on contact with itching, burning and watering eyes.

**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**

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

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	Practice reasonable caution to avoid contact with this product. Avoid breathing dusts and mists if generated. Use personal protective equipment during use as required to prevent contact with eyes or skin, and to avoid breathing mist. Users should wash thoroughly after using this product. Do not contaminate water, food or feed by storage or disposal.
Storage Conditions	Keep containers tightly closed in a cool, well-ventilated place. EcoGuard consists of living microbes. Store at room temperature and use before the expiry date. Do not freeze. Close opened packages tightly. 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 REL
Aerosol mist, nontoxic	5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL
Iron Salts, soluble (as Fe)	1 mg/m <sup>3</sup> TWA	Not established	Not established

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. All handlers should wear coveralls worn over short sleeved shirt and short pants, socks, chemical-resistant footwear and chemical-resistant gloves.
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	Medium to dark brown solution
pH	7 - 8
Odor	Slight
Odor Threshold	No information available
Melting point/freezing point	approximately -1° C
Boiling point / boiling range	100° C
Flash point	Not applicable for an aqueous liquid
Evaporation rate	Similar to water
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
Volatility	Similar to water
Specific Gravity	Approximately 1.2
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	Not an oxidizer

**10. STABILITY AND REACTIVITY**

**Reactivity:** Not very reactive.

**Chemical stability:** Stable for up to 2 years when stored at 72° F (23° C).

**Possibility of Hazardous Reactions:** Behaves similarly to water.

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Freezing or boiling.

**Incompatible materials:** Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate the product.

**Hazardous Decomposition Products:** None known.

**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.

**Sensitization**                      No information available.

**Germ cell mutagenicity**      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	None expected
STOT - single exposure	No information available
STOT - repeated exposure	No information available
Chronic toxicity	No information available
Target Organ Effects	Skin and eye irritation.
Aspiration hazard	No information available

**Acute oral toxicity:** LD50 >5,000 mg/kg  
**Acute dermal toxicity:** LD50 >5,050 mg/kg  
**Acute inhalation toxicity:** LC50 >2.56mg/L  
**Eye irritation:** Mild eye irritation may result from exposure  
**Skin irritation:** Mild skin irritation may result from exposure  
**Skin sensitization:** No sensitization noted

**12. ECOLOGICAL INFORMATION**

**Toxicity to bees:** No signs of toxicity or pathogenicity  
**Toxicity to fish:** No signs of toxicity or pathogenicity  
**Toxicity to birds:** No signs of toxicity or pathogenicity

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.  
 Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

Persistence and degradability	No information available
Bioaccumulation	None expected
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**

Do not reuse packaging. Follow local regulations.

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**14. TRANSPORT INFORMATION**

Material should be properly labeled for transport. This item is not regulated as a hazardous material for all modes of transportation within the U.S. and Canada.

**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.

**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.

**FIFRA:** This product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and its Amendments.

**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.