

4-(or 5-)Chloro-2-methylcyclohexane-carboxylic acid, 1,1-dimethyl ester (112603) Fact Sheet

Summary

This active ingredient is a mating pheromone that female Mediterranean fruit flies (MFF) produce to attract males for mating. The pheromone is approved for use in the manufacturing of products intended to attract male MFFs to traps, which may contain toxic materials to flies. When used according to label directions, this active ingredient is not expected to harm people or the environment.

I. Description of the Active Ingredient

OPP Chemical Code: 112603

CAS # 12002-53-8

This active ingredient is a mating pheromone that female Mediterranean fruit flies (MFF) produce to attract males for mating. Pheromones are volatile chemicals produced by a given species to communicate with other individuals of the same species. The goal is to change the behavior of the individuals who detect the pheromone. For example, many kinds of female insects produce pheromones that attract the male of the same species for mating. Animals use pheromones to mark territory (dogs, bears), or to warn other individuals of danger. Pheromones are usually effective in tiny amounts, and act only on one species or a few closely related species.

The Mediterranean fruit (commonly known as Medfly) feeds on various fruit and nut trees, and is a serious agricultural pest in orchards. The female fruit flies release a pheromone to attract male for the purpose of mating. When used as part of a trap or lure, the pheromone which is slowly released to the air over a period of several weeks, attracts flies to the trap.

II. Use Sites, Target Pests, and Application Methods

- **Use sites:** Fruit and nut orchards; vegetable crops infested with MFF
- **Target pest:** Mediterranean fruit fly

- **Application Methods:** For use in manufacturing end use pheromone products intended for use in traps in polymeric matrix dispensers which are placed throughout fruit and nuts orchards and vegetable fields.

III. Assessing Risks to Human Health

Based on the known properties of insect pheromones and the results of toxicity tests conducted on the Mediterranean fruit fly pheromone, no risks to human health are expected from exposure to this pheromone.

IV. Assessing Risks to the Environment

Adverse effects of pheromones on nontarget organisms (e.g., mammals, birds, aquatic organisms, beneficial insects) are not expected because

- The pheromone chemicals are not toxic
- They are released slowly in tiny amounts
- MFF pheromone attracts only the Mediterranean fruit fly

V. Regulatory Information

Arthropod pheromones such as trimedlure are exempt from the requirements of food tolerance for residues when used in retrievably sized dispensers and at a rate not exceeding 150 grams released per acre per year.

VI. Additional Contact Information

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