FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED 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

PRODUCT NAME: SIGNATURE® CRABGRASS PREVENTER WITH BARRICADE® .375% PLUS 16-0-16 WITH 50% XCU™
CHEMICAL NAME: Herbicide (Prodiamine: 5-dipropylamino-α,α,α-trifluoro-4,6-dinitro-o-toluidine) on N-K Fertilizer
CHEMICAL FAMILY: Dinitroaniline Herbicide
EPA REG. NO.: 34704-776
MSDS Number: 000776-10-LPI **MSDS Revisions:** Sections 1, 2 and 3 **Date of Issue:** 02/01/10 **Supersedes:** 03/05/08

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or repeated skin contact while handling the material may cause allergic reactions in some individuals. The fertilizer in this product is derived from Urea, Polymer Coated Sulfur Coated Urea, and Muriate of Potash. Nausea and vomiting could be expected upon large dose ingestion. The acute ingestive effects are described as nausea, chills, and diarrhea. Eye or skin contact with these products could cause irritation (particularly in sensitive persons), and respiratory irritation could be expected from the unprotected inhalation of fertilizer dusts. Product users should avoid prolonged or repeated skin contact by wearing impervious gloves, long sleeve shirt, long pants, socks and rubber boots. Goggles for eye protection are recommended. Wash thoroughly after handling and using this product.

This product is an orangish-yellow to brown-colored granule with slight aromatic odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
Prodiamine	0.375	29091-21-2	not listed
Total Nitrogen (N)	16.00	Mixture	not listed
Soluble Potash (K_2O)	16.00	Mixture	not listed
Fertilizer salts and inert ingredients	67.625		

4. FIRST AID MEASURES

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 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 15-20 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.

If swallowed: Call 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): Not applicable
FLAMMABLE LIMITS (LFL & UFL): Not applicable
EXTINGUISHING MEDIA: Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: May include but are not limited to oxides of carbon, hydrogen chloride, hydrogen fluoride, oxides of nitrogen, ammonia, oxides of phosphorus, oxides of sulfur, hydrogen sulfide.
SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool containers exposed to fire. Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Dusts or vapors can travel to a sources of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Avoid breathing dusts. Contain and sweep up material of spill for disposal or use per label instructions. Wash cleanup equipment to prevent contamination elsewhere. Excess quantities above normal application rates could result in damage to plants subject to spill Water-in remainder, disc under, cover with layer of soil, or leave exposed to sunlight, as deemed appropriate to the situation.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Wash hands after handling, and 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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Keep away from children.

STORAGE: Store in original container away from other fertilizer, feed, or foodstuffs and separated from other pesticides. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Not normally required.

RESPIRATORY PROTECTION: Not normally required, if vapors or dusts exceed acceptable levels, wear a MSHA/NIOSH approved pesticide respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	**ACGIH TLV-TWA**
Nuisance Particulates	15 mg/m^3 (total dust)	none established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Orangish-yellow to brown-colored granules with slight aromatic odor

SOLUBILITY: Insoluble

SPECIFIC GRAVITY (Water = 1): 1.009 – 1.089 g/ml

BULK DENSITY: 63 - 68 lbs/ft^3

pH: Not applicable

VAPOR PRESSURE: Not applicable

BOILING POINT: Not applicable

PERCENT VOLATILE (by volume): Not applicable

EVAPORATION RATE: Not applicable

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

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat, open flame, other ignition sources.

INCOMPATIBILITY: Caustics, acids, oxidizers, fluorine, metals.

HAZARDOUS DECOMPOSITION PRODUCTS: May include but are not limited to oxides of carbon, hydrogen chloride, hydrogen fluoride, oxides of nitrogen, ammonia, oxides of sulfur, and hydrogen sulfide from burning.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD_{50} (rat): >5000 mg/kg

Acute Dermal LD_{50} (rabbit): >2000 mg/kg

Eye Irritation (rabbit): Moderate irritant

Skin Irritation (rabbit): Not an irritant

Inhalation LC_{50} (rat): Not established

Skin Sensitization (guinea pig): Not a sensitizer.

Carcinogenic Potential: None listed in OSHA, NTP, IARC or ACGIH

12. ECOLOGICAL INFORMATION

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of solubility, it may be toxic to fish. 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 areas may be hazardous to aquatic organisms in adjacent sites.
Do not contaminate water when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Paper or plastic containers: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. Wastes resulting from the use of this product may be disposed of no site or at an approved waste disposal facility.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY USDOT.
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	H	PPE
		4	Severe		

SARA Hazard Notification/Reporting
SARA Title III Hazard Category:

Immediate	Y	Fire	N	Sudden Release of Pressure	N
Delayed	Y	Reactive	N		

Reportable Quantity (RQ) under U.S. CERCLA: Not listed
SARA, Title III, Section 313: Not listed
RCRA Waste Code: Not listed
CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16. OTHER INFORMATION

MSDS STATUS: Sections 1, 2 and 3 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

®Signature is a registered trademark of Loveland Products, Inc.

XCU is a trademark of Agrium Advanced Technologies

®Barricade is a registered trademark of Syngenta Professional Products

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.