

67760-108

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 10, 2010

Carrie Tackema  
Registration Manager  
Cheminova, Inc.  
One Park Drive, Suite 150  
P.O. Box 110566  
Research Triangle Park, NC 27709

Subject:       Fyfanon PLUS ULV to amend specific mixing instructions  
                  EPA Reg. No. 67760-108  
                  Notification Application Dated December 1, 2010

Dear Ms. Haage:

The Agency has received your Application for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10, dated December 1, 2010, for the product Fyfanon PLUS ULV, EPA Reg. No. 67760-108. The Registration Division (RD) has reviewed this request and finds that the actions requested fall within the scopes of PR Notice 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at (703) 308-8043.

Sincerely,

A handwritten signature in black ink, appearing to read "Marianne Lewis".

Marianne Lewis  
Insecticide-Rodenticide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

**NOTIFICATION**

DEC 10 2010

**Fyfanon® PLUS ULV**  
ULTRA LOW VOLUME CONCENTRATE INSECTICIDE

**Restricted Use Pesticide**  
**Due to toxicity to fish and aquatic organisms.**  
For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

**ACTIVE INGREDIENTS:**

- Malathion:** O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.....92.2%
- Gamma-cyhalothrin:** Cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl,cyano(3-phenoxyphenyl) methyl ester..... 1.47%
- INERT INGREDIENTS:**..... 6.33%
- TOTAL:**..... 100.00%

Contains 9.4 lbs. malathion per gallon  
Contains 0.15 lbs. gamma-cyhalothrin per gallon  
Contains petroleum distillate

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING**

**SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS**

EPA Reg. No. 67760-108

EPA Est. No. 4787-DN-1

**NET CONTENTS:**

Cheminova, Inc.  
One Park Drive, Suite 150  
P.O. Box 110566  
Research Triangle Park, NC 27709  
Product of Denmark  
© Fyfanon is a registered trademark of Cheminova

Net weight: 1.19 lbs. (54 g)  
Net volume: 1.19 L (32 fl. oz.)

**IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-866-303-6950**

**FIRST AID**

**This product is an organophosphate and a cholinesterase inhibitor.**

- 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 by a poison control center or doctor. 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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration,

preferably by mouth-to-mouth, if possible.  
Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

**NOTE TO PHYSICIAN-** This product is a cholinesterase inhibitor. Treat symptomatically. Atropine is antidotal. Induced vomiting as first aid for this substance may result in increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent. Vomiting should be induced only under professional supervision. Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, safety glasses). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, or viton. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart.

For all formulations and use patterns – mixers, loaders, applicators, flaggers, and other handlers must wear:

- long sleeved shirt and long pants
- shoes and socks
- protective eyewear (goggles, safety glasses, face shield)
- chemical resistant apron (mixers and loaders)

For all air blast applications – applicators must wear:

- long sleeved shirt and long pants
- shoes and socks
- protective eyewear (goggles, safety glasses, face shield)
- chemical resistant gloves
- chemical resistant headgear

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 CONTROL STATEMENTS**

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators.

**User Safety Recommendations:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.

**ENVIRONMENTAL HAZARDS**

This product is extremely toxic to aquatic organisms, including fish and invertebrates and toxic to wildlife.

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms. Do not contaminate water when disposing of equipment washwater or rinsate.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

**PHYSICAL OR CHEMICAL HAZARDS**

Combustible: Do not use or store near heat or open flame.

**STORAGE AND DISPOSAL**

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

**PESTICIDE DISPOSAL:**

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**PESTICIDE STORAGE:**

Fyfanon® PLUS ULV should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77°F). Do not allow product to freeze.

**Container Disposal:**

**Nonrefillable containers equal to or less than 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) 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 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.

**Nonrefillable containers greater than 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the 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. Turn the container over onto its other 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.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe consult the agency responsible for pesticide regulation.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during restricted entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water, is:

- Coveralls
- Chemical Resistant gloves made of any waterproof material
- Shoes plus socks

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or nurseries. Do not enter or allow others to enter until sprays have dried.

**PRECAUTIONS AND RESTRICTIONS**

- All ULV aerial formulations other than those intended for use as a Wide Area Mosquito Adulticide, must be packaged in closed mixing and loading systems.
- Do not graze livestock in treated areas.
- Do not use this product for any uses other than those specified on this label.
- Do not permit spray to contact auto vehicles as paint finish could be permanently damaged. If vehicles come into contact with spray, wash immediately.
- When applied according to label directions for control of cotton bollworm and tobacco budworm, Fyfanon PLUS ULV also provides ovicidal control of unhatched *Heliothis spp.* eggs.
- Fyfanon PLUS-ULV is used undiluted in any specially designed aircraft or ground equipment that

has been adapted and calibrated for ultra low volume spraying. Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

- Buffer Zones for Ground-based Application: When making a ULV application with ground-based application equipment, do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and common commercial fish ponds).
- Buffer Zones for Aerial Application: When making a ULV application with aerial application equipment, do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).
- Only ten synthetic pyrethroid applications (of one product or a combination of products) may be made per growing season with the following restrictions:
  - No more than 3 applications of Fyfanon PLUS ULV can be applied per year; and
  - See chart below for gamma cyhalothrin and lambda cyhalothrin rates.

Maximum Seasonal Use Rates for gamma and Lambda Cyhalothrin on Cotton

Crop	Maximum Rate for Either Product Used Alone (lb ai/acre)*	
	Gamma-cyhalothrin	Lambda-cyhalothrin‡
Cotton	0.10	0.20

\*NOTE: If both gamma-cyhalothrin and lambda-cyhalothrin are used on cotton during the same crop growing season, the amounts of each that can be used can be calculated as shown in the following examples:

Example 1: If the maximum use rate for lambda-cyhalothrin = 0.20 lb ai/acre/year and 0.10 lb ai has been applied,  $(0.20-0.10) \div 2 = 0.05$  lb ai of gamma-cyhalothrin could be applied during the remainder for the crop use season.

Example 2: If the maximum use rate for gamma-cyhalothrin = 0.10 lb ai/acre/year and 0.05 lb ai has been applied,  $(0.10-0.05) \times 2 = 0.10$  lb ai of lambda-cyhalothrin could be applied during the remainder for the crop use season.

‡NOTE: Includes any lambda-cyhalothrin product approved for crop uses.

**Spray Drift Requirements**

Observe the following requirements when spraying in the vicinity of aquatic areas such as, but not limited to lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries and commercial fish ponds.

**Droplet Size**

Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

For groundboom and aerial applications, use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles, or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Wind Direction and Speed**

Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when

wind gusts approach 15 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

**Temperature Inversion**

Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Additional Requirements for Ground Applications**

For groundboom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Spray should be released at the lowest height consistent with pest control. Applications by airblast more than 10 feet above the crop canopy should be avoided.

**Additional Requirements for Aerial Applications**

For aerial applications, the spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or 90% rotor diameter. Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

Use mist blowers and boom sprayers utilizing a controlled air flow to facilitate particle size and spray deposition at a vehicle speed of 4 to 10 mph.

Use mist blowers with a pump capable of producing 40 psi and blower speeds of 2600 rpm. Use flat fan nozzles, 8001 to 8002, placed 30° into air blast, or rotary atomizers placed into the air blast that produce an efficient spray particle with a mass median diameter of 30 to 100 microns. Other similar application equipment which has demonstrated the capability to deliver even distribution of the labeled rate over the desired area may be used.

Use boom sprayers with a filtered rotary air compressor, either PTO or gas engine driven or an air pump capable of producing at least 12 psi. Use air pressure on chemical tanks and an accurate metering valve to assure a calibrated flow of the pesticide. Air should be regulated with a relief valve and gauge for proper air and liquid mixture. Pneumatic-type spray nozzles, as suggested by equipment manufacturer, should be used for spray particles with mass median diameter of 30 - 100 microns.

Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

**RESISTANCE MANAGEMENT**

Some insects are known to develop resistance to products used repeatedly for control. Because the

development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or State agricultural authorities for details.

**AGRICULTURAL CROP USE**

Dilute Fyfanon PLUS ULV in once-refined cottonseed or vegetable oil sufficient to make at least one quart of finished spray per acre. For proper mixing, fill the spray tank at least 3/4 filled with water before Fyfanon® PLUS ULV is added. Mechanical agitation or recirculation through the pump by-pass to the tank is usually sufficient for maintaining a good dispersion. Rinse empty container with water and drain into spray tank—repeat twice more. Repeat applications may be made as indicated in the table below. Consult your State Agricultural Experiment Station for proper timing of applications.

Crop	Pests Controlled	FL. OZ./Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Cotton	thrips (including soybean thrips and tobacco thrips); fleahoppers; leafhoppers; cutworms spp.;	4-8	1.22	3	7	21	2 days
	grasshoppers	8					
	lygus bug spp.(1)*; cabbage looper; cotton leafperforator; cotton leafworm; pink bollworm (adult); saltmarsh caterpillar; bandedwing whitefly(1)(2); beet armyworm (1)(3); boll weevil; brown stink bug; cotton aphid (1)(2); cotton bollworm; European corn borer; fall armyworm; green stink bug; southern green stink bug; sweetpotato whitefly (1)(2); tobacco budworm (1); twospotted spider mite(2); Boll Weevils	8-16					

\*Use highest rate for very heavy migrating population.  
 (1) See Resistance Management section.  
 (2) Suppression only.  
 (3) For control of first and second instars only.



**WARRANTY DISCLAIMER**

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

**INHERENT RISKS OF USE**

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the Seller. All such risks shall be assumed by Buyer and User. Buyer and User agree to hold Cheminova and the Seller harmless for any claims related to such factors.

**LIMITATION OF REMEDIES**

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to one of the following, at Cheminova's election:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, Cheminova shall not be liable for consequential, incidental, or special damages or losses in any matter.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the Seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.