

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 – GROUP 3 INSECTICIDE
EPA REG. NO.: 34704-873
MSDS Number: 000873-14-LPI **MSDS Revisions:** Sections 1, 2, 3, 4, 8, 13, 15 **Date of Issue:** 01/06/14 **Supersedes:** 03/24/09

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.) Harmful if swallowed, absorbed through skin or inhaled. Causes skin irritation. Causes moderate eye irritation. Do not get on skin or clothing. Avoid breathing vapor or spray mist. Avoid contact with eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

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
Other ingredients, including:	61.60		
Aromatic Hydrocarbons		64742-94-5	not listed
Naphthalene		91-20-3	52 mg/m ³

4. FIRST AID MEASURES

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.

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 by 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.

NOTE TO PHYSICIAN: Contains petroleum distillates. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

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°C. Do not use or store near heat or open flame. 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
Naphthalene	50 mg/m ³	52 mg/m ³
Trimethylbenzene	not listed	123 mg/m ³

Personal Protective Equipment (PPE): Applicators and other handlers must wear: Coveralls over long sleeved shirt and long pants, chemical-resistant gloves, chemical-resistant footwear plus socks, and protective eyewear. When mixing and loading, wear a chemical-resistant apron. For overhead exposure, wear chemical-resistant headgear. When cleaning equipment, wear a chemical-resistant apron. 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.

SPECIFIC GRAVITY (Water = 1): 1.013 g/ml

VAPOR PRESSURE: Not applicable

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.

BULK DENSITY: 8.45 lbs/gal. / 1.01 kg/L

BOILING POINT: Not established

EVAPORATION RATE: Not applicable

SOLUBILITY: Emulsifiable

pH: 4.63 (1% solution)

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

Eye Irritation (rabbit): Moderate eye irritant

Inhalation LC₅₀ (rat): 25.7 mg/L (4 hr).

Carcinogenic Potential: Permethrin is listed as IARC-3: Unclassifiable as to Carcinogenicity in Humans. Naphthalene is listed as IARC-2B (limited evidence for carcinogenicity in humans), NTP-R (Reasonably anticipated to be a Human Carcinogen), and TLV-A4 (Not Classifiable as a Human Carcinogen by ACGIH. Not listed by OSHA or ACGIH).

Acute Dermal LD₅₀ (rabbit): >2000 mg/kg

Skin Irritation (rabbit): Not established

Skin Sensitization (guinea pig): Not established.

12. ECOLOGICAL INFORMATION

This pesticide is extremely toxic to aquatic organisms, including fish and 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters. Under some conditions, it may also have a potential for transport into surface water in runoff (primarily adsorbed to suspended soil particles) for several months or more after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, and areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters. This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water board or Regional Office of the EPA.

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. 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 1/4 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 1/4 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. 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.

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 Flammability	1 Slight
		1 Instability	2 Moderate
			3 High
			4 Severe
			2 Health
			2 Flammability
			1 Reactivity
			C PPE

SARA Hazard Notification/Reporting

SARA Title III Hazard Category: Immediate Y Fire Y Sudden Release of Pressure N
Delayed Y Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Naphthalene (CAS: 91-20-3) 100 pounds

SARA, Title III, Section 313: Permethrin (CAS: 52645-53-1) 38.40%; Naphthalene (CAS: 91-20-3) <5.0%; 1,2-4 Trimethylbenzene (CAS: 95-63-6): <1.0%

RCRA Waste Code: U165 (Naphthalene).

CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

WARNING – This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.

16. OTHER INFORMATION

MSDS STATUS: Sections 1, 2, 3, 4, 8, 13, and 15 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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% (\pm) cis and min. 45% trans*

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