

Olive Fly Pheromone 1,7-dioxaspiro-[5,5]-undecane (124851) Factsheet

OPP Chemical Code: 124851 (CAS # 180-84-7)

Summary

This active ingredient is a chemical that female olive flies use to attract males for mating. As part of a pesticide end-use product, small amounts of olive fly pheromone are released from dispensers hung on trees in olive orchards, to attract olive flies to a trap. Properties of insect pheromones are well known, and no risks are expected to humans, wildlife, or the environment from proper use of this active ingredient.

I. Description of the Active Ingredient

Pheromones are volatile chemicals produced by a given species to communicate with other individuals of the same species in order to change their behavior. In this case, the pheromone chemical is slowly released in olive orchards to attract male olive flies to a trap. The olive fly pheromone is a colorless, water-white liquid with a characteristic minty odor.

Mechanism of Action. The first pesticide end products containing olive fly pheromone consist of a trap that encloses a matrix containing three active ingredients: olive fly mating pheromone, which attracts olive flies from a distance; ammonium bicarbonate as a source of ammonia, which attracts the flies and stimulates them to eat; and lambda cyhalothrin, which kills insects that ingest it. These traps are dispersed throughout the olive orchards.

II. Use Sites, Target Pests, and Application Methods

- **Use site:** Olive orchards, commercial and ornamental

- **Target pest:** Olive flies

- **Manufacturing Use Product:** This pheromone product is approved only for use in manufacturing an end use product. See Mechanism of Action (above) for a description of the first end products containing olive fly pheromone.

III. Assessing Risks to Human Health

Whether a substance poses a risk to humans or other organisms depends on two factors: how toxic the substance is, and how much of it an organism is exposed to. Therefore, the EPA considers toxicity data and exposure data in deciding whether to approve a pesticide for use.

Mammalian toxicity studies at high doses show no dermal or inhalation toxicity, and only slight oral toxicity and dermal and eye irritation. No risks to the public are expected because the pheromone is approved only for manufacturing an end product, and because the end product will be in a dispenser that results in virtually no human exposure. Workers are required to wear appropriate personal protective equipment.

IV. Assessing Risks to the Environment

Olive fly pheromone, as is true for many other insect pheromones, is toxic to aquatic invertebrates and fish, although not to birds or mammals. Because olive fly pheromone will be used in dispensers that slowly release tiny amounts of the chemical into olive orchards, exposure to aquatic organisms is not expected. Product labels tell users not to use or dispose of pheromone-containing products in bodies of water.

V. Regulatory Information

September 2003: Registration of "Certis Technical Olive Fly Pheromone" (OPP Registration # 70051-77) as a Manufacturing Use Product

June 2004: Registration of two end products containing Olive Fly Pheromone:
"Olive Fly Attract and Kill (A&K) Target Device for Commercial Olives" (70051-76);
"Olive Fly Attract and Kill (A&K) Target Device for Ornamental Olives" (70051-96)

VI. Registrant Information

Christine A. Dively
CERTIS USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046
301-483-3806
cdively@certisusa.com

VII. Additional Contact Information

[Ombudsman, Biopesticides and Pollution Prevention Division](#) (7511P)
Office of Pesticide Programs
Environmental Protection Agency

1200 Pennsylvania Avenue, NW
Washington, D.C. 20460