

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: 1-800-301-7976
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: STRATEGY
CHEMICAL NAME: Ethalfuralin: N-ethyl-N- (2-methyl-2-propenyl)-2,6-dinitro-4- (trifluoromethyl benzeneamine); Clomazone: 2-(2-chlorophenyl) methyl-4, 4-dimethyl-3-isoxazolidinone
CHEMICAL FAMILY: Dinitroaniline-Isoxazolidinone Herbicide
EPA REG. NO.: 34704-836
MSDS Number: 000836-04-LPI **MSDS Revisions:** See section 16 **Date Of Issue:** 07/12/04 **Supersedes:** 12/12/03

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear long-sleeved shirt and long pants, socks and shoes.

This product is a bright yellow-colored liquid with acrylic paint-like odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Ethalfuralin	18.20	55283-68-6	none established
Clomazone	5.60	81777-89-1	none established
Inert Ingredients (contains Naphthalene)	76.20	91-20-3	5 mg/m ³

This product is hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

4. FIRST AID MEASURES

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 a poison control center or doctor. Never give anything by mouth to an unconscious person.

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 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 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): Not determined
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: Ammonia, oxides of nitrogen, chlorine-containing compounds and other unknown hazardous materials may be formed in a fire situation. Incomplete combustion may lead to formation of oxides of carbon.
SPECIAL FIRE FIGHTING PROCEDURES: Formulation emits toxic fumes as it burns. Wear self-contained breathing apparatus and full protective gear. Fight fire from upwind and keep all non-essential personnel out of area of intense smoke.
UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire, contain run-off, using dikes to prevent contamination of water supplies.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Avoid breathing vapors. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste or transfer to suitable containers for possible land application according to label use. Check local, state and federal regulations for proper disposal.

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

7. HANDLING AND STORAGE

HANDLING: 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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Protect from freezing. Store above 40°F/4.5°C. If frozen, poor weed control may result. Do not use or store near heat or open flame. Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required, if vapors or dusts exceed acceptable levels, wear a 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
Naphthalene	50 mg/m ³	52 mg/m ³

EPA HANDLER REQUIREMENTS**Worker Protection Standard – 40 CFR 170**

Personal Protective Equipment: Applicators and other handlers must wear: Coveralls, long-sleeved shirt and pants, chemical-resistant gloves, such as barrier laminate or Viton®, shoes plus socks, protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Bright yellow-colored liquid with acrylic paint-like odor	SOLUBILITY: Soluble
SPECIFIC GRAVITY (Water = 1): 1.049 g/ml	pH: 7.68 (2% solution)
VAPOR PRESSURE: Not established	BULK DENSITY: 8.75 lbs/gal
PERCENT VOLATILE (by volume): Not established	BOILING POINT: > 215°F/101.7°C
Note: These physical data are typical values based on material tested but may vary from sample to sample.	EVAPORATION RATE: Not established
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.	

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Strong bases and oxidizers.

CONDITIONS TO AVOID: Excessive heat or cold.

HAZARDOUS DECOMPOSITION PRODUCTS: Ammonia, oxides of nitrogen, chlorine-containing compounds and other unknown hazardous materials may be formed in a fire situation. Incomplete combustion may lead to formation of oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): >5050 mg/kg	Acute Dermal LD₅₀ (rabbit): >5050 mg/kg
Eye Irritation (rabbit): Causes moderate eye irritation	Skin Irritation (rabbit): Causes slight irritation
Acute Inhalation LC₅₀ (rat): >2.38 mg/L.	Skin Sensitization (guinea pig): Not established
Carcinogenic Potential: Naphthalene has been determined to be a possible human carcinogen (Group 2B) by IARC; not classifiable as a human carcinogen by ACGIH; and a possible human carcinogen with further research needed by US EPA.	

12. ECOLOGICAL INFORMATION

This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. Runoff or erosion from treated areas may be hazardous to fish in neighboring areas. Due to risk to plants and animals in aquatic habitats that receive runoff containing this product, use of controls such as a vegetative buffer strip to filter such water flow from recently treated fields is recommended. Do not apply when weather conditions favor drift from target area.

13. DISPOSAL CONSIDERATIONS

Plastic Jugs: Triple rinse (or equivalent), then offer for recycling at an ACRC site or by reconditioning, or puncture and dispose of in a sanitary landfill or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. **Metal Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable federal, state or local procedures. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY USDOT.

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2:CLASS: 60)

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:		NFPA		HMIS
1	Health	0	Least	1 Health
1	Flammability	1	Slight	1 Flammability
1	Instability	2	Moderate	1 Reactivity
		3	High	H 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: Naphthalene (CAS: 91-20-3) 100 pounds

SARA, Title III, Section 313: Naphthalene (CAS: 91-20-3) 3.9% maximum

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: Format modified to address changes in ANSI Standard Z400.1-2004

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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