

**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**

**DISTRIBUTED BY:**

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:** Chlorpyrifos; O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate  
**PRODUCT USE:** Insecticide – Group 5  
**PCP REG. NO.:** 29984  
**MSDS Number:** 29984-12-LPI

**MSDS Revisions:** Sections 1, 14

**Date of Issue:** 08/09/12

**Supersedes:** 01/31/11

**2. HAZARDS IDENTIFICATION SUMMARY**

**KEEP OUT OF REACH OF CHILDREN AND UNAUTHORIZED PERSONNEL – DANGER - POISON – EYE AND SKIN IRRITANT.** WARNING: Contains the allergen soy. Fatal if swallowed • May be harmful if inhaled or absorbed through skin • Causes eye irritation • May cause skin irritation. Do not get in eyes, on skin, or on clothing. Do not inhale vapours or spray mist.

This product is red liquid with aromatic odor.

**Warning Statements:**

**NOTE TO PHYSICIAN:** Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing respiratory and cardiac depression. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferred antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early but only in conjunction with Atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration. This product contains petroleum distillate solvent – vomiting may cause aspiration pneumonia.

**3. COMPOSITION, INFORMATION ON INGREDIENTS**

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Chlorpyrifos	480 g/L	2921-88-2	0.1 mg/m <sup>3</sup> IFV*
This product is hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)			

**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 swallowed:** Immediately call a poison control centre or doctor. Do not induce vomiting unless told to do so by a 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 to 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 centre or doctor for further treatment advice.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273.** Take the container label or product name and Pest Control Registration Number with you when seeking medical attention.

**5. FIRE FIGHTING MEASURES**

**FLASH POINT (°F/Test Method):** 106°F / 41.1°C (TCC)

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

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

**HAZARDOUS COMBUSTION PRODUCTS:** May generate hydrogen chloride, ethyl sulfide, diethyl sulfide and oxides of nitrogen 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.

**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.

**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. 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 local, state and federal regulations. 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:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F / 37.8°C for extended periods of time. Storage below 20°F / -6.7°C may result in the formation of crystals. If product crystallizes, store at 50°F / 10°C to 70°F / 21°C and agitate to redissolve crystals. Do not use or store near heat or open flame. Do not contaminate water, food, or feed by storage or disposal.

**Personal Protective Equipment (PPE): Mixers and loaders** using a mechanical transfer loading system and applicators using aerial application equipment must wear: long-sleeved shirt and long pants, shoes and socks. In addition, **mixers and loaders**, using a mechanical transfer loading system must wear: chemical-resistant gloves, chemical-resistant apron, and a NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter. **All other mixers, loaders, applicators and other handlers must wear:** coveralls over short sleeved shirt and short pants, chemical-resistant gloves, chemical-resistant apron when mixing or loading or exposed to the concentrate, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, a NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter. 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 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:** 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, chemical-resistant footwear and socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Chlorpyrifos	not listed	0.1 mg/m <sup>3</sup> IFV, Skin
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:** Red liquid with aromatic odour.

**SPECIFIC GRAVITY (Water = 1):** 1.079 g/ml @20°C

**VAPOR PRESSURE:** <10mm Hg @ 25°C

**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.

**BULK DENSITY:** 1.079 kg/L.

**BOILING POINT:** 290°F/143°C (solvent)

**EVAPORATION RATE (Butyl Acetate = 1):** Not established

**SOLUBILITY:** Soluble

**pH:** 3.8-5.0

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**INCOMPATIBILITY:** Strong alkalis, amines, and oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May generate hydrogen chloride, ethyl sulfide, diethyl sulfide and oxides of nitrogen in a fire situation.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Temperatures above 122°F / 50°C

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (rat):** 776 mg/kg

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

**Inhalation LC<sub>50</sub> (rat):** 1.5-2.7 mg/L (Aerosol - 4 hrs.)

**Carcinogenic Potential:** Nothing listed in NTP, IARC or OSHA. ACGIH has classified Chlorpyrifos as TLV-A4 (Not Classifiable as a Human Carcinogen).

**Acute Dermal LD<sub>50</sub> (rat):** >5,000 mg/kg

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

**Skin Sensitization (guinea pig):** Not a sensitizer

**12. ECOLOGICAL INFORMATION**

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops. Do not apply this product or allow it to drift to blooming crops or weeds if bees are actively visiting the treatment 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**

**TDG Shipping Description:** ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, 6.1 (3), UN3017, III (CHLORPYRIFOS, AROMATIC NAPHTHA)

**DOT Shipping Description:** RQ ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, 6.1 (3), UN3017, III (CHLORPYRIFOS, AROMATIC NAPHTHA) RQ (CHLORPYRIFOS) ERG GUIDE 171

**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)

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
	1 Instability	2 Moderate	0 Reactivity
		3 High	G PPE
		4 Severe	

**SARA Hazard Notification/Reporting**

<b>SARA Title III Hazard Category:</b>	Immediate	<u>Y</u>	Fire	<u>Y</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** Chlorpyrifos (CAS: 2921-88-2) 1 pound; Xylene (mixed isomers) (CAS: 1330-20-7) 100 pounds; Cumene (CAS: 98-82-8) 5000 pounds

**SARA, Title III, Section 313:** 1,2,4-Trimethylbenzene (CAS: 95-63-6) 3.5% 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:** Not listed

**16. OTHER INFORMATION**

**MSDS STATUS:** Sections 1 and 14 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental/ Regulatory Services

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