

PyroFOS™ 1.5 ULV

VECTOR CONTROL INSECTICIDE

For Use Outdoors to Control Adult Mosquitoes in Residential and Recreational Areas.

Active Ingredient:

Chlorpyrifos: *O,O*-diethyl *O*-(3,5,6,-trichloro-2-pyridinyl) phosphorothioate 19.36%

Other Ingredients: 80.64%

Total 100.00%

Contains 1.5 pounds chlorpyrifos per gallon

Contains petroleum distillate

EPA Reg. No. 53883-251

EPA Est. No. 53883-TX-002

KEEP OUT OF REACH OF CHILDREN
CAUTION

See attached booklet for additional precautionary statements

Manufactured By:

CSI

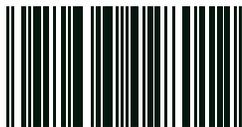
C O N T R O L

S O L U T I O N S

incorporated

5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

**NET CONTENTS:
2.5 GALLONS**



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FIRST AID

Have product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall® International for emergency medical assistance at (866) 897-8050.

IF SWALLOWED: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center 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 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 the 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 mouth-to-mouth. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Chloryrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidote. 2-PAM may be effective as an adjunct to atropine. This product contains petroleum distillate. Vomiting may cause aspiration pneumonia.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE): All mixers and loaders involved in ground application must wear coveralls over long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, 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. Applicators involved in ground ULV application must use an enclosed cab as described in the Engineering Controls Section of this label and must wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves. Aerial applicators and pilots must use an enclosed cockpit and long-sleeved shirt, long pants, shoes, and socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls: Ground applicators must use an enclosed cab that has a nonporous barrier that totally surrounds the occupant but prevents contact with pesticides outside the cab. Applicators must be provided and have immediately available for use in an emergency when they exit the cab in the treated area: coveralls, chemical-resistant gloves, and a respirator of the type specified in the PPE section of this labeling. Take off any PPE that was worn in the treated area before reentering the cab and store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Mixers and loaders involved in aerial application must use a closed system designed by the manufacturer to expose the pesticide to prevent it from contacting handlers or other people and which is used and maintained in accordance with the manufacturer's written operating instructions. Mixers and loaders using a closed system must wear protective eyewear if the system operates under pressure, and must have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown, coveralls, chemical-resistant gloves, chemical-resistant footwear, chemical resistant apron and a respirator of the type specified in the PPE section of this labeling.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should 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.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material beyond the body of water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes, or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Do not store near heat or open flame.

PHYSICAL OR CHEMICAL HAZARDS

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

PyroFos 1.5 ULV is recommended for application either as a thermal fog or as an ultra low volume (ULV) nonthermal aerosol (cold fog) to control adult mosquitoes in outdoor residential and recreational areas and other non-cropland areas where these insects are a problem. For best results treat when mosquitoes are most active and weather conditions are conducive to keeping the spray cloud close to the ground. An inversion of air temperatures and a light breeze are preferable. Application in calm air conditions is to be avoided. Apply only when ground wind speed is greater than 1 mph. Air temperatures should be greater than 50° F when conducting applications.

Do not treat a site with more than 0.01 pounds of chloryrifos per acre in a twenty-four hour period. Do not exceed 0.26 pounds of chloryrifos per acre per year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

SPRAY DROPLET SIZE DETERMINATION

Ground-based Application: For application as an ultra low volume (ULV) nonthermal aerosol (cold fog) spray, equipment must be adjusted so that the volume median diameter (VMD) is between 8 and 30 microns ($8 < Dv \leq 30 \mu m$) and that 90% of the spray is contained in droplets smaller than 50 microns ($Dv \leq 0.9 < 50 \mu m$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Application: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($Dv \leq 0.6 < 60 \mu m$) and that 90% of the spray is contained in droplets smaller than 115 microns ($Dv \leq 0.9 < 115 \mu m$). The effects of flight speed and, for rotary-type nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND ULV APPLICATION

Thermal Fog Application: To prepare a fog solution, thoroughly mix 4 gallons of **PyroFos 1.5 ULV** in 94 gallons of No. 2 fuel oil or other fuel, diesel or kerosene-type oil suitable for insecticide and fogging use. Apply the finished fog solution with any standard thermal fog machine calibrated to deliver 52.5 gallons per hour at an average vehicle speed of 5 mph to cover a swath of up to 300 feet.

ULV Nonthermal Aerosol (Cold Fog) Application: Apply **PyroFos 1.5 ULV** through standard ULV cold aerosol or non-thermal aerosol (Cold Fog) generators undiluted at a flow rate of 2.7 to 5.3 fluid ounces per minute at an average vehicle speed of 10 mph. This is equivalent to 0.005 to 0.01 pounds of chloryrifos per acre based on an effective swath width of 300 feet. Under normal residential conditions a flow rate of 4.3 fluid ounces per minute is recommended. If a different vehicle speed is used, adjust rate, accordingly. An accurate flow meter must be used to ensure the proper flow rate.

Chloryrifos pounds/acre	Application Rate (Fl. oz. per Minute)				Fl. oz. per acre
	5 mph	10 mph	15 mph	20 mph	
0.01	2.6	5.3	7.9	10.5	0.87
0.008	2.1	4.3	6.4	8.6	0.71
0.005	1.4	2.7	4.1	5.4	0.45

For proper application, mount the applicator so that the nozzle is at least 4 1/2 feet above ground level and directed out the back of the vehicle. Failure to follow the above directions may result in reduced effectiveness and oversize spray droplets, which may deposit on and permanently damage automobile paint.

AERIAL APPLICATION

PyroFos 1.5 ULV may be applied undiluted at rates up to 0.87 fluid ounces **PyroFos 1.5 ULV** per acre (0.01 pounds of chloryrifos per acre) by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Aerial application shall be made altitudes ranging from 75 to 300 feet.

IN FLORIDA: Not for aerial application in Florida unless specifically authorized by the Bureau of Entomology, Florida Department of Agriculture & Consumer Services.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage and Spill Procedures: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spillage or leakage, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of or by an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a disposal tank and recap. Repeat for the second and third rinsate. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available. If recycling is not available, then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

NOTICE: Seller makes no warranty, expressed or implied concerning the use of this product other than as indicated on the label. To the extent consistent with applicable law, Buyer assumes all risk of use and/or handling of this material when use and/or handling is contrary to label instructions.

Material Safety Data Sheet

Section 1 – Product Identification

Product Name: PyroFos™ 1.5 ULV Vector Control Insecticide
 EPA Registration #: 53883-251

Manufacturer: Control Solutions Inc.
 5903 Genoa- Red Bluff
 Pasadena, TX 77507
 281-892-2500
 EPA Establishment #: 53883-TX-002

Section 2 – Chemical Composition

Material	CAS #	% by Weight	OSHA PEL/ACGIH TLV
Chlorpyrifos	002921-88-2	19.36%	ACGIH: 0.2 mg/m ³
Inert Ingredients	64742-55-8	80.64%	OSHA: 5 mg/m ³ (oil mist) 500 ppm (petroleum solvent)

Section 3 – Hazard Identification

Symptoms of Toxicity: Chlorpyrifos is a cholinesterase inhibitor. May cause headache, dizziness, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions. Chronic exposure may cause peripheral neuropathy.

Flammability: Slightly combustible.

Reactivity: Stable under most conditions. May break down into various toxic constituents under elevated temperatures. Avoid temperatures > 40°C.

Carcinogenicity: No evidence of carcinogenicity in long term animal studies.

Section 4 – First Aid

Eye Contact: Flush eyes with water for 15 minutes. Seek medical attention if irritation persists.

Inhalation: Move person to fresh air. If person is not breathing, give artificial respiration. Call a poison control center for further treatment advice.

Ingestion: Call poison control center immediately for treatment advice. Do not induce vomiting unless directed to do so by a poison control center. Do not give anything by mouth to an unconscious person.

Dermal Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center for treatment advice if irritation persists.

Notes/Physician's Information: You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.

Section 5 – Fire and Explosion Hazards

Flash Point:	165.2°F	Upper Flammability Limit:	N/A
Extinguishing Media:	Foam, dry chemical, CO ₂ , water fog	Lower Flammability Limit:	N/A
Special Procedures:	Foam systems are preferred. Use SCBA with full-face piece and protective clothing.		
Unusual Fire Hazards:	Possible toxic smoke, vapors, fallout and runoff water can result from fires. Heated containers can rapidly pressurize/rupture.		
Reactivity/Stability:	Unstable at elevated temperatures. May release organic sulfides and HCl when burned. Hazardous polymerization will not occur.		

Section 6 – Spill/Release Procedures

Absorbent:	Universal or oil-only absorbent pads, vermiculite, absorbent booms, or clay granules.
Containment:	Do not discharge into municipal wastewater or public storm drains. Eliminate runoff as much as possible.
Waste Disposal:	Dispose of contaminated material in municipal land fill or through licensed TSDF. Not a hazardous waste under RCRA, 40 CFR 261.
Reporting:	Report all major spills and uncontrolled releases to proper local, state, and federal agencies. RQ – As a mixture, 5.165 pounds or 2/3 gal.
Emergency Contact #:	Chemtrec: 1-800-424-9300

Section 7 – Storage and Handling Instructions

Storage Conditions:	Do not store near foodstuffs or feed. Store in a cool, dry, well-ventilated area away from flammable materials and sources of heat. Keep away from oxidizing agents and alkaline material.
Special Handling Considerations:	Exercise caution to prevent damage to or leakage from the container. Workers should follow good hygiene practices to avoid accidental ingestion.
Container Disposal:	Do not reuse empty containers. Triple rinse (or equivalent), then offer for recycling or render unusable and dispose of in municipal landfill or with licensed TSDF.

Section 8 – Protective Equipment/Engineering Controls

Eye Protection:	ANSI approved goggles or safety glasses with side shields.
Respiratory Protection:	NIOSH approved half-mask or full-face with any N, P, or HE type filter.
Dermal Protection:	Gloves, long sleeves, pants and shoes.
Engineering Controls:	Use only in adequately ventilated areas.

Section 9 – Physical Data

Odor:	Petroleum odor.	Melting Point:	N/A
Physical State:	Liquid.	Flash Point:	165.2°F
Color:	Light straw.	Specific Gravity:	0.93 (g/ml)
Bulk Density:	See specific gravity.	pH:	N/A
Vapor Pressure:	N/A	Water Solubility:	Negligible
Viscosity:	N/A	Refractive Index:	N/A

Section 10 – Toxicity

EPA Toxicity Category:		Oral LD ₅₀ :	> 1923 mg/kg
Skin Contact:	Mildly irritating	Dermal LD ₅₀ :	>5000 mg/kg
Eye Contact:	Irritating	Inhalation LC ₅₀ :	>2.3 mg/L
HMIS/NFPA Classification:	Fire - 1 Health - 2 Reactivity - 1	Fire - 1 Health - 2 Reactivity - 1 Special - none	
Other Comments:	Avoid cross contamination. Always wash hands thoroughly after handling pesticides and before eating, drinking, or smoking.		

Section 11 – Ecological Data

Aquatic:	LC ₅₀ – Chlorpyrifos < 1.0 mg/L
Avian:	N/A
Bioaccumulation:	Will not bioaccumulate.
Summary:	This product is extremely toxic to fish. Do not apply directly to water. Drifts and runoff from treated areas may be hazardous to aquatic organisms in treated areas.

Section 12 – Transportation

DOT:	RQ, Environmentally hazardous substance, liquid, n.o.s. (contains chlorpyrifos), UN3082, Class 9, PG III
IATA:	RQ, Environmentally hazardous substance, liquid, n.o.s. (contains chlorpyrifos), UN3082, Class 9, PG III
IMDG:	RQ, Environmentally hazardous substance, liquid, n.o.s. (contains chlorpyrifos), UN3082, Class 9, PG III, marine pollutant

Section 13 – Regulatory

Section 302/TPQ: (emergency planning)	Not regulated under section 302.
Section 304/EHS RQ: (release notification)	Not regulated under section 304.
CERCLA RQ: (release notification)	RQ for Chlorpyrifos is 1 pound. As a mixture: RQ – 5.165 pounds or 2/3 gal. Report all qualifying releases to proper local, state, and federal agencies.
Section 311/Tier II: (MSDS submission)	Acute health hazard. Delayed health hazard. Fire hazard.
Section 313/TRI Chemicals:	Chlorpyrifos. CAS #: 002921-88-2
RCRA Haz-Waste Code(s):	Not an RCRA hazardous waste.
CAA TQ: (air emissions)	Not regulated under the CAA.

Section 14 – Other

NFPA and HMIS ratings assigned to this product are based on the hazards of its ingredient (s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.

The information provided on this Material Safety Data Sheet is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Control Solutions, Inc. The data on this sheet relates only to the specific material designated herein. Control Solutions, Inc. assumes no legal responsibility for the accuracy or completeness of this data, nor for use or reliance upon this data.