

**IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273 or CHEMTREC 1-800-424-9300**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**FORMULATED FOR:**

LOVELAND PRODUCTS CANADA, INC.  
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

**24-Hour Emergency Phone:** 1-800-561-8273  
**Additional Emergency Phone (Canutec):** 1-613-996-6666 (Collect)

**PRODUCT NAME:** DDVP; DICHLORVOS; (2,2-Dichlorovinyl)dimethyl phosphate)  
**PRODUCT USE:** Insecticide – Group 1B  
**PCP REG. NO.:** 23915  
**MSDS Number:** 23915-12-LPI

**MSDS Revisions:** Section 1

**Date of Issue:** 09/12/12

**Supersedes:** 03/10/11

**2. HAZARDS IDENTIFICATION SUMMARY**

**KEEP OUT OF REACH OF CHILDREN – DANGER - POISON** – Poisonous if swallowed, inhaled, or absorbed through skin. Rapidly absorbed through skin. Avoid breathing of spray mist. Avoid contamination of feed and foodstuff. Keep out of reach of children. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Do not contaminate water used for irrigation, domestic or spray purposes.

This product is colourless to amber liquid with aromatic solvent odour.

**Warning Statements:**

**NOTE TO PHYSICIAN:** This product is an organophosphate (cholinesterase-inhibiting) insecticide. Atropine is antidotal and should be given in multiple doses as necessary until the patient is atropinized. In severe cases 2-PAM may be given provided therapy begins within 24 hours of exposure. Monitor serum and RBC cholinesterase. Administer intravenous fluids cautiously, if needed, to correct dehydration. Symptoms of cholinesterase inhibition include salivation, gastrointestinal hypermotility, abdominal cramping, nausea, diarrhea, sweating, miosis, tearing, blurred vision, headache, dizziness, ataxia, bradycardia, dyspnea, cyanosis, and muscle twitching or tremors. In extreme cases, tetany, mental confusion, incontinence, weakness, collapse, paralysis, convulsive seizures, and even death, can occur. Contains petroleum distillates.

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Dichlorvos	20.00	62-73-7	0.1 mg/m <sup>3</sup> IFV*
Aromatic Solvent	70.00	64742-95-6	Not listed

**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 centre 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, preferable by mouth-to-mouth, if possible. Call a poison control centre or doctor for treatment advice. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by poison control centre or doctor. Do not give any liquid to the person. 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 centre or doctor for treatment advice.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273.** 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):** 116.6°F / 47°C (TCC)

**FLAMMABLE LIMITS (LFL & UFL):** LFL: 1%; UFL: 7%.

**EXTINGUISHING MEDIA:** Combustible liquid. Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of carbon and other toxic fumes will be emitted 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. Vapors in the air may flash and ignite.

**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:** 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. Store away from children, domestic animals, food, feed, and water supplies. Keep container tightly closed when not in use. Do not contaminate water, food or feed by storage or disposal.

**Personal Protective Equipment: Applicators and other handlers must wear:** long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate, butyl rubber, Nitrile rubber, or Viton®, chemical-resistant footwear and socks, protective eyewear, chemical-resistant apron when mixing, loading, or cleaning equipment. In case of possible overhead exposure, chemical-resistant head covering should be worn. 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. After each day of use, clothing or PPE must not be reused until it has been cleaned. **For containers over 1 gallon and less than 5 gallons in capacity:** Mixers and loaders who do not use a mechanical system (probe and pump) to transfer the product must wear coveralls or a chemical-resistant apron in addition to other required PPE.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** When handlers use enclosed cabs, or aircraft in a manner that meets the requirements listed in the 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:** If vapors or mists become excessive or exceed TLV, wear a NIOSH/MSHA approved pesticide respirator with cartridges for organic vapors.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

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

DDVP	<b>OSHA PEL 8 hr TWA</b> 1 mg/m <sup>3</sup> (skin)	<b>ACGIH TLV-TWA</b> 0.1 mg/m <sup>3</sup> IFV*
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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b> Colourless to amber liquid with aromatic solvent odour	<b>SOLUBILITY:</b> Emulsifies
<b>SPECIFIC GRAVITY (Water = 1):</b> 0.98 g/ml @ 20°C	<b>BULK DENSITY:</b> 0.98 kg/L.
<b>VAPOR PRESSURE:</b> Not established	<b>BOILING POINT:</b> 363 - 401°F / 184 - 205°C
<b>PERCENT VOLATILE (by volume):</b> Not established	<b>EVAPORATION RATE (Butyl Acetate = 1):</b> 0.1

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:** Extreme heat. Sources of ignition.

**INCOMPATIBILITY:** Strong bases, acids, and oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride (HCl), phosphorous oxides, oxides of carbon, and other unknown hazardous materials may be formed in a fire situation.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (female rat):** 56 mg/kg

**Eye Irritation (rabbit):** Irritant

**Inhalation LC<sub>50</sub> (rat):** >198 mg/m<sup>3</sup> (4H)

**Carcinogenic Potential:** EPA lists Dichlorvos as EPA-B2: Probable Human Carcinogen with sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies. ACGIH lists Dichlorvos as: TLV-A4: Not Classifiable as a Human Carcinogen. IARC lists Dichlorvos as 2B: Possibly Carcinogenic to Humans. Not listed in OSHA or NTP.

**Acute Dermal LD<sub>50</sub> (rabbit):** 205 mg/kg

**Skin Irritation (rabbit):** Irritant

**Skin Sensitization (guinea pig):** Possible sensitizer

**12. ECOLOGICAL INFORMATION**

This product is toxic to fish, birds, and other wildlife. Do not apply directly to water. Do not contaminate water when disposing of equipment wash water. Do not apply when weather conditions favor drift from target area.

**13. DISPOSAL CONSIDERATIONS**

Do not reuse containers for any purpose. Refillable Container: For disposal, the container may be returned to the point of purchase (dealer/distributor). It must be refilled by the dealer/distributor with the same product. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

**14. TRANSPORT INFORMATION**

**DOT/TDG Shipping Description:** RQ ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (DICHLORVOS, AROMATIC HYDROCARBON), 6.1 (3), UN3017, III MARINE POLLUTANT ERG GUIDE 131

**U.S. Surface Freight Classification:** INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OR VERMIN EXTERMINATORS, ANIMAL OR POULTRY, NOI; POISON (NMFC 102100; CLASS: 77.5)

**IMDG Shipping Description:** RQ ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (DICHLORVOS, AROMATIC HYDROCARBON), 6.1 (3), UN3017, III MARINE POLLUTANT ERG GUIDE 131

Consult appropriate ICAO/IATA regulations for shipment requirements in the Air 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	H	PPE
			4	Severe		

**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>N</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** DDVP (Dichlorvos) (CAS: 62-73-7): 10 pounds; Naphthalene (CAS: 91-20-3): 100 pounds (calculated in product: 15 pounds)

**SARA, Title III, Section 313:** DDVP (Dichlorvos) (CAS: 62-73-7); Naphthalene (CAS: 91-20-3)

**RCRA Waste Code:** Not listed

**CA Proposition 65:** Not listed

**16. OTHER INFORMATION**

**MSDS STATUS:** Section 1 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Safety and Health

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**IFV\*:** Measured as inhalable fraction and vapour.

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