Cuelure (4-[p-Acetoxyphenyl]-2-butanone) (128916) Fact sheet

Active Ingredient: Cuelure (4-[p-Acetoxyphenyl]-2-butanone)

OPP Chemical Code: 128916 (CAS # 3572-06-3)

Summary

Cuelure is structurally related to the sex pheromone that female melon flies produce to attract males for mating. The modified pheromone is a more potent attractant than the natural pheromone. The registered manufacturing use product (MUP) will initially be used in producing end products that will slowly release cuelure into the air, thus attracting males flies and preventing them from mating. Melon flies are a major pest on pumpkins, zucchini, and melons in Hawaii. Cuelure shows minimal to no toxic effects in mammals. No adverse effects to humans or the environment are expected from pesticide end products containing cuelure as the active ingredient.

I. Description of the Active Ingredient

Cuelure is chemically related to the sex pheromone produced by female melon flies to attract males for mating. Pheromones are volatile chemicals produced by a given species to change the behavior of other individuals of the same species. In this case, cuelure will be initially used to attract male melon flies to prevent them from mating and producing the next fly generation. These flies are a pest in Hawaii and other parts of the world, although not currently in the continental United States. The name cuelure is derived from the Latin name of the target melon fly, *Bactrocera cucurbitae* (Coquilette). Cuelure is a colorless to pale yellow liquid with a raspberry-like odor. It volatilizes slowly. Tests show that cuelure attracts male melon flies more effectively than the unmodified sex pheromone.

II. Use Sites, Target Pests, And Application Methods

- **Use Sites:** This registered manufacturing use product (MUP) is expected to be used initially in producing end products that attract and inactivate melon flies on such crops as melons, pumpkins, and zucchini in Hawaii.

- **Target pests:** Melon fly, *Bactrocera cucurbitae* (Coquilette)

- **Application Methods:** This cuelure product is approved only for use in manufacturing end products. Each end product needs to be approved by EPA before it can be legally distributed or sold.

III. Assessing Risks to Human Health

Mammalian laboratory studies at high doses show no oral, dermal, or inhalation toxicity, or eye or skin irritation. In any case, the public will not be exposed to cuelure either in the registered manufacturing use product or in the initial end products. Every end product will be assessed for potential human exposure and toxicity. Workers are required to wear appropriate personal protective equipment to minimize their exposure.

IV. Assessing Risks to the Environment

Cuelure is toxic to fish and presumably to aquatic invertebrates, a characteristic it shares with many insect sex pheromones. Because cuelure will be used on land and volatilizes slowly into the air, exposure to aquatic organisms is not expected. The label of this registered MUP instructs users not to dispose of the product in bodies of water. Laboratory studies showed no mammalian toxicity. For each potential end product, EPA will determine if additional non-target studies are needed.

V. Regulatory Information

September 29, 2005: Registration of first product containing cuelure as an active ingredient.

"FT-Cuelure Technical Grade" (Manufacturing Use Product),

EPA Registration No. 81325-1

VI. Registrant Information

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VII. Additional Contact Information

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