

Frequently Asked Questions about Lambda-Cyhalothrin

Q: What is lambda-cyhalothrin?

Lambda-cyhalothrin in Warrior II Insecticide is a restricted-use, broad-spectrum insecticide registered in the U.S. by the U.S. Environmental Protection Agency (EPA) and in Florida by the Florida Department of Agriculture and Consumer Services (FDACS). Lambda-cyhalothrin is a synthetic pyrethroid insecticide that is similar to naturally occurring pyrethrin insecticide compounds found in chrysanthemum flowers. Lambda-cyhalothrin can be used to control a number of insect pests that threaten food crops and public health.

Q: How may lambda-cyhalothrin be applied?

For fruit fly control programs, lambda-cyhalothrin will be applied by trained staff beneath host/target trees within a quarantine zone as a topsoil drench to target emerging larvae. It will also be applied as a drench to potted nursery plants as a condition of their sale and release from a quarantine zone.

Q: Has the EPA reviewed the safety of lambda-cyhalothrin?

The EPA assessed potential human health and environmental risks for lambda-cyhalothrin prior to approving its first registration for use in 1988. Since that time, the Agency has continued to gather new environmental and toxicity data for lambda-cyhalothrin and evaluate the safety of new uses of the active ingredient. A formal re-registration review began in 2011 to determine whether there is a need for any additional scientific data to assure that there is minimal risk from all combined uses of lambda-cyhalothrin and other pyrethroid insecticides.

Q: What happens to lambda-cyhalothrin in the environment?

Lambda-cyhalothrin will be used as a soil drench to the topsoil or potting material. Lambda-cyhalothrin is unlikely to remain in the topsoil because sunlight breaks it down quickly and it is metabolized by soil microbes. Volatilization into the air will be insignificant since it has a low vapor pressure. Movement to ground water will be unlikely due to its low water solubility and high potential to bind to soil. Movement to surface water will also be unlikely since lambda-cyhalothrin will be used as a soil drench to topsoil in spot treatments around trees and in nursery pots. Applications are also under label restrictions requiring a 25 foot buffer for all ground applications between a treatment area and a surface water body. Within that 25 foot buffer width a minimum 10 foot vegetative buffer width is also mandatory.

Q: What are the potential human health effects of lambda-cyhalothrin exposure?

Lambda-cyhalothrin is moderately toxic when eaten, inhaled or exposed to skin, but it is not allergenic. No adverse human health effects are expected as a result of exposure to the negligible levels used in fruit fly control. With improper use at levels far higher than those used to control fruit flies, lambda-cyhalothrin could cause a person to have dizziness, headache, nausea, skin tingling, salivation, tremors, and other clinical effects. Coming into contact with very high levels may lead to seizures, loss of consciousness, or very rarely, death. Lambda-cyhalothrin did not adversely affect the developing fetus in animal studies. The EPA has concluded that lambda-cyhalothrin is “not likely to be carcinogenic to humans.”

Q: Are the lambda-cyhalothrin breakdown products a risk to human health?

The EPA concluded that the small amounts of lambda-cyhalothrin’s breakdown products that are formed after fruit fly control should not cause health problems in people.

Q: What does the Florida Department of Health (DOH) suggest to protect health?

The best way to prevent harm from pesticides is to avoid coming into contact with them. In most cases, it is not essential or practical to leave an area being treated. Instead, you can reduce or prevent exposure by staying indoors. Even so, being outside during treatment has very little chance to cause any harm to health.



What can I do to reduce exposure to pesticides like lambda-cyhalothrin during treatment?

EPA has evaluated lambda-cyhalothrin for fruit fly control and concluded that lambda-cyhalothrin poses little risk to human health when used according to the label directions. If you are concerned about treatment, talk to your doctor, and look for treatment schedule notices in the newspapers, radio or TV announcements.

Will lambda-cyhalothrin harm my pets?

Over exposure to lambda-cyhalothrin may cause similar symptoms in pet dogs or cats as in people. To minimize exposure, keep animals away from treated areas during and shortly after treatment.

What effects does lambda-cyhalothrin have on wildlife?

Since lambda-cyhalothrin will be applied as a soil drench, it is unlikely that high concentrations will come into contact with wildlife. Lambda-cyhalothrin binds very tightly to the soil and sediments, thus limiting runoff to aquatic habitats, and reducing exposure to terrestrial organisms not associated with soil biomes. Lambda-cyhalothrin is practically non-toxic to birds and moderately toxic to mammals. Lambda-cyhalothrin is considered highly toxic to bees, fish, and aquatic invertebrates. While highly toxic to several wildlife groups, the soil drench application method should effectively limit exposure to these organisms. Very little should enter aquatic habitats due to soil adsorption, and few pollinator species come in direct contact with soils. Toxicity and environmental fate studies show that Lambda-cyhalothrin should not reach levels that would harm wild animals in the environment. Adverse impacts to wildlife appear to be mitigated and are not expected to occur.

What can I do if I believe that lambda-cyhalothrin might be making me sick?

If you are ill, you should call your doctor. You can also call your county health department, or the Florida DOH Bureau of Epidemiology, Pesticide Surveillance Program at (850) 245-4277. You can also call the Florida Poison Information Center at (800) 222-1222.

How do I get more information about lambda-cyhalothrin?

You can get more information on the use of lambda-cyhalothrin in fruit fly control by calling the Florida Department of Agricultural and Consumer Services, Division of Plant Industry at (888) 397-1517 or by checking the website at: <http://www.fdacs.gov/PI>. You can also get more technical information about lambda-cyhalothrin by calling the Florida Department of Agriculture and Consumer Services, Bureau of Scientific Evaluation and Technical Assistance at (850) 617-7917.