

# Chlorpyrifos E-Pro 4

Insecticide

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Chlorpyrifos E-Pro 4 Insecticide  
**Active Ingredient:** Chlorpyrifos  
**Chemical Name:** O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate  
**Chemical Formula:** C<sub>9</sub>H<sub>11</sub>Cl<sub>3</sub>NO<sub>3</sub>PS

#### COMPANY IDENTIFICATION:

Etigra  
501 Cascade Pointe Lane, Suite 103  
Cary, NC 27513  
UNITED STATES

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chlorpyrifos	CAS No. 2921-88-2	44.7%
Aromatic hydrocarbons	CAS No. 64742-94-5	50.0–55.0%

### 3. HAZARD IDENTIFICATION

#### EMERGENCY OVERVIEW

May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Wash thoroughly with soap and water after handling. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing vapors. Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine, only by injection, is an antidote. This product is an organophosphorus ester that inhibits cholinesterase. Contains petroleum distillate — vomiting may cause aspiration pneumonia.

**POTENTIAL HEALTH EFFECTS:** Symptoms of overexposure include headaches, nausea, vomiting, cramps, weakness, blurred vision, pin point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling, muscle spasms and coma.

#### POTENTIAL HEALTH HAZARDS:

**EYE –** Irritating and may injury eye tissue if not removed promptly.  
**SKIN –** Harmful if absorbed through skin. Large exposures could be fatal.  
**INHALATION –** Vapor or mist concentrations may be harmful if inhaled. High concentrations could be fatal.  
**INGESTION –** May be fatal if swallowed.

**POTENTIAL PHYSICAL HAZARDS:** Combustible liquid and vapor.

### 4. FIRST AID

**IF SWALLOWED:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give any liquids to the person. Do not give anything by mouth to an unconscious person.

**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 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.

(continued on next page)

Manufactured for:  
Etigra  
501 Cascade Pointe Lane  
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Cary, NC 27513  
www.etigra.com

REV 0107

Etigra  
Emergency Phone: Chemtrec 800-424-9300  
Effective Date: November 29, 2004  
EPA Reg. No. 79676-9

  
ETIGRA™

## 5. FIRST AID (continued)

**NOTE TO PHYSICIAN:** This product is an organophosphorus ester that inhibits cholinesterase and also contains a xylene-range aromatic solvent. In cases of severe acute poisoning, the decision of whether to induce vomiting or not should be made by the attending physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be evaluated against toxicity when considering emptying the stomach.

**ANTIDOTE:** Treat symptomatically based on judgment of the attending physician in response to reactions of the patient. Atropine (by injection only) is an antidote. Oximes such as 2-PAM/protopam, may be therapeutic but should only be used in conjunction with atropine. Contact your supplier or doctor to ensure this information is up to date.

## 5. FIRE-FIGHTING MEASURES

**Flash point:** 150°F (CC)

**Flammable Limits (LFL-UFL):** 2% - 15%

**Fire and Explosion Hazards:** Combustible liquid. Vapors can form explosive mixtures at temperatures at or above the flashpoint. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Means of Extinction:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**Fire Fighting Instructions:** Evacuate area and fight fire from a safe distance. Approach from upwind to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Foam fire extinguishing system is preferred to prevent environmental damage from excessive water run off. If water is used, avoid heavy hose streams. If possible, dike and collect water used to fight fire to prevent/minimize run off.

**Firefighting Equipment:** Self-contained breathing apparatus with full facepiece. Wear full firefighting turn-out gear (Bunker gear).

**Hazardous Combustion Products:** Heat and fire may result in thermal decomposition and the release of hydrogen chloride, ethyl sulfide, diethyl sulfide and nitrogen oxides.

## 6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately. Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of area.

**SMALL SPILL:** Absorb spill with inert material such as dry sand, vermiculite or fuller's earth, then place in a chemical waste container. Rinse area with dilute soda ash and place rinsate into chemical waste container.

**LARGE SPILL:** Same as for small spills; may neutralize with dilute alkaline solutions of soda and ash and place into chemical waste container. Do not allow run off into soil, drainage systems, or bodies of water. Notify and consult with proper regulatory authorities.

## 7. HANDLING AND STORAGE

**Keep out of reach of children and animals.** Do not use or store near heat, open flame or hot surfaces. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. Wash thoroughly after handling this product.

Store in original container in a secured dry storage area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal Protective Equipment:**

**Eyes and Face:** Protective eyewear (goggles, face shield, or safety glasses with front, brow, and temple protection)

**Respiratory Protection:** All mixers, loaders and handlers must wear a NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

**Protective Clothing:** All pesticide handlers must wear a long-sleeved shirt and long pants, chemical resistant gloves such as barrier laminate or viton, and shoes plus socks.

Exception: Pesticide handlers who submerge containerized or balled/burlapped plants in tanks must wear long-sleeved shirt and long pants, chemical-resistant gloves such as barrier laminate or viton, chemical-resistant footwear plus socks, and a chemical-resistant apron.

**Gloves:** All pesticide handlers must wear chemical-resistant gloves made of materials such as barrier laminate or viton. Inspect gloves regularly for leaks. Thoroughly wash the outside of gloves with soap and water prior to removing.

**NOTE:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Pale, amber liquid

**Odor:** Aromatic

**pH:** 3.8

**Boiling Point:** 275°F

**Melting Point:** 105°F (technical)

**Specific Gravity:** 1.08 g/ml at 25°C (9.0 lbs./gal.)

**Vapor Pressure:** 2.5 mPa at 25°C (technical)

**% Volatile:** 50.0%

**Solubility in Water:** Emulsifies

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Avoid temperatures above 100°F (60°C)

**CHEMICAL STABILITY:** Product is normally stable. However, product may decompose if heated above 300°F for an extended period, significantly increasing the risk of explosion.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Heat and fire may result in thermal decomposition and the release of hydrogen chloride, ethyl sulfide, diethyl sulfide, and nitrogen oxides.

**INCOMPATIBILITY WITH OTHER MATERIALS:** Strong alkalis, amines and oxidizers.

**POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE ORAL TOXICITY

Oral LD<sub>50</sub> (rat, female): 350 mg/kg

### ACUTE DERMAL TOXICITY

Dermal LD<sub>50</sub> (rat): > 2,000 mg/kg

### ACUTE INHALATION TOXICITY

Inhalation LC<sub>50</sub> (rat): 1.5 mg/L

### EYE IRRITANT

Rabbit – Moderate Irritant

### SKIN IRRITATION

Rabbit – Moderate Irritant

### SENSITIZATION

Guinea pig – Non-sensitizing

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing cholinesterase depression.

### CARCINOGENICITY:

**ACGIH:** Not listed

**IARC:** Not listed

**NTP:** Not listed

**OSHA:** Not listed

**MUTAGENIC DATA:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**ADDITIONAL DATA:** Chlorpyrifos is not known to exhibit reproductive or birth defects. Repeated or prolonged exposures may cause sensitization to subsequent exposures that mimic acute exposures.

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, 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 adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water by cleaning of equipment or disposal of equipment wash water.

### FISH TOXICITY

96 hour LC<sub>50</sub>, Rainbow trout – 48 µg/L (technical)

### AVIAN TOXICITY

Oral LD<sub>50</sub>, Bobwhite quail – 83 mg/kg (technical)

**BEE TOXICITY:** Highly toxic.

## 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 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 DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incinerate, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Organophosphorus Pesticides, Liquid, Toxic (Chlorpyrifos)

DOT HAZARD CLASS OR DIVISION: 6.1

DOT UN/NA NUMBER: UN3018

DOT PACKING GROUP: II

REPORTABLE QUANTITY: 1 lb.

MARINE POLLUTANT: Severe Marine Pollutant

DOT EMERGENCY RESPONSE GUIDE: 152

## 15. REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

FIFRA –

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated

SARA Title III – Section 302 Extremely Hazardous Substances  
Not listed

SARA Title III – Section 311/312 Hazard Categories  
Immediate, Fire

SARA Title III – Section 312 Threshold Planning Quantity  
The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients  
None

### CERCLA

Chemical Name	Wt.%	RQ
Chlorpyrifos	44.7%	1 lb.

CALIFORNIA PROP 65 STATUS –  
Not listed

## 16. OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

### **DISCLAIMER:**

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