

# MATERIAL SAFETY DATA SHEET

# LOW VOL 4 ESTER WEED KILLER

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:** LOW VOL 4 ESTER WEED KILLER  
**CHEMICAL NAME:** 2,4-D: Isooctyl (2-ethylhexyl) ester of 2,4-Dichlorophenoxyacetic acid  
**CHEMICAL FAMILY:** Phenoxy Herbicide  
**EPA REG. NO.:** 34704-124  
**MSDS Number:** 000124-11-LPI

**MSDS Revisions:** Section 14

**Date of Issue:** 03/16/11

**Supersedes:** 02/17/09

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – CAUTION –** Harmful if swallowed. Harmful absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. This product is amber liquid with alcohol 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>
Isooctyl ester of 2,4-D	65.50	1928-43-4	not established
Other Ingredients	34.50	Mixture	

## 4. FIRST AID MEASURES

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have a 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.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin 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 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.

**NOTE TO PHYSICIAN:** Aspiration pneumonia hazard, contains petroleum distillate.  
**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):** 149°F/65.0°C (PMCC)  
**FLAMMABLE LIMITS (LFL & UFL):** None established  
**EXTINGUISHING MEDIA:** Considered combustible, 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.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus with full protective clothing. 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 and/or cool containers, contain runoff, using dikes to prevent contamination of water supplies.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Contain spill and absorb with suitable absorbent, sweep up material and transfer to containers for possible land application according to label use or for proper disposal. Wash spill area with water containing strong detergent, absorb and sweep up as above. 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:** Combustible. Do not use or store near heat or open flame. 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 0°F / -17.8°C. If frozen, warm to 45°F / 7.2°C and re-dissolve before using by rolling or shaking the container. Store in original container only. Keep container tightly closed when not in use. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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

**RESPIRATORY PROTECTION:** Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved respirator with an organic vapor cartridge and dust/mist prefilter.

**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.

2,4-D LV	<b>OSHA PEL 8 hr TWA</b> not established	<b>ACGIH TLV-TWA</b> not established
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**Personal Protective Equipment: All mixers, loaders, applicators, flaggers and other handlers must wear:** long sleeved shirt and long pants, shoes and socks, chemical-resistant gloves (except for pilots), chemical-resistant apron for mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate. 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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<p><b>APPEARANCE AND ODOR:</b> Amber liquid with alcohol-like odor.</p> <p><b>SPECIFIC GRAVITY (Water = 1):</b> 1.03-1.04 g/ml</p> <p><b>VAPOR PRESSURE:</b> 0.456 mm/Hg @ 20°C</p> <p><b>PERCENT VOLATILE (by volume):</b> Not established</p> <p>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.</p>	<p><b>BULK DENSITY:</b> 8.6-8.7 lbs/gal.</p> <p><b>BOILING POINT:</b> Not established</p> <p><b>EVAPORATION RATE:</b> Not established</p>	<p><b>SOLUBILITY:</b> Emulsifies</p> <p><b>pH:</b> Not established</p>
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**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**INCOMPATIBILITY:** Strong bases and oxidizers.

**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.

**CONDITIONS TO AVOID:** Extreme heat or extreme cold.

**11. TOXICOLOGICAL INFORMATION**

<p><b>Acute Oral LD<sub>50</sub> (rat):</b> 1670 mg/kg</p> <p><b>Eye Irritation (rabbit):</b> Moderate irritation</p> <p><b>Inhalation LC<sub>50</sub> (rat):</b> &gt;5.28 mg/L.</p> <p><b>Carcinogenic Potential:</b> None listed in OSHA, NTP or ACGIH; IARC Group 2B (limited evidence for carcinogenicity in humans).</p> <p><b>Target Organs:</b> 2,4-D: Skin, CNS, liver, kidneys</p>	<p><b>Acute Dermal LD<sub>50</sub> (rabbit):</b> &gt; 2000 mg/kg</p> <p><b>Skin Irritation (rabbit):</b> Non-irritating</p> <p><b>Ingestion:</b> May cause stomach distress, nausea or vomiting.</p>
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**12. ECOLOGICAL INFORMATION**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. 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 contaminate water when disposing of equipment wash waters.

Summary of Effects

2,4-D ethylhexyl ester is slightly toxic to aquatic organisms.

**Eco-Acute Toxicity**

LC<sub>50</sub>/EC<sub>50</sub>

**Most sensitive species** 10-100 mg/L

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate, is a violation of Federal law and may contaminate groundwater. 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 at the nearest EPA Regional Office for guidance. **CONTAINER HANDLING: 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.acrcycle.org](http://www.acrcycle.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 or 50 lbs:) 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 square bottom caged totes greater than 55 gals.): Triple rinse or 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. Fill the container about ¼ full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this 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:** For containers greater than 26 gallons: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, UN3082, III (2,4-D), ERG GUIDE 171

**DOT LABEL:** CLASS 9 FOR LESS THAN 119 GALLONS; FOR GREATER THAN 119 GALLONS, CLASS 9 PLACARD WITH UN/ID NUMBER 3082

**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		HMIS	
		2	Health	0	Least
		2	Flammability	1	Slight
		0	Instability	2	Moderate
				3	High
				4	Severe
				2	Health
				2	Flammability
				0	Reactivity
				H	PPE

**SARA Hazard Notification/Reporting**

<b>SARA Title III Hazard Category:</b>	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:** 2,4-D Acid (CAS: 94-75-7) 100 pounds.

**SARA, Title III, Section 313:** 2,4-D 2-ethylhexyl ester (CAS: 1928-43-4) 65.5%; 2,4-D Acid (CAS: 94-75-7) 43.4% acid equivalent

**RCRA Waste Code:** U240; D016

**CA Proposition 65:** Not listed.

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**16. OTHER INFORMATION**

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**MSDS STATUS:** Section 14 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental/ Regulatory Services

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