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

Product Name: Roots Holly Boost 6-4-6

EPA No: Not applicable

Product Identity: Bio Granular Fertilizer/Inoculant

Supplier/Manufacturer
**Lebanon Seaboard Corporation**
**1600 East Cumberland Street**
**Lebanon PA 17042**
Tel: 1-800-233-0628 USA
(717-273-1685) INTL Supplier Email: customerservice@lebsea.com

Emergency telephone numbers:
Chemtrec (Spill) 1-800-424-9300 Prosar (Health) 888-208-1368

## 2. HAZARDS IDENTIFICATION

OSHA Signal Word: Warning

Classification:
H316: Causes mild skin irritation. (Category 3), Skin corrosion/irritation

Hazard Statements:

H316: Causes mild skin irritation. (Category 3)

Pictogram:



Precautionary Statements for handling:
P332: If skin irritation occurs: Get medical advice/ attention.
Keep out of reach of children

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight % |
|---|---|---|
| Feathermeal | 68952-07-8 | 35 - 40 |
| ROCK PHOSPHATE | 65996-94-3 | 20 - 25 |
| Potassium Sulfate | 7778-80-5 | 10 - 15 |
| Meat and Bone Meal | 68920-45-6 | 10 - 15 |
| Wheat | 130498-22-5 | 5 - 10 |
| Sulfur | 7704-34-9 | 1 - 5 |

## 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 you feel unwell, call a poison control center or seek medical attention. Do not induce vomiting of an unconscious person. |

Self-protection of the first aider: Use any appropriate personal protective equipment as required for nuisance dusts.

Most important symptoms and effects, both acute and delayed: Nuisance dust irritation may occur with nasal discomfort under highly dusty conditions.
Eye irritation on contact with redness, tearing and burning sensation.
Redness, itching, or burning sensation on skin with prolonged contact.

Indication of any immediate medical attention and special treatment needed: Treat Symptoms. Consult physician if discomfort or irritation persists.

## 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media**
Use extinguishing media suitable to local circumstances and the surrounding environment. Options in this case include water, $CO_2$, ABC Dry Chemical extinguisher, or foam. Avoid stirring up dust extinguisher stream.

**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
Note: Excessive amounts of any burnable dusts can produce explosive mixtures if allowed to disperse in the air in confined areas where ignition sources occur. Prevent excessive dust dispersal in areas of use, storage, or production.

**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 (bunker) gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment, and emergency procedures

| | |
|---|---|
| Personal Precautions | Use dust mask and gloves as needed or other reasonable personal protective equipment as required to prevent contact with eyes or skin. Remove ignition sources prior to clean-up. |
| 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 dust mask and/or reasonable personal protective equipment as required to avoid breathing dusts. Moisten or cover powder spill with plastic sheet or tarp to minimize spreading. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Soak up excess with inert absorbent material. Clean contaminated surface thoroughly. |

## 7. HANDLING AND STORAGE

| | |
|---|---|
| Safe Handling | Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required to avoid breathing dusts or mists, and to prevent eye contact. 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

### Exposure Guidlines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH* |
|---|---|---|---|
| Sulfur | | TWA 5 ppm (13 mg/m3) | |
| Quartz Sand Silica | 0.025 mg/m3 (respirable) | 6 mg/m3 (resp) | |
| Nuisance Dusts (for granulars) | 10 mg/m3 (TWA- Total) | 15 mg/m3 (TWA total) 50 mppcf (TWA total) 5 mppcf (TWA respirable) | Not Established |

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

Engineering controls: Use with adequate ventilation and follow safe work practices to prevent dust buildup in air.

**Individual protection measures**Use personal protective equipment as required to avoid breathing dust/mist, and to prevent eye contact.

| | |
|---|---|
| Eye protection | Provide face and eye protection: face shield and goggles recommended if face or eye contact is likely. |
| Skin and Body Protection | Gloves and standard work coveralls recommended |

| | |
|---|---|
| Respiratory Protection | Dust mask recommended for dusty or 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. |

Also see Precuationary Statements in Section 2

## 9. PHYSICAL AND CHEMCIAL PROPERTIES

| | |
|---|---|
| Physical state | Granular Solid |
| Appearance | Granular Solid |
| Color | Mixed, various |
| Odor | Slight |
| Odor Threshold | No information available |
| pH | Not applicable |
| Melting point/freezing point | Not applicable |
| Boiling point / boiling range | Not applicable |
| Flash point | No information available |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | No information available |
| Flammability Limits in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | Not applicable |
| Vapor density | Not applicable |
| Water solubility | Mostly insoluble |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Oxidizing properties | Not particularly reactive |

## 10. STABILITY AND REACTIVITY

**Reactivity**
Not Reactive

**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**
High heat, sparks and open flames, as some ingredients may be burnable.

**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), dust inhalation

| | |
|---|---|
| Symptoms | May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea.<br>Eye irritation on contact with redness, tearing and burning sensation.<br>Redness, itching, or burning sensation on skin with prolonged contact. |
| Sensitization | No information available. |
| Germ cell mutagenicity | None known unless noted below in Other |
| Carcinogenicity | None |
| Reproductive toxicity | The bacteria in this product are typically harmless strains, and are not associated with disease or infection healthy people (Biosafety Level 1). However, use good hygiene practices. Handle as rich soil or compost. Nonporous gloves recommended. Wash hands thoroughly after handling. Avoid breathing dust. Persons with severely compromised immune systems should consult with their physician before handling microbial products.<br>No information available. |
| STOT - single exposure | No information available |
| STOT - repeated exposure | No information available |
| Chronic toxicity | Yes |
| Target Organ Effects | Lungs-Nuisance dusts |
| Aspiration hazard | No information available |
| Other | The bacteria in this product are typically harmless strains, and are not associated with disease or infection healthy people (Biosafety Level 1). However, use good hygiene practices. Handle as rich soil or compost. Nonporous gloves recommended. Wash hands thoroughly after handling. Avoid breathing dust. Persons with severely compromised immune systems should consult with their physician before handling microbial products. |

## 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:**
Excess product should be used up according to label directions, to avoid disposal issues. Dispose of in accordance with Local, State, and Federal regulations.

**Contaminated packaging**
Dispose empty container with normal trash, unless prohibited by local regulations.

## 14. TRANSPORT INFORMATION

NMFC 68140-5 FERTILIZER COMPOUNDS (MANUFACTURED FERTILIZERS) NOI, DRY 20 OR GREATER PCF

| | |
|---|---|
| **DOT:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **IATA:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **IMDG/IMO:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **IMDG:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **ADR:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **ADN:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **RID:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **TDG:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **ICAO:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |
| **MEX:** | Not Regulated |
| Proper Shipping Name: | Not Regulated |
| Hazard Class: | Not Applicable |

## 15. REGULATORY INFORMATION

TSCA (USA): Complies.
**General Product Information:** This product is not federally regulated as a hazardous material.
**Clean Air Act:** No information is available.
**Clean Water Act:** This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**SARA 313 Superfund Amendments:** This product contains no chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal regulations, Part 372.

**SARA 311/312 Hazard Categories:**

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

**CERCLA:** This material, as supplied, does not contain any substances regulated as hazardous

substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) and Superfund.

Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**State Regulations:**
**California Proposition 65:**This product does not contain detectable quantities of chemicals known to the State of California to cause cancer or birth defects, or other reproductive harm.

**Component Analysis - State:** Right-to-Know: Sulfur NJ, PA, RI

## 16. OTHER INFORMATION

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.