

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOV 1991

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Ms. Ada M. Freaux
Sandoz Crop Protection Corporation
Corporate Headquarters
1300 East Touhy Avenue
Des Plaines, Illinois 60018

Dear Ms. Freaux:

Subject: ENLARGED INSECT GROWTH REGULATOR
EPA REG. NO. 55947-82
APPLICATION FOR AMENDED REGISTRATION
Your submission of May 29, 1991

Your amendment request referred to above, submitted in connection with registration under Section 2(c)(7)(D) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (FIFRA), is ACCEPTABLE for the following amendments provided that you agree to submit the requested information as listed below in the Data/Information Discrepancy Category of this letter.

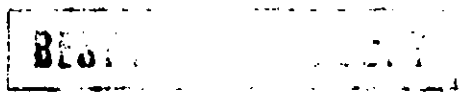
NOTE: FOR THE DEGREE OF ALL LABELS OF CONCERN:

The initial product chemistry and toxicology reviews were reviewed with the understanding that vegetable seed crops were to be treated. SANDOZ realized that by removal of the VEGETABLE SEED CROPS from their labeling the policy of requiring data for related food uses (e.g., nature of residues, metabolism, etc.) was negated. Therefore, the policy is no longer applicable to this amendment.

BEST COPY AVAILABLE

CONCURRENCES

SYMBOL							
SURNAME							
DATE							



ACCEPTABLE AMENDMENT REQUESTS

1. This amendment is acceptable for the following:
 - a. The additional brand name listed below is also being accepted under this amendment/registration. The labels must be identical with the basic label except for brand name ENSTAR 5F INSECT GROWTH REGULATOR.

° ENSTAR II
 - b. Also acceptable is the request for the substitution of S-Kinoprene active ingredient for PS-Kinoprene in the ENSTAR formation.
 - c. The acceptable use pattern for this product reflects the revised labeling for ornamental plants.

DATA/INFORMATION DISCREPANCY CATEGORY

2. You must submit the required data the immunotoxicity testing with in one year time (see the enclosed attachment).

The following information must be supplied as part of the condition for acceptance of the amendment:

- a. Submit the composition of data from five (5) representative samples (pilot plant versus commercial production).
 - b. Submit data on the analytical method for verifying the certified limits of your product.
 - c. Data must be submitted on solubility in representative polar and non-polar solvents, vapor pressure and stability.
3. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration/ amendment will be subject to cancellation in accordance with FIFFA sec. 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,



Phil Futton, PM-1E
Insecticide-Rodenticide Branch
Registration Division (F7505)

ENSTAR® II
INSECT GROWTH REGULATOR

July 7

Act as
Pesticide
EPA Reg. No.
55947-82

**For Control of Whiteflies, Aphids, Soft and Armored Scales, Mealybugs,
and Fungus Gnats in Greenhouses and Interior Scapes (i.e., Atriums)
on Ornamental Plants and Vegetable Seed Crops**

ACTIVE INGREDIENT

S-Kinoprene [2-propynyl (2E,4E)-(7S)-3,7,11-trimethyl-2,4-dodecadienoate]* 65.0%

INERT INGREDIENTS..... 35.0%

Total 100.0%

Contains 0.625 lb. active ingredient per pint.

ENSTAR® is a registered trademark of Sandoz Ltd., *U.S. Patent 4021461

EPA Reg. No. 55947-82

EPA Est. No. 55947-CA-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Side Panel For Additional Precautionary Statements

DIRECTIONS FOR USE

GENERAL CLASSIFICATION

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL

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

Container Disposal (Glass): Triple rinse (or equivalent) then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Disposal (Plastic): Triple rinse or equivalent, then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of according to federal, state or local procedures.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. Wash thoroughly after handling. Do not store near or contaminate food or feedstuffs.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

INSTRUCTIONS FOR USE

1. Partially fill spray tank with water, then add recommended amount of ENSTAR[®] II, agitate and complete filling.
2. Diluted spray solution should be used within twenty-four (24) hours; always agitate before using.

RECOMMENDED GREENHOUSE APPLICATIONS RATES OF APPLICATION

Preventative Program: Before insect populations reach damaging levels, mix ENSTAR[®] II at the rate of 3-5 ounces per 100 gallons of water (1/2 tsp./2 gal.) and apply to runoff every two (2) weeks.

Curative Program: For an existing population of adult insects, make two (2) applications seven (7) days apart of ENSTAR[®] II to runoff at a rate of 10 to 20 ounces per 100 gallons of water (1 tsp./gal.). Two (2) weeks later, begin the Preventative Program.

For Root (Ground) Mealybug and Fungus Gnat Control: When infestations of root mealybugs and fungus gnats are observed, the entire pot containing the infested plant should be drenched by submersion in a solution of ENSTAR[®] II at a rate of one-half (1/2) ounce per five (5) gallons of water. Submersion should continue until no more air bubbles are seen escaping from the fluid surface. This insures that the root system surface is saturated and the container is thoroughly treated. Repeat as necessary.

METHODS OF APPLICATION

Do Not Apply ENSTAR® II Through Any Type Of Irrigation System.

Complete coverage of foliage is essential for control of whiteflies, aphids, mealybugs, fungus gnats and scales. For conventional spray equipment, mix the recommended amount of ENSTAR® II and water and spray both top and bottom surfaces of leaves until runoff. For other applications, follow the equipment manufacturer's specifications.

ENSTAR® II is compatible with other commonly used insecticides and miticides, such as MAVRIK AQUAFLOW® and PENTAC AQUAFLOW®. Before mixing in spray tank; however, it is advisable to test physical compatibility by mixing all components in a small container in proportionate quantities. Read and follow all precautionary statements, mixing instructions, and label directions on tank mix products.

EFFECTS ON GREENHOUSE PLANTS

Slight to moderate injury has occasionally been noted on some blooms under certain conditions. For insect control, it is suggested that applications be made in the pre-bloom stage. Before making large-scale application to any crop, a grower should test spray small numbers of plants to determine plant safety under his own cultural conditions.

Applications of ENSTAR® II have been made to greenhouse plants (aluminum plant, azalea, Boston fern, bromeliad, chrysanthemum, devil's ivy, dianthus, dracaena compacta, emerald gem nephthylis, English ivy, epipremnum aureum, exotica perfection dumbcane, false aralia, fluffy ruffles fern, fuchsia, geranium, gerbera, gloxinia, heartleaf philodendron, hydrangea, kalanchoë, lantana, lily, marigold, pelargonium, petunia, purple passion plant, red-veined prayer plant, Sanders dracaena, snapdragon, table fern, variegated oval leaf peperomia, wax plant, weeping fig), foliage plants (areca palm, aucubifolium [cotton], coleus varieties, commutatum evergreen, coral ardisia, grape ivy, neanthe belle palm, sprengeri fern, zebra plant), and vegetable seed crops in greenhouses (fava bean, green bean, spinach, sugar beet, tomato) without adverse effects.

EFFECTS ON GREENHOUSE PLANTS

(continued)

Application of ENSTAR[®] II should be made to poinsettia prior to bract formation. Foliar damage on some sensitive varieties can result; therefore, test on a small area before large-scale use. Some varieties of roses, such as yellow blooded roses, show delayed damage. Seeds from treated vegetable crops must be used only for subsequent planting. Portions of treated plants other than seeds must be disposed of according to local regulations and must not be used for food or feedstuffs.

LIMITED WARRANTY AND LIABILITY:

Notice: Read this Limited Warranty and Liability before buying or using this product. If terms are not acceptable, return it at once, unopened.

It is critical that this product be used and mixed only as specified on the label. The laws of the State may make some or all of this paragraph inapplicable or may give you rights in addition to your rights hereunder. Except to the extent prohibited by applicable law, the exclusive remedy of the user or buyer and the limit of liability of this Company or any other Seller for any and all losses, personal injuries or damages resulting from the use of this product, shall be the purchase price paid by the user or buyer for the quantity of product involved. Except to the extent prohibited by State Law, there is no warranty, and this Company and other Sellers disclaim all liability for losses, personal injury or damages: (i) arising from any use of this product in a manner or for a purpose not recommended in its label directions, or from mixing this product before use with any substance except as recommended by the product's label; (ii) arising from handling or storage in violation of label instructions; (iii) for all indirect, special or consequential damages; (iv) when not reported to this Company within one year of discovery. THERE ARE NO IMPLIED WARRANTIES AND NO WARRANTIES OF MERCHANTABILITY OR FITNESS.

SANDOZ CROP PROTECTION CORPORATION

Des Plaines, Illinois 60018