

**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:** CADENCE® HERBICIDE  
**CHEMICAL NAME:** Acetochlor: 2-chloro-2'-methyl-6'-ethyl-N-ethoxymethylacetanilide  
**CHEMICAL FAMILY:** Chloroacetamide Herbicide  
**EPA REG. NO.:** 34704-926  
**MSDS Number:** 000926-12-LPI

**MSDS Revisions:** Sections 1, 4, and 15    **Date of Issue:** 12/10/12    **Supersedes:** 07/29/08

**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 skin and eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Do not get on skin, in eyes, or on clothing. Avoid breathing spray mist. Vapor may cause eye irritation experienced as mild discomfort and redness. Prolonged skin contact may cause moderate skin irritation with local redness.

This product is dark amber to purple liquid with aromatic odor. This is a Hazardous Chemical.

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Acetochlor	70.87	34256-82-1	0.1 mg/m <sup>3</sup>
Other Ingredients, including	29.13		
Dichlormid		37764-25-3	
Xylene Range Aromatic Solvent		64742-95-6	

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

**4. FIRST AID MEASURES**

**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 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. 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 further treatment advice.

**NOTE TO PHYSICIAN:** If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. There is no specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. This product contains petroleum distillate – vomiting may cause aspiration pneumonia.

**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):** 162°F / 74°C (TCC)

**FLAMMABLE LIMITS (LFL & UFL):** LFL: 1%; UFL: 6% (xylene range aromatic solvent)

**EXTINGUISHING MEDIA:** Water fog, alcohol foam, carbon dioxide, dry chemical, or halogenated agents.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen dioxide, and sulfur dioxide.

**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.

**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. If heated above the flash point, heavy vapors can flow along surfaces to distant ignition sources and flash back.

**6. ACCIDENTAL RELEASE MEASURES**

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

For small spills, absorb with an absorbent material such as sand, vermiculite or other absorbent material. Place contaminated material in appropriate containers for proper disposal. For large spills: dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, scrub the area with detergent and water and flush contaminated area thoroughly with water.

**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:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. Prevent cross-contamination with other pesticides and fertilizers. Do not contaminate water, food, or feed by storage or disposal.

**Personal Protective Equipment (PPE): Applicators and other handlers must wear:** coveralls over short sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing, or loading. 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 instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Refer to product label for additional information.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 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 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 with socks. Wear rubber chemical-resistant gloves.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Dark amber to purple liquid with aromatic odor

**SPECIFIC GRAVITY (Water = 1):** 1.1086 g/ml

**VAPOR PRESSURE:** Not established

**PERCENT VOLATILE (by volume):** Not established

**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.

**SOLUBILITY:** Soluble  
**pH:** 6.0

**BULK DENSITY:** 9.25 lbs/gal.

**BOILING POINT:** Not established

**EVAPORATION RATE:** Not established

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** None known

**INCOMPATIBILITY:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen dioxide, and sulfur dioxide may form in a fire situation.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (male rat):** 1942 mg/kg

**Eye Irritation (rabbit):** Slight irritant

**Inhalation LC<sub>50</sub> (rat):** >2.1 mg/L (4 hrs.)

**Acute Dermal LD<sub>50</sub> (rabbit):** >2,240 mg/kg

**Skin Irritation (rabbit):** Slight irritant

**Skin Sensitization (guinea pig):** Acetochlor and Dichlormid have caused sensitization.

**Carcinogenic Potential:** Acetochlor has caused cancer in laboratory animals. Nothing listed in ACGIH, IARC, NTP, or OSHA.

**12. ECOLOGICAL INFORMATION**

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow may result in groundwater contamination. Do not contaminate water when disposing of equipment wash waters. This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. Use of this product in areas where soils are permeable, particularly where groundwater is shallow, may result in groundwater contamination. Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

**13. DISPOSAL CONSIDERATIONS**

**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](http://www.acrecycle.org). 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. 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. Pesticide wastes are toxic. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, 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:** NON-BULK: NOT REGULATED  
**BULK:** RQ COMBUSTIBLE LIQUID, N.O.S., NA1993, III (NAPHTHA SOLVENT) ERG GUIDE 128(27)  
**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**

<b>NFPA &amp; HMIS Hazard Ratings:</b>	NFPA		HMIS
	2 Health	0 Least	2 Health
	2 Flammability	1 Slight	2 Flammability
	0 Instability	2 Moderate	0 Reactivity
		3 High	G PPE
		4 Severe	

**SARA Hazard Notification/Reporting**

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

**Reportable Quantity (RQ) under U.S. CERCLA:** Xylene (mixed isomers) (CAS: 1330-20-7); Cumene (CAS: 98-82-8)

**SARA, Title III, Section 313:** 1,2,4-Trimethylbenzene (CAS: 95-63-6) 1.5% maximum; Xylene (mixed isomers) (CAS: 1330-20-7) <1.5% maximum; Cumene (CAS: 98-82-8) <1.0% 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.

**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, 4, and 15 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

*®Cadence is a registered trademark of Dow AgroSciences LLC*

**Disclaimer and Limitation of Liability:** This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.