



**Guaranteed Analysis**

**Total Nitrogen (N)**..... **22.00%**  
**22.00% Urea Nitrogen\***  
**Soluble Potash (K<sub>2</sub>O)**..... **3.00%**  
**Derived From:** Urea, Polymer Coated Urea, and Muriate of Potash.  
 \*8.80% Slowly Available Urea Nitrogen from Polymer Coated Urea.

**KEEP OUT OF REACH OF CHILDREN  
 CAUTION**

**Guaranteed By:**  
 LOVELAND PRODUCTS, INC.                      F1548  
 P.O. BOX 1286  
 GREELEY, CO 80632-1286



Signature® and Prospect Plus are registered trademarks of Loveland Products, Inc.  
 Duration CR® is a registered trademark of Agrium, Inc.

**Net Weight 50 lbs. (22.68 kg)**

**Product Code: 6000310**

**22-0-3**

**with DURATION® CR**

**FIRST AID**  
**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.  
**If on Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.  
**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.  
**If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**STORAGE and DISPOSAL:** **STORAGE:** Store in original containers only. Keep containers tightly closed when not in use. Store in a cool, dry well-ventilated area, preferably in a locked storage area away from children, feed and food products, and seed. Store at ambient temperatures. Do not contaminate water, food, or feed by storage or disposal. **DISPOSAL:** Do not reuse container. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. Do not contaminate water, food, or feed by storage or disposal. **HANDLING:** Avoid breathing fertilizer dusts. Avoid prolonged or repeated skin contact. Avoid eye contact. Wash hands thoroughly after handling this product.

**DIRECTIONS FOR USE:** Apply as needed based on soil tests or according to recommendations in your nutrient management plan,

Lbs. N / 1000 sq. ft.	Lbs. Product / Acre	
0.5	98	Low
1.0	196	Medium
1.5	294	High

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

BEFORE BUYING OR USING THIS PRODUCT, read the Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary. LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, when the product is used in accordance with such Directions for Use under normal conditions of use. LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

Tests have not been carried out under all possible use conditions and Seller cannot and does not represent or warrant that the goods are compatible with all other chemicals or under all use conditions.

**J3013**

# SAFETY DATA SHEET

# SIGNATURE® 22-0-3 WITH DURATION® CR

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC® – TOLL FREE 1-800-424-9300

## 1. PRODUCT AND COMPANY IDENTIFICATION

### MANUFACTURED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300  
Medical Emergencies: 1-866-944-8565  
U.S. Coast Guard National Response Center: 1-800-424-8802

CHEMICAL IDENTITY: POLYMER COATED UREA WITH POTASH

PRODUCT USE: SLOW-RELEASE NITROGEN FERTILIZER FOR TURF APPLICATION

SDS Number: 6000310-13-LPI

MSDS Revisions: New

Date of Issue: 10/30/13

Supersedes: New

## 2. HAZARDS IDENTIFICATION

KEEP OUT OF REACH OF CHILDREN –

**Emergency overview: CAUTION:** May cause eye irritation. May cause skin and respiratory tract irritation. Possible reproductive hazard – contains material that may cause adverse reproductive effects.

**OSHA Regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (the Hazard Communication standard)

### Potential Health effects

#### Routes of exposure

Inhalation. Ingestion. Skin absorption.

#### Eyes

May cause eye irritation.

#### Skin

Irritating to skin.

#### Inhalation

Irritating to respiratory system.

#### Ingestion

Irritating to mouth, throat, and stomach.

### Target organs

Skin. Eyes. Inhalation.

### Signs and symptoms

May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system.

### Potential environmental effects

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name and Synonyms:</u>	<u>Percent Hazardous by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Ammonia, anhydrous	Trace – 0.5	7664-41-7	17 mg/m <sup>3</sup>
Urea	49 - 50	57-13-6	10 mg/m <sup>3</sup> (AIHA)
Silica, crystalline	Trace	14808-60-7	30 mg/m <sup>3</sup> / % SiO <sub>2</sub> + 2
	<b><u>Non Hazardous</u></b>		
Muriate of Potash	5	7447-40-7	not listed

## 4. FIRST AID MEASURES

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**.

NOTES TO PHYSICIAN: Treatment based on the sound judgment of the physician and the individual reactions of the patient.

## 5. FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA:

Water fog. Water spray. Carbon dioxide (CO<sub>2</sub>). Foam.

### SPECIAL FIRE FIGHTING PROCEDURES:

Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

Containers may burst if exposed to extreme heat.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
<b>Methods for containment</b>	Dike spilled material if possible.
<b>Methods for cleaning up</b>	Should not be released into the environment.

Large spills: Dike the spilled material where this is possible. Sweep up, raising as little dust as possible and place into containers. Following product recovery, flush area with water.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS

**CAUTION:** Spill area will be quite slippery.

**7. HANDLING AND STORAGE**

<b>HANDLING:</b>	Avoid exposure - obtain special instructions before use. Do not breathe dusts or vapors. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.
<b>STORAGE:</b>	Store in a cool, dry place away from children, feed and food products, and seed. Store in original tightly closed container. Use care in handling/storage. Store in accordance with local/regional/national/international regulation. Keep out of reach of children. Long term storage at temperatures above 100°F /36°C, and long term storage of opened containers, will cause the product to degrade. Store below 100°F (36°C) and use opened containers within 30 days. Always use oldest stock first.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****OCCUPATIONAL EXPOSURE LIMITS****U.S. ACGIH. BEIs. Biological Exposure Indices**

Components	Type	Value
Ammonia	OSHA PELs	35 mg/m <sup>3</sup>
Particulates, not otherwise classified	OSHA PELs	15 mg/m <sup>3</sup> (Total dust)
Silica, crystalline	OSHA PELs	30 mg/m <sup>3</sup> / % SiO <sub>2</sub> + 2 (Total dust)

**EXPOSURE GUIDELINES**

Follow standard monitoring procedures.

**ENGINEERING CONTROLS**

Provide adequate general and local exhaust ventilation. Provide eyewash station.

**PERSONAL PROTECTION EQUIPMENT****EYE / FACE PROTECTION:**

Safety glasses are recommended.

**SKIN PROTECTION:**

Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of neoprene gloves is recommended.

**RESPIRATORY PROTECTION:**

In case of inadequate ventilation or risk of inhalation of dusts, use suitable respiratory equipment. Wear respiratory protection during operations where spraying or misting occurs. Wear air supplied respiratory protection. Wear air supplied respiratory protection if exposure concentrations are unknown.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Multi-colored granules.

**PHYSICAL STATE:** Solid.

**FORM:** Solid.

**COLOR:** Multi-colored.

**ODOR:** Dusty

**ODOR THRESHOLD:** 0.1 ppm

**pH:** Not applicable

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY (Air = 1):** Not applicable

**BOILING POINT:** Not applicable

**MELTING POINT:** No Data

**SOLUBILITY:** Negligible

**SPECIFIC GRAVITY (Water = 1):** 0.64 – 1.21 g/ml – **BULK DENSITY:** 40 – 70 lbs/ft<sup>3</sup>

**FLASHPOINT:** Not applicable

**FLAMMABLE LIMITS (LFL & UFL): Lower Flammability Limit:** Not applicable; **Upper Flammability Limit:** Not applicable

**AUTO-IGNITION TEMPERATURE:** Not established

**PARTITION COEFFICIENT (n-octanol/water):** < -1.73 (Urea)

**Note:** These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.



**10. STABILITY AND REACTIVITY****CHEMICAL STABILITY:** Stable**CONDITIONS TO AVOID:** None known.**INCOMPATIBLE MATERIALS:** None known.**HAZARDOUS DECOMPOSITION PRODUCTS:** Urea may decompose to release cyanuric acid, ammonia, HCN, oxides of carbon (CO<sub>2</sub> and CO), oxides of nitrogen.**POSSIBILITY OF HAZARDOUS REACTIONS:** None known. Will not polymerize.**11. TOXICOLOGICAL INFORMATION****TOXICOLOGICAL DATA**

Components	Species	Test Results
Ammonia, anhydrous (CAS: 7664-41-7)		
<b>Acute</b>		
<i>Oral</i>		
LD <sub>50</sub>	Rat	350 mg/kg
<i>Inhalation</i>		
LC <sub>50</sub>	Rat	4,230 – 19, 960 mg/l
Urea (CAS: 57-13-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD <sub>50</sub>	Rat	Not established
<i>Oral</i>		
LD <sub>50</sub>	Rat	14,300 mg/kg
Castor Oil (CAS: 8001-79-4)		
<b>Acute</b>		
<i>Intramuscular</i>		
TD <sub>Lo</sub>	Rat	1 mL/kg
<i>Oral</i>		
TD <sub>Lo</sub>	Rat	4 mL/kg
Muriate of Potash (CAS: 7447-40-7)		
<b>Acute</b>		
<i>Oral</i>		
LD <sub>50</sub>	Rat	1,500 – 2,600 mg/kg

**TOXICOLOGICAL INFORMATION  
ACUTE EFFECTS**

Occupational exposure to the substance or mixture may cause adverse effects. May cause severe irritation or burns to eyes, skin, gastrointestinal tract, and respiratory system.

**CHRONIC EFFECTS  
CARCINOGENICITY  
MUTAGENICITY  
REPRODUCTIVE EFFECTS**

Prolonged exposure may cause chronic effects.

Not classified.

Not classified.

Possible reproductive hazard. Can cause adverse reproductive effects – such as birth defects, miscarriages, or infertility.

**TERATOGENICITY  
SYMPTOMS AND TARGET ORGANS**

Avoid contact during pregnancy or while nursing.

Contact may produce eye irritation with associated redness, swelling, tears and pain. May adversely affect the liver and kidney based on animal testing.

**FURTHER INFORMATION**

Symptoms may be delayed.

**12. ECOLOGICAL INFORMATION****Ecotoxicological Data**

Components	Species	Test Results
Ammonia, anhydrous (CAS: 7664-41-7)		
<b>Aquatic</b>		
Crustacea	Daphnia magna	2.94 mg/L, 48 hours
Fish	Various	21.4 - 279 mg/L (varies due to species, test type)
Urea (CAS: 57-13-6)		
<b>Aquatic</b>		
Fish	Tilapia mossambica	22,500 mg/l, 96 hours
Muriate of Potash (CAS: 7447-40-7)		
<b>Aquatic</b>		
Crustacea	Daphnia magna	337 - 825 mg/l, 48 hours
Fish	Lepomis machrochirus (Blue Gill)	2,010 mg/l, 96 hours

**ECOTOXICITY**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**PERSISTENCE AND DEGRADABILITY  
MOBILITY IN ENVIRONMENTAL MEDIA**The product is not readily biodegradable.  
This product is not readily soluble in water.

**13. DISPOSAL CONSIDERATIONS**

**DISPOSAL INSTRUCTIONS**  
**WASTE FROM RESIDUES / UNUSED PRODUCTS**

Do not dispose of in drains or water courses.  
 This material must be disposed of according to local, state, provincial and federal requirements and procedures.

**14. TRANSPORT INFORMATION**

UN No.: NOT APPLICABLE  
 UN PROPER SHIPPING NAME: NOT APPLICABLE  
 TRANSPORT HAZARD CLASS: NOT APPLICABLE  
 PACKING GROUP: NOT APPLICABLE  
 ENVIRONMENTAL HAZARDS: NOT DETERMINED

U.S. Surface Freight Classification: FERTILIZING COMPOUNDS (MANUFACTURED FERTILIZERS), NOI; DRY (NMFC 68140, SUB 5; CLASS 50)

**15. REGULATORY INFORMATION**



**NFPA & HMIS Hazard Ratings:**

NFPA		HMIS	
1 Health	0 Least	1 Health	
0 Flammability	1 Slight	0 Flammability	
0 Instability	2 Moderate	0 Reactivity	
	3 High	B PPE	
	4 Severe		

**SARA Hazard Notification/Reporting**  
**SARA Title III Hazard Category:**

Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
Delayed	<u>Y</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Ammonia, anhydrous (CAS: 7664-41-7) 100 lbs.  
 SARA, Title III, Section 313: Ammonia, anhydrous (CAS: 7664-41-7) 100 lbs.  
 RCRA Waste Code: Not listed.  
 CA Proposition 65: Not applicable.

**16. OTHER INFORMATION**

SDS STATUS: New

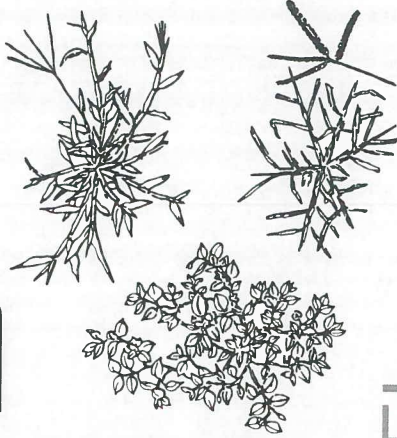
PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

**Disclaimer and Limitation of Liability:** This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.

NET WT. 40 LBS. (18.18 KG)

# Lebanon TREFLAN\* 5G HERBICIDE



SPECIMEN LABEL

Lebanon TREFLAN\* 5G  
HERBICIDE

Lebanon TREFLAN\* 5G  
HERBICIDE

Lebanon TREFLAN\* 5G is a selective preemergence herbicide for control of certain annual grasses and broadleaf weeds in:

- Container Grown Ornamentals
- Landscape Ornamentals
- Nursery Stock
- Ground Covers
- Established Flowers
- Ornamental Bulbs
- Non-Bearing Fruit and Nut Trees and Non-Bearing Vineyards in Ornamental Landscaping
- Noncropland

**ACTIVE INGREDIENT:**

\*trifluralin ..... 5.0%

**OTHER INGREDIENTS:** ..... 95.0%

**TOTAL** ..... 100.0%

Contains 2 pounds active ingredient per 40 pound bag

EPA Reg. No. 661-405

\*Trademark of Dow AgroSciences LLC

Manufactured using the processes of U.S. Patents 4,120,905 and 4,226,789

(E) (D)  
EPA Est. 561-PA-01-95-IL-01

Superscript used in first letter of lot number.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Refer to back panel of bag for precautionary information and Directions for Use including STORAGE AND DISPOSAL.  
In case of an emergency endangering life or property involving this product, call Chemtrec at 1-800-424-9300.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Causes moderate eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**FIRST AID**

**IF IN EYES:** • Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the last 5 minutes, then continue rinsing.

• Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** • Call a poison control center or doctor immediately for treatment advice.

• Have person sip a glass of water if able to swallow.

• Do not induce vomiting unless told to by a poison control center or doctor.

• Do not give anything by mouth to unconscious person.

**IF ON SKIN:** • Take off contaminated clothing.

• Rinse skin immediately with plenty of water for 15-20 minutes.

• Call a poison control center or doctor for treatment advice.

**IF INHALED:** • Move person to fresh air.

• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

• Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For Emergency Medical Information call (888) 368-1348.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should: • Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

• Remove clothing immediately if possible gets inside. Then wash thoroughly and put on clean clothing.

• Remove PPE immediately after handling the product. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is extremely toxic to freshwater marine and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply in a manner which will directly expose oysters, hakes, sheepsheads, ponds, marshes or estuaries to aerial drift. Do not concentrate water when disposing of approved containers. Do not apply directly to water, or to areas where surface water is present, or to wildlife areas before the mean high water mark.

MANUFACTURED BY  
**LEBANON SEABOARD CORPORATION**  
1600 EAST CUMBERLAND STREET  
LEBANON, PA 17042  
www.LebanonTurf.com



Lebanon TREFLAN\* 5G is a selective preemergence herbicide for control of certain annual grasses and broadleaf weeds in:

- Container Grown Ornamentals
- Landscape Ornamentals
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- Ornamental Bulbs
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\*trifluralin ..... 5.0%

**OTHER INGREDIENTS:** ..... 95.0%

**TOTAL** ..... 100.0%

Contains 2 pounds active ingredient per 40 pound bag.

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Manufactured using the processes of U.S. Patents 4,120,905 and 4,226,789.

(L) (D)

EPA Est. 961-PA-01:961-IL-01

Superscript used is first letter of lot number.

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• Rinse skin immediately with plenty of water for 15-20 minutes.  
• Call a poison control center or doctor for treatment advice.

**IF INHALED:** • Move person to fresh air.  
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.  
• Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For Emergency Medical Information call (888) 208-1368.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Applicators and other Handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

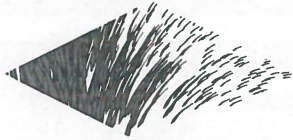
- Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
  - Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
  - Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

MANUFACTURED BY  
**LEBANON SEABOARD CORPORATION**  
1600 EAST CUMBERLAND STREET  
LEBANON, PA 17042  
www.LebanonTurf.com

SPECIMEN LABEL



# Lebanon TREFLAN\* 5G HERBICIDE

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

**NOT FOR USE ON PLANTS BEING GROWN FOR SALE OR OTHER COMMERCIAL USE, OR FOR COMMERCIAL SEED PRODUCTION OR FOR RESEARCH PURPOSES. FOR USE ON PLANTS INTENDED FOR AESTHETIC PURPOSES OR CLIMATIC MODIFICATIONS AND BEING GROWN IN INTERIOR PLANTSCAPES, ORNAMENTAL GARDENS OR PARKS, OR ON GOLF COURSES OR LAWNS AND GROUNDS.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

## ENTRY RESTRICTIONS

Do not enter or allow others to enter the treated area until dusts have settled. If soil incorporation is required after the application, do not enter or allow others to enter the treated area (except those persons involved in the incorporation) until the incorporation is complete. If the incorporation is accomplished by watering-in, do not enter or allow others to enter the treated area until the surface is dry after the watering-in.

## GENERAL INFORMATION

This product is a preemergence herbicide for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established flowers, ornamental bulbs, non-bearing fruit and nut trees, non-bearing vineyards in ornamental landscaping only, and noncropland. Apply before or after planting but prior to germination of target weeds, or immediately after cultivation. Length of weed control will vary with weed population, potting media or soil conditions, temperature, watering regime and other factors. Following application, user should monitor and observe level of weed control over time to determine when additional applications may be needed. Repeat applications should not be made sooner than 60 days after a previous application. Do not apply over 240 lbs. per acre total of this product within a 12-month period.

## GENERAL USE PRECAUTIONS

This product does not control established weeds. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings and trash should be removed or thoroughly mixed into soil prior to treatment. Soil should be in good condition and free of clods at the time of application. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation, is required to activate this product. Optimum weed control is obtained when this product is activated within 3 days of application. If rainfall or irrigation has not occurred within 3 days of application and tillage is possible, this product may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil. Failure to activate this product within 3 days of application may result in erratic weed control. Do not apply when wind conditions favor drift of the granules from the target area.

Optimum weed control will be obtained when followed by overhead irrigation or rainfall within a few hours after surface application.

## WEEDS CONTROLLED WHEN APPLIED AT 80 LBS./ACRE (1.8 Lbs./1,000 Sq. Ft.)

ANNUAL GRASSES							
Barley, bare	Brome	Crabgrass	Fescue, raitail	Goosegrass	Lovegrass	Panicum, fall	Signalgrass
Barryardgrass (watergrass)	Cheat	Cupgrass, Southwestern	Footail	Junglelice	Oat, Wild	Sandbur, field	Sprangletop, Mexican
Bluegrass, annual							Stinkgrass
							Witchgrass
ANNUAL BROADLEAF WEEDS							
Chickweed, common	Goosefoot, nettleleaf	Knotweed, prostrate	Kochia	Lambsquarters, common	Nettle, stinging	Pigweed	Purslane, common
							Thistle, Russian
In addition to the weeds controlled, the following weeds will be partially controlled or suppressed at 80 lbs./acre (1.8 lbs./1000 sq. ft.).							
Carpetweed	Johnsongrass (from seed)	Panicum, Texas	Pusley, Florida	Shattercane			

## APPLICATION DIRECTIONS

Apply this product using a drop or rotary-type spreader designed to apply granular herbicides or insecticides. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or plant injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first.

## APPLICATION TECHNIQUES

- When using a drop-type spreader, a splash board mounted under the hopper will provide more even granule distribution.
- A chain fastened to the side of the spreader and allowed to drag on the soil surface can be used to mark the edge of the treated swath and help prevent skips or overlaps.
- For treating smaller areas or rows of nursery stock or ornamental beds, a hand held or push-type rotary applicator such as whirlybird or cyclone unit is recommended. For hand held units, walk and turn the crank at a constant rate of speed.
- A shaker-type applicator made from a small container with holes punched in the bottom is recommended for small, hard to treat areas. Carefully measure the amount of product needed to avoid over-application.

## APPROVED USES

Container Grown Ornamentals, Landscape Ornamentals, Nursery Stock, Ground Covers, Established Flowers, Ornamental Bulbs, Non-bearing Fruit and Nut Trees, Non-bearing Vineyards in Ornamental Landscaping Only, and Non-cropland.

This product is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established flowers, ornamental bulbs, non-bearing fruit and nut trees, non-bearing vineyards in ornamental landscaping only, and non-cropland. Apply before or after planting but prior to germination of target weeds, or immediately after cultivation.

Refer to the "General Information" section of this label for general use precautions and information on application, application rates and weeds controlled.

## SPECIAL USE PRECAUTIONS

To avoid possible injury, do not apply this product to:

- Unrooted liners or cuttings that have been planted in pots for the first time
- Pots less than four inches wide
- Ground covers until they are established and well rooted

Do not apply to newly transplanted ornamentals, nursery stock, ground covers, flowers and non-bearing fruit and nut crops and non-bearing vineyards in ornamental landscaping until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or injury may occur.

Do not make preplant applications of this product to areas where gladioli corms are less than one inch in diameter will be planted or injury may occur.

Do not apply this product in greenhouse or other enclosed structures.

Repeat applications should not be made sooner than 60 days after a previous application of this product. Do not apply over 240 lbs. per acre total of this product within a 12 month period.

Prior to using this product on a large number of plants, the treated plants should be observed for signs of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. THE USER ASSUMES RESPONSIBILITY FOR ANY PLANT DAMAGE OR OTHER LIABILITY RESULTING FROM THE USE OF THIS PRODUCT ON PLANT SPECIES NOT RECOMMENDED ON THIS LABEL.

This product may be used on the following established plant species when container grown or field grown:

## TREES

Balsam Fir	European White Birch	Kousa Dogwood	Honey Locust	Pendula-Weeping Norway Spruce	Monterey Pine	Scarlet Oak
White Fir	Bottle Tree	Green Hawthorn	Shademaster Honey Locust	Repens-Spreading Norway Spruce	Red Pine	Bear Oak
Albus Flowering Maple	Black Olive	Carrot Wood	Toyon	Dwarf Alberta Spruce	White Pine	Pin Oak
Luteus Flowering Maple	Chinese Chestnut	Arizona Cypress	Florida Anise-Tree	White Spruce	Columnar Scotch Pine	Willow Oak
Roseus Flowering Maple	Carob	Russian Olive	Eastern Red Cedar	Dwarf Globe Blue Spruce	Scotch Pine	Red Oak
Tangerine Flowering Maple	Redbud	Redgum Eucalyptus	Japanese Larch	Glaucia-Colorado Blue Spruce	Loblolly Pine	Live Oak
Vesuvius Red-Flowering Maple	Filicoides-Fernspray Cypress	Mealy Eucalyptus	American Sweet Gum	Hoopsii-Hoop's Blue Spruce	Japanese Black Pine	Black Locust
Flame Maple	Gracilis-Stender Hinoki Cypress	Silver Dollar Eucalyptus	Tuliptree	Koster-Koster Blue Spruce	London Planetree	Willow
Norway Maple	Sware False Cypress	Coolbah Tree	Southern Magnolia	Bristlecone Pine	American Sycamore	Giant Sequoia
Red Maple	Squarrosa-Moss Cypress	Red Ironbark Eucalyptus	Crabapple	Canary Island Pine	California Sycamore	Mahogany
Red Sunset Maple	Palm (Chamaedorea cataractarum)	Ficus	White Mulberry	Shore Pine, Beach Pine	Podocarpus	Yellow Tab
Silver Maple	Palm (Chamaedorea costaricana)	Mini Ficus	Banana	Eldarica Pine	Cottonwood	Baldcypress
Sugar Maple	Parlor Palm	White Ash	Blackgum	Bosnian Pine	Chilean Mesquite	Eastern Hemlock
Queen Palm	Cloud Nine Dogwood	Shamel Ash	Sourwood	Pumilio-Shubby Swiss Mountain Pine	Yoshino Flowering Cherry	Chinese Elm
River Birch	Flowering Dogwood	Ginko-Maidenhair Tree	Norway Spruce	Austrian Black Pine	Douglasfir	Mexican Fan Palm
Paper Birch						

SPECIMEN LABEL



Edward Goucher Abelia  
Glossy Abelia  
Alysicinnac Acacia  
Prostrate Acacia  
Shoestring Acacia  
Copper Leaf  
Amur Maple  
Coral Bark Japanese Maple  
Dwarf Japanese Maple  
Century Plant  
False Spirea  
Japanese Painted Fern  
Coyotebush  
William Penn Barberry  
Mentor Barberry  
Atropura-Redleaf Japanese Barberry  
Aurea-Golden Japanese Barberry  
Crimson Pygmy Barberry  
Rose Glow Barberry  
Barbara Karst  
California Gold  
Pink Pixie  
Scarlet O'Hara  
Temple Fire  
Texas Dawn

Japanese Boxwood  
Korean Boxwood  
Common Boxwood  
Lemon Bottlebrush  
Weeping Bottlebrush  
Spring Torch Scotch Heather  
Japanese Camellia  
Sasanqua Camellia  
Feathery Cassia  
Wild Lilac  
Plum Yew  
Snow-in-Summer  
Kosterii Cypress  
Nana-Dwarf Hinoki Cypress  
Torulosa Cypress  
Fillera-Thread Cypress  
Arecia Palm  
Summersweet  
Japanese Cleyera  
Sibirica-Siberian Dogwood  
Bailey Red Osier Dogwood  
Flaviramea-Yellowtwig Dogwood  
Royal Purple Smoke Tree  
Coral Beauty Smoke Tree  
Eichholz Smoke Tree

Praecox-Early Coloneaster  
Cranberry Coloneaster  
Pyrenees Coloneaster  
Bearberry Coloneaster  
Himalayan Coloneaster  
Rock Coloneaster  
Zabel Coloneaster  
Sago Palm  
Hollandia-Warminster Broom  
Lena-Scotch Broom  
Fragrant Daphne  
Deutzia  
Hopseed Bush  
Fruiland Silver Berry  
Purple Bell Heather  
Mediterranean Pink Heather  
Cormish Heather  
Winged Euonymus  
Canada Gold Euonymus  
Emerald'n Gold Euonymus  
Sunspot Euonymus  
Wintercreeper Euonymus  
Silver King-Euonymus  
Variegated Evergreen Euonymus  
Spreading Euonymus

## ORNAMENTAL SHRUBS

Pineapple Guava  
Forsythia  
August Beauty Gardenia  
Gardenia  
Radican Gardenia  
Sala/Lemon Leaf  
Carolina Jessamine  
Sago Palm  
Ross Estey-Hibiscus  
Rose-of-Sharon- Heart  
Rose-of-Sharon- Red Bird  
Rose-of-Sharon- Woodbridge  
Holly  
Mystery Gardenia  
Henry Garnet Holly Leaf Sweetspire  
Ixora  
Juniper  
Mountain Laurel  
Crape Myrtle  
Lanlana  
Coast Leucothoe  
Drooping Leucothoe  
Privet  
Chinese Fountain Palm  
Flowering Woodbine

Serotina Woodbine  
Trumpet Honeysuckle  
Leather Leaf Mahonia  
Creeping Mahonia  
Wax Myrtle  
Compacta-Dwarf Heavenly Bamboo  
Harbour Dwarf-Heavenly Bamboo  
Heavenly Bamboo  
Nana Compacta-Heavenly Bamboo  
Nana Purpurea-Heavenly Bamboo  
Woods Dwarf Heavenly Bamboo  
Hardy Red Oleander  
Oleander  
Ruby Lace Oleander  
Fortunes Osmanthus  
Mockorange  
Pigmy Date Palm  
Fraser's Photinia  
Japanese Andromeda  
Mountain Fire Lily-of-the-Valley  
Snowdrift Lily-of-the-Valley  
Templebells Lily-of-the-Valley  
Valley Rose Lily-of-the-Valley  
Valley Valentine Lily-of-the-Valley  
Forest Flame Lily-of-the-Valley

Mugo-Mugho Pine  
Green Pittosporum  
Japanese Pittosporum  
Wheeler's Dwarf Pittosporum  
Blue Cape Plumbago  
Plumbago  
Yewpine  
Tassel Fern  
Cinquefoil  
Carolina Laurel Cherry  
Dwarf Pink Flowering Almond  
Pyracantha  
Charisma-Monruce Rhampholepis  
Enchantress-Moness Rhampholepis  
India Hawthorn  
Springtime-Monme Rhampholepis  
Roundleaf Rhampholepis  
Azalea/Rhododendron  
Africa Sumac  
Ramanas Rose  
Rosemary  
Japanese Skimmia  
Reeve's Skimmia  
Anthony Waterer Spiraea  
Dolchia Spiraea

Japanese Alpine Spiraea  
Shirobana Spiraea  
Bridal Wreath  
Chinese Lilac  
Common Lilac  
Upright Japanese Yew  
Anglojap Yew  
Cape Honeysuckle  
*Ternstroemia gymnanthera*  
American Arborvitae  
Emerald Arborvitae  
Globosa-Globe Arborvitae  
Little Giant-Dwarf Arborvitae  
Nigra-Dark American Arborvitae  
Pyramidalis-Pyramid Arborvitae  
Rheingold Arborvitae  
Techry Arborvitae  
Aureus Nana-Dwarf Golden Arborvitae  
Minima Glauca-Dwarf Arborvitae  
Christmas Palm  
Virburnum  
Weigela  
Xylosma  
Yucca

Woolly Yarrow  
Lily-of-the-Nile  
Beechgrass  
Cape Weed  
Thrift  
Asparagus Fern  
Bellflower  
Variegated Carex

Largeleaf Iceplant  
Dwarf Plumbago  
Rockrose  
Coreopsis  
Crown Vetch  
Pampas Grass  
Coloneaster  
White Iceplant

Descampsia  
Trailing Rosea Iceplant  
Iceplant  
Blue Fescue  
Strawberry Beach  
Gazania  
Golden Hakonechloa  
Algerian Ivy

## GROUND COVERS

English Ivy  
Daylily  
Rupturewort  
Albo-Marginala Hosta  
Aaronsbeard  
St. Johnswort  
Angelwing Jasmine  
Trailing Iceplant

White Lily Turf  
Big Blue Lily Turf  
Lilac Beauty Lily Turf  
Magestic Lily Turf  
Silvery Sunproof Lily Turf  
Variegated Lirope Lily Turf  
Green/Creeping Lily Turf  
Eulalia Grass

Creeping Wirevine  
Myoporum  
Dwarf Mondo Grass  
Mondo Grass  
Trailing African Daisy  
Japanese Spurge  
Fountain Grass

Ribbon Grass  
Stonerop (Sedum)  
Germander  
Asaian Jasmine  
Verbena  
Speedwell  
Periwinkle

Yarrow  
Floss Flower  
Alyssum  
Snapdragon  
African Daisy  
Dusty Miller  
Aster (perennial)  
Calendula

Cornflower  
Velvet Centaurea  
Sweet Sultan  
Chrysanthemum  
Morningglory  
Coreopsis  
Aster  
Dahlia

Dianthus  
Marigold, Cape  
Snow on the Mountain  
Gaillardia  
Geum  
Gladiolus  
Baby's Breath

## ESTABLISHED FLOWERS

Sunflower  
Balsam  
Impatiens  
Ixora  
Sweet Pea  
Statice  
Lobelia

Sweet Alyssum  
Lupine  
Stock  
Four O'Clock  
Forget-Me-Not  
Nicotiana  
Poppy, California

Petunia  
Phlox  
Portulaca  
Rose  
Blackeyed Susan  
Golden Glow  
Salvia

Pincushion Flower  
Lamb's Ears  
Stoke's Aster  
Marigold  
Nasturtium  
Vinca  
Zinnia

## ORNAMENTAL BULBS

This product may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth and tulip. Apply to the soil surface 2 to 4 weeks after planting, but prior to the emergence of annual weeds. This product may also be applied following bulb emergence. For fall planted bulbs, apply this product again in later winter or early spring to weed-free soil surfaces.

## NON-BEARING FRUIT AND NUT TREES AND NON-BEARING VINEYARDS IN ORNAMENTAL LANDSCAPING ONLY\*

Almond  
Apple  
Apricot  
Avocado  
Blackberry  
Blueberry

Boysenberry  
Cherry, sour  
Cherry, sweet  
Currant  
Dewberry  
Elderberry

Fig  
Filbert  
Gooseberry  
Grape, American  
Grape, European  
Grapefruit

Kiwi  
Lemon  
Loganberry  
Macadamia Nut  
Nectarine  
Olive

Orange  
Peach  
Pear  
Pecan  
Pistachio  
Plum

Pomegranate  
Prune  
Rasperry  
Walnut, black  
Walnut, English

\*Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants which will not bear fruit for at least one year after treatment.

## NON-CROPLAND AREAS

This product is recommended as a preemergence herbicide for control of certain annual grasses and broadleaf weeds on industrial sites, utility substations, highway guard rails, sign posts and delineators. Apply anytime prior to germination of target weeds. Areas to be treated should be free of established weeds or existing weeds should be controlled with postemergence herbicides. Refer to the "General Information" section prior to using this product on non-cropland.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**STORAGE:** Keep in original container in a cool, dry area, away from extreme heat and direct sunlight. Do not store near food, feed, seeds or other pesticides.

Store in original container only. In case of leak or spill, contain material and dispose of as waste.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## WARRANTY DISCLAIMER

The Manufacturer warrants that this product conforms to the chemical description of the label and is reasonably fit for the purpose stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. THE MANUFACTURER MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESSED OR IMPLIED WARRANTY.

## INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of the Manufacturer or the Seller. All such risks shall be assumed by Buyer.

## WARRANTY

The Manufacturer warrants that this product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions not reasonably foreseeable to Manufacturer, and Buyer assumes the risk of any such use.

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SPECIMEN LABEL