



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name: **Roots Concentrate**

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
(717-273-1685)

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:

May irritate the digestive tract if ingested.

Pictograms: Silhouette, Exclamation Point



Precautionary Statements for handling: See also Section 7.

P201: Obtain special instructions before use.

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

P261: Avoid breathing product mist/vapors/spray.

P272: P363, Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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.

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

P333, P352: If skin irritation or rash occurs: wash with plenty of soap and water. See physician if irritation persists.

P405: Store locked up.

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

Hazards not otherwise classified (HNOC): None known

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

Continued on next page....

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Seaweed extract solution	84775-78-0	38.8
Potassium lignosulfonate	68514-28-3	2.9
Glycine	56-40-6	1
Potassium sorbate	590-00-1	0.9
Myo-inositol	87-89-8	0.5
Dipropylene glycol	25265-71-8	0.35
Thiamine mononitrate (Vitamin B1)	67-03-8	0.3
1,2-Benzisothiazolin-3-one	2634-33-5	0.1
Alpha tocopherol (Vitamin E acetate)	7695-91-2	0.04
Polyethylene glycol	25322-68-3	0.03
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 skin irritation, injury, or rash 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. If exposed or concerned, get medical advice or attention.

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. If exposed or concerned, seek medical advice. Call a POISON CENTER or doctor/physician if you feel unwell.

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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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	Store locked up. 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
Aerosol mist, nontoxic	5 mg/m ³ TWA	5 mg/m ³ TWA	5 mg/m ³ TWA 10 mg/m ³ STEL
1,2-Benzisothiazolin-3-one	None established*	None established*	None established*

*Other Information: Corporate Recommended Exposure Limit for 1,2-Benzisothiazolin-3-one: 0.1 mg/m³ (TWA).

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	Wear protective gloves. 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. Contaminated work clothing must not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Aqueous Liquid
Appearance	Solution
Color	Mixed, various
Odor	Slight
Odor Threshold	No information available
pH	6.5 - 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	1.054 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

No data available

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.
- Sensitization** May cause an allergic skin reaction in some individuals.
- 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: This product does not contain any carcinogens or potential carcinogens as listed by /ARC, NTP, ACGIH or OSHA.

- | | |
|--------------------------|---|
| 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 | No information available |
| Aspiration hazard | No information available |
| Mutagenicity: | Potassium Sorbate induced chromosome aberrations in cultured Chinese hamster cells. |

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 | Largely biodegradable. |
| Bioaccumulation | Not expected, 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: 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. |
| Marine pollutant: | No |

15. REGULATORY INFORMATION

General Product Information:

Component Analysis - Inventory

Potassium Sorbate (590-00-1)

- TSCA- Yes
- DSL-Yes
- EINECS-Yes

SARA 302: Potassium sorbate has no Threshold Planning Quantity, so default value of 10,000 Lbs applies.

SARA 311/312 Hazard Categories

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

CERCLA: No listed ingredients relevant to CERCLA.

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.

C: Component Analysis - WHMIS IDL

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

Potassium Sorbate (590-00-1)

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.