

MATERIAL SAFETY DATA SHEET

PERMETHRIN

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: PERMETHRIN
CHEMICAL NAME: Permethrin: (3-Phenoxyphenyl) methyl (\pm) cis-trans-3- (2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate*
CHEMICAL FAMILY: Pyrethroid Insecticide
EPA REG. NO.: 34704-873
MSDS Number: 000873-09-LPI **MSDS Revisions:** Sections 1, 4, 8, 13 **Date of Issue:** 03/24/09 **Supersedes:** 10/15/08

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION - 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.) Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. This product is amber liquid with an aromatic solvent odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Permethrin	38.40	52645-53-1	not listed
Inert ingredients, including: Aromatic Hydrocarbons	61.60	64742-95-6	not listed

4. FIRST AID MEASURES

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.

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 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 swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. 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.

NOTE TO PHYSICIAN: Vomiting should be supervised by a physician or the professional staff because of the possible pulmonary damages by aspiration of the solvent.

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): 108°F / 42.2°C (CC)
FLAMMABLE LIMITS (LFL & UFL): None established
EXTINGUISHING MEDIA: Foam, CO₂, or dry chemical. Soft stream water fog only if necessary.
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide and/or carbon dioxide. Chlorine and hydrogen chloride may be formed.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel downwind and out of area.
UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire and cool the containers, contain run-off by diking to prevent contamination of water supplies. Containers in fire may burst or explode from excessive heat. Vapors may travel a considerable distance to source of ignition and flash back along vapor trail.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Wash the spill with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container and handle in an approved manner. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue. For large spills: contain liquid by diking the area, keep product out of water supplies. Large spills that soak into ground should be dug up to a depth of 1 to 2 inches, placed in drums and disposed of in accordance with instructions provide under DISPOSAL, section 13 of this MSDS. Any recovered spilled liquid should be similarly collected and disposed of.

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 store below 10°F / -12.2°C. Do not use or store near heat, open flame, or hot surfaces. Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

RESPIRATORY PROTECTION: Not normally required; if vapors or mists become excessive, wear a NIOSH approved pesticide respirator with cartridges for pesticide vapors.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

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

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Xylene (mixed isomers)	435 mg/m ³	434 mg/m ³
Ethyl benzene	435 mg/m ³	434 mg/m ³
Trimethylbenzene	not listed	123 mg/m ³
Cumene	245 mg/m ³ (Skin)	246 mg/m ³

Personal Protective Equipment (PPE): All mixers, loaders, applicators and other handlers must wear: long sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots, and flaggers. Chemical-resistant apron for mixers/loaders, persons cleaning equipment, and persons exposed to the concentrate. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched (except as required by directions for use) or heavily contaminated with this product's concentrate. Do not reuse them.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Amber liquid with an aromatic solvent odor. **SOLUBILITY:** Emulsifiable

SPECIFIC GRAVITY (Water = 1): 1.002 g/ml **BULK DENSITY:** 8.36 lbs/gal.

VAPOR PRESSURE: Not applicable **BOILING POINT:** Not established

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 and fire.

INCOMPATIBILITY: Not established.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and/or carbon dioxide, chlorine and hydrogen chloride may be formed in a fire situation.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 1,030 mg/kg **Acute Dermal LD₅₀ (rabbit):** >2000 mg/kg

Eye Irritation (rabbit): Moderate eye irritant **Skin Irritation (rabbit):** Not established

Inhalation LC₅₀ (rat): 25.7 mg/L (4 hr). **Skin Sensitization (guinea pig):** Not established.

Carcinogenic Potential: Ethyl benzene is listed as a Class 2B carcinogen (limited evidence for carcinogenicity in humans) by the International Agency for Research on Cancer (IARC). Ethyl benzene was found to be possibly carcinogenic to humans by NTP. Not listed by OSHA or ACGIH.

12. ECOLOGICAL INFORMATION

This pesticide is extremely toxic to fish and aquatic invertebrates. For terrestrial uses, 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 when weather conditions favor drift from target areas. Do not contaminate water by cleaning equipment or disposal of wastes. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance. **CONTAINER DISPOSAL: Nonrefillable 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. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **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.

14. TRANSPORT INFORMATION

DOT Shipping Description: LESS THAN 119 GALLONS NOT REGULATED BY USDOT FOR SURFACE (GROUND) TRANSPORTATION.
U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120; CLASS: 60)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes. Packaging and classification for these modes of transportation are more stringent.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:		NFPA		HMIS		
	2	Health	0	Least	2	Health
	2	Flammability	1	Slight	2	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>Y</u>	Sudden Release of Pressure
	Delayed	<u>Y</u>	Reactive	<u>N</u>	<u>N</u>

Reportable Quantity (RQ) under U.S. CERCLA: Xylene (mixed isomers) (CAS: 1330-20-7) 100 pounds; Cumene (CAS: 98-82-8) 5000 pounds; Ethylbenzene (CAS: 100-41-1) 1000 pounds

SARA, Title III, Section 313: Permethrin (CAS: 52645-53-1) 38.40%; 1,2-4 Trimethylbenzene (CAS: 95-63-6) <17.0%; Xylene (mixed isomers) (CAS: 1330-20-7) <2.0%; Cumene (CAS: 98-82-8) <1.0%; Ethylbenzene (CAS: 100-41-1) <1.0%

RCRA Waste Code: Not listed.

CA Proposition 65: Not listed.

16. OTHER INFORMATION

MSDS STATUS: Sections 1, 4, 8, and 13 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

This product is a Restricted Use Pesticide (Toxic to Fish and Aquatic Organisms)

U.S. Patent No. 4,024,163

*cis/trans ratio: Max. 55% (±) cis and min. 45% trans

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