

MATERIAL SAFETY DATA SHEET

INTENSITY®

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: INTENSITY® POST-EMERGENCE GRASS HERBICIDE

CHEMICAL NAME: Clethodim; (E)-2-[1-[(3-chloro-2-propenyl)oxy]limino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

CHEMICAL FAMILY: Cyclohexanedione Herbicide

EPA REG. NO.: 34704-864

MSDS Number: 000864-09b-LPI

MSDS Revisions: Sections 1 and 4

Date of Issue: 06/30/09

Supersedes: 01/07/09

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – WARNING – AVISO – Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail.) Causes substantial but temporary eye irritation. Avoid contact with skin. Do not get in eyes, on skin or on clothing. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This product is amber liquid with mild aromatic odor. Primary routes of entry are Inhalation, eye contact and skin contact.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Clethodim	26.40	99129-21-2	not listed
Other Ingredients*	73.60		
*contains xylene range aromatic solvent+		64742-94-5	
+contains Naphthalene		91-20-3	10 ppm

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

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 further treatment advice.
If swallowed:	Immediately call poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. 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 mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
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.	
NOTE TO PHYSICIAN:	Ingestion of this product or subsequent vomiting can result in aspiration of the light hydrocarbon liquid, which can cause pneumonitis. This product contains petroleum distillate.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method):	144-150°F / 62-65.6°C (Setaflash Closed Cup)
FLAMMABLE LIMITS (LFL & UFL):	Not established
EXTINGUISHING MEDIA:	Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, and water-fog.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide. Water vapor will emit oxides of nitrogen and sulfur. Incomplete combustion may produce carbon monoxide.
SPECIAL FIRE FIGHTING PROCEDURES:	Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Liquid evaporates and forms vapor (fumes) that can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85°F / 29°C. If water is used to fight fire or cool containers, dike to prevent runoff and contamination of municipal sewers and waterways.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Stop leak if possible without risk. Dike and contain spilled material. Absorb spill with inert material, such as pet litter, dry sand, or earth, then place in a chemical waste container. Wash area with soap and water. Absorb and pick up wash liquid and place in a chemical waste container. When exposed to water this material will form an emulsion.

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: Do not use or store near heat or open flame. Store in original containers. Store in a cool, dry place. Do not put concentrate or dilute product into food or drink containers. Do not store diluted spray. Do not contaminate water, food, or feed by storage or disposal.

Personal Protective Equipment (PPE): Applicators and other handlers must wear: long sleeved shirt and long pants, chemical-resistant gloves such as Barrier Laminate or Viton® ≥ 14 mils, shoes plus socks, and 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 cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 mists exceed acceptable levels, wear a MSHA/NIOSH approved respirator with NIOSH approved ammonia cartridges, if necessary.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing as dictated by workplace conditions: long-sleeved shirts and pants, shoes plus socks. Wear chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Naphthalene	10 ppm/50 mg/m ³	10 ppm/52 mg/m ³ (Skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Amber liquid with mild aromatic odor	SOLUBILITY: Emulsifies
SPECIFIC GRAVITY (Water = 1): 0.95 g/ml	pH: 3.6 (5% emulsion)
VAPOR PRESSURE: Not established	
PERCENT VOLATILE (by volume): 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: Unstable at extreme pH's, temperature and upon exposure to UV light. **CONDITIONS TO AVOID:** Excessive heat and sources of ignition

INCOMPATIBILITY: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Will emit oxides of carbon, nitrogen, and sulfur in a fire situation.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): Not established	Acute Dermal LD₅₀ (rabbit): Not established
Eye Irritation (rabbit): May cause prolonged or significant irritation	Skin Irritation (rabbit): May cause minimal irritation
Inhalation LC₅₀ (rat): Not established	Skin Sensitization (guinea pig): Not a sensitizer.
Carcinogenic Potential: None listed in OSHA, NTP, or IARC. ACGIH lists Naphthalene as TLV-A4: Not Classifiable as a Human Carcinogen.	

12. ECOLOGICAL INFORMATION

This product is of low toxicity to avian species, slightly toxic to freshwater fish and practically non-toxic to daphnia. 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 apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment wash water or rinsate.

13. DISPOSAL CONSIDERATIONS

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:** Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. For packages greater than 56 gallons: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Do not contaminate water, food, or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY USDOT WHEN SHIPPED IN BULK CONTAINERS LESS THAN 119 GALLONS

DOT Shipping Description: COMBUSTIBLE LIQUID, N.O.S. (NAPHTHALENE), NA1993, III, RQ IN BULK CONTAINERS MORE THAN 119 GALLONS

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

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:

NFPA

2 Health	0 Least
2 Flammability	1 Slight
1 Instability	2 Moderate
	3 High
	4 Severe

HMIS

2 Health
2 Flammability
1 Reactivity
H PPE

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>Y</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 lbs.

SARA, Title III, Section 313: Naphthalene (CAS: 91-20-3) 5-7%; 1,2,4 Trimethylbenzene* (CAS: 95-63-6) 2-3%

RCRA Waste Code: Naphthalene – U165

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 and 4 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

@Intensity is a registered trademark of Loveland Products, Inc.

@Viton is a registered trademark of DuPont Performance Elastomers L.L.C.

*1,2,4 Trimethylbenzene is a constituent of Xylene Range Aromatic Solvent

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