Revision Date: 01/11/2016

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name: **Lebanon Turf Fungicide contains 1% Bayleton**

EPA No: 432-1336-961

Recommended use
This product is a mixed fertilizer/pesticide 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 number
800-233-0628 Chemtrec 1-800-424-9300 Prosar 888-208-1368

2. HAZARDS IDENTIFICATION

OSHA Signal Word: Warning
EPA Signal Word: Caution

Hazard Statements and Hazard Categories:
H302: Harmful if swallowed. (Category 4)
H312: Harmful in contact with skin. (Category 4)
H315: Causes skin irritation with prolonged contact. (Category 2)
H317: May cause allergic skin reaction. (Category 1B)
H320: Causes eye irritation. (Category 2B)
H332: Harmful if inhaled. (Category 4)
H351: Suspected of causing cancer. (Category 2)
May irritate the digestive tract if ingested.
Keep out of reach of children.

Pictogram:

Precautionary Statements for handling:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing dust or 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.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281:Use appropriate personal protective equipment as required to avoid breathing dust.
P301, P310, P330, P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P302, P332, 352: IF ON SKIN: Gently wash with plenty of soap and water. Seek medical attention if irritation occurs and persists.
P304, 340: If inhaled, remove person to fresh air and keep comfortable for breathing.
P305, P337, P351: If in eyes, rinse cautiously with water for several minutes. If eye irritation persists: Seek medical advice.
P308: If exposed or concerned, seek medical advice.
P362, P363: Take off contaminated clothing and wash contaminated clothing before reuse.
P405: Store locked up.
See labels for specific first aid measures.
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 %
Triadimefon (Bayleton)	43121-43-3	1%
Hexylene glycol	107-41-5	2%
Non hazardous inert ingredients or fillers	Various	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. 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 to avoid breathing dust, and to avoid eye and skin contact.

Most important symptoms and effects, both acute and delayed:

Symptoms: Ingestion in rats caused hyperactivity followed by sedation. Dust irritation with nasal discomfort, or skin irritation possible. May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea. Eye irritation with redness, tearing. Possible skin irritation with redness, rash.

Indication of any immediate medical attention and special treatment needed: Treat Symptomatically. There is no specific antidote.

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 with water 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 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 dust. 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 reasonable personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up excess with inert absorbent material.

7. HANDLING AND STORAGE

Safe Handling	Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Wash hands thoroughly after handling.
Storage Conditions	Store locked up. Keep containers tightly closed in a cool, well- ventilated place. Keep away from food, drink and animal feed. Keep out of the reach of children. 60 day average storage temperature should not exceed 100 ^{o}F (38 ^{o}C).
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
Triadimefon*	Not Established	Not Established	Not Established
Hexylene glycol	25 ppm or 121 mg/m^3 Ceiling	Not Established	25 ppm or 125 mg/m^3 Ceiling
Nuisance Dusts	10 mg/m^3 (TWA)	15 mg/m^3 (TWA total) 50 mppcf (TWA total) 5 mppcf (TWA respirable)	Not Established

*Other Information: Bayer CropScience has recommended an occupation exposure standard of 0.7 mg/m^3 for triadimefon.

Engineering controls: Use with adequate ventilation to prevent dust buildup in air.

Individual protection measures

Wear protective gloves, protective clothing, eye protection, and face protection.

Eye protection	Safety glasses, or goggles if eye contact is likely
Skin and Body Protection	Chemical resistant gloves (e.g., nitrile rubber), and standard coveralls recommended with long pants and sleeves, and socks.
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. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMCIAL PROPERTIES

Physical state	Solid
Appearance	Granules
Color	Mixed, various
Odor	Slight, musty
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
Specific Gravity	Not applicable
Water solubility	Mostly Insoluble in water, although some ingredients may dissolve.
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
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
High heat, sparks and open flames, as some ingredients may be burnable.

Incompatible materials
Strong acids or alkali, oxidizers, 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	Neurobehavioral effect: Hyperactivity followed by sedation. May irritate the digestive tract if ingested in quantity, causing nausea, vomiting and diarrhea. Eye irritation with redness, tearing. Possible skin irritation with redness, rash.

Toxicology of active ingredient (Based on 50% Triadimefon)

Acute oral toxicity
male rat: LD50: 812 mg/kg
female rat: LD50:1,470 mg/kg

Acute dermal toxicity
male/female combined rat: LD50: > 2,000 mg/kg
male/female combined rabbit: LD50: > 2,000 mg/kg

Acute inhalation toxicity
male/female combined rat: LC50: > 3.5 mg/l, 4 hr. Determined in the form of a respirable fine dust.

male/female combined rat: LC50: > 14.0 mg/l, 1 hr. Determined in the form of a respirable fine dust. (Extrapolated from the 4 hr LC50.)

Skin irritation: rabbit: slight irritation

Eye irritation: rabbit: Minimally irritating.

Chronic Toxicology of Technical grade (>96%) Triadimefon (Bayleton):

Sensitization: Potential skin sensitizer

The major organs affected from long-term exposure to triadimefon in chronic studies in rats and dogs were the liver and/or thyroid (secondary effects).

Carcinogenicity Assessment:
EPA has classified triadimefon as a Group C (possible human carcinogen) based on borderline statistically significant increases in thyroid adenomas in male rats, and increases in liver adenomas in both sexes in mice. The Agency used a non-linear methodology approach for determining the Margin of Exposure (MOE) for the estimation of human cancer risk because the tumors were benign, and there were no apparent genotoxicity concerns. Therefore, EPA has a reasonable certainty that no harm will result from exposure to residues of triadimefon.

Reproductive Toxicity:
In reproduction studies in rats, triadimefon caused reproductive effects (e.g., smaller litter sizes) in conjunction with parental toxicity at the highest doses tested.

Developmental Toxicity:
Triadimefon is not a primary developmental toxicant based on developmental toxicity studies in rats and rabbits. Malformations were observed in both species but only at maternally-toxic dose levels.

Mutagenicity:
Triadimefon is not considered genotoxic or mutagenic based on in vitro and in vivo mutagenicity studies.

Target Organ Effects	No information available
Aspiration hazard	No information available

12. ECOLOGICAL INFORMATION

Effects on birds: Triadimefon ranges from slightly toxic to practically nontoxic to birds.

Mallard ducks: LD_{50} : > 4000 mg/kg
Japanese quail: LD_{50}: 2000 mg/kg
Canaries: LD_{50} >1000 mg/kg

Even the most tolerant species exhibited some compound-related acute toxicity such as diarrhea and regurgitation within 5 minutes of administration of the highest doses. At the lowest dose tested (500 mg/kg) no signs of diarrhea were noted.

Effects on aquatic organisms: Triadimefon is slightly toxic to fish, indicating that they are more susceptible to the presence of the compound than are birds.

Bluegill sunfish: LC_{50} 11 mg/L (96 hr)
Goldfish LC_{50} : LC_{50} 10 to 50 mg/L (96 hr)
Rainbow trout: LC_{50} 14 mg/L (96 hr)

Effects on other organisms: Triadimefon is not acutely toxic to honeybees.

Environmental Fate:
Breakdown in soil and groundwater:
Triadimefon has low to moderate persistence in soils.

- Sandy loam: half-life 18 days.
- Loamy soil: half-life about 6 days
- Other reported soil half-lives are 14 to 60 days with an average of 26 days.

Mobility: Triadimefon and its residues are moderately mobile and may have potential to leach to groundwater.

Breakdown of Triadimefon in water: In water with a pH 3.0, 6.0, or 9.0, almost 95% of the compound remained after 28 weeks. The compound is very stable in water and does not readily undergo hydrolysis.

Breakdown in vegetation: In plants, a breakdown product is triadimenol , and translocation and metabolism may vary according to plant species. Triadimenol is of comparable toxicity to Triadimefon.

Pesticides may be harmful to aquatic life with short term effects, depending on the amount released. Use with care when applying to turf areas adjacent to any bodies of water. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent bodies of water. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwater.
Application around a cistern or well may result in contamination of groundwater or drinking water, particularly where soils are permeable and water table is shallow.

13. DISPOSAL CONSIDERATIONS

This material, as supplied is not a hazardous waste according to federal regulations (40 CFR 261).

Disposal of wastes: Dispose of in accordance with Local, State, and Federal regulations.

Contaminated packaging
Do not re-use empty containers. Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

Freight Classification: FUNGICIDES N.O.I., OTHER THAN POISON
According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

DOT:	Not Regulated
Proper Shipping Name:	Non Regulated
Hazard Class:	Not Applicable
IATA:	Not Regulated
Proper Shipping Name:	Non Regulated
Hazard Class:	Not Applicable
IMDG/IMO	Not Regulated
Hazard Class	Not Applicable
Marine Pollutant	No

ADR:	Not Regulated
ADN:	Not Regulated
RID:	Not Regulated
IATA:	Not Regulated
TDG:	Not Regulated
ICAO:	Not Regulated
MEX:	Not Regulated

15. REGULATORY INFORMATION

US Federal Regulations
TSCA list: None
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D): None.
SARA Title III - Section **302** - Notification and Information: None.
SARA Title III - Section **313** - Toxic Chemical Release Reporting: Triadimefon 43121-43-3 1.0%

US States Regulatory Reporting
CA Prop 65: This product contains trace amounts of a substance (silica) known to the State of California to cause cancer.
This product contains a chemical known to the State of California to cause birth defects or other reproductive harm:

Triadimefon (43121-43-3):

- Developmental toxin.
- Female reproductive toxin.
- Male reproductive toxin.

US State Right-To-Know Ingredients: Triadimefon (Bayleton) (43121-43-3) NJ

Environmental
CERCLA: None.
Clean Water Section 307 Priority Pollutants: None.
Safe Drinking Water Act Maximum Contaminant Levels: None.

16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association
Health -1 Flammability -1 Reactivity -1 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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.