

December 8, 1999

Novartis Crop Protection, Inc.
Regulatory Affairs
P.O. Box 18300
Greensboro, NC 27419-8300

Attention: Dr. Robert Wurz

Subject: Endeavor™
EPA File Symbol 100-913
Your letters of September 30 and October 11, 1999

347/67
5-572249
5-572253 309/117

In the above submissions, you submitted revised Confidential Statements of Formula and labels.

The Agency has determined that the revised CSFs for your Basic and Alternate Formulations, dated September 30, 1999, which were submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable. A copy of these CSFs have been placed in our file for this product. All previous versions are obsolete.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act on October 11, 1999, is acceptable. A stamped copy of the labeling is enclosed for your record.

Sincerely,



Dan Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

PULL HERE TO OPEN ►

Endeavor™

INSECTICIDE

For control of aphids and whiteflies on landscape ornamentals, container grown ornamentals, nonbearing fruit and nut trees in nurseries, Christmas trees, ground covers, and ornamental plants in greenhouses, lath and shadehouses, and interiorscapes

Active Ingredient:	
Pymetrozine (CAS No. 123312-89-0)	50.0%
Other Ingredients:	50.0%
Total:	100.0%

Endeavor is a water-dispersible granule.
Made in Switzerland

**KEEP OUT OF REACH OF CHILDREN.
CAUTION**

See additional precautionary statements inside booklet. See Directions for Use before applying.
For Professional Use Only (Not for application by homeowners)

EPA Reg. No. 100-913 EPA Est. 67545-AZ-1

NCP 913B-L1A 0499

6 x 2.5 OUNCE PACKETS

15 OUNCES

TOTAL NET WEIGHT PER BOX
U.S. Standard Measure

NOVARTIS

ACCEPTED
with COMMENTS
in EPA Letter dated

DEC 8 1999
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registration under EPA Reg. No.
100-913

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS OF SALE AND WARRANTY

The Directions for Use of this product reflect the opinion of experts based on laboratory and field trials. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.
Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Endeavor™

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY AND/OR POOR INSECT CONTROL.

GENERAL INFORMATION

Endeavor is an insecticide that controls aphids and whiteflies on landscape ornamentals, container grown ornamentals, nonbearing fruit and nut trees in nurseries, Christmas trees, ground covers, and ornamental plants in greenhouses, lath and shadehouses, and interiorscapes.

Mode of Action

Endeavor has a mode of action that controls aphids and whiteflies by stopping their feeding activity. These insects stop feeding within hours, but remain on the plant for a short time (2-4 days). Endeavor has residual activity in the plant and will control aphids and whiteflies that move onto the plant after spraying.

Suitability for Integrated Pest Management Programs

Endeavor is suitable for Integrated Pest Management (IPM) programs as it has a low toxicity to beneficial insect (including honeybees and bumblebees) and mite populations.

Use Restrictions

Do not apply aerially.

Do not apply more than 10 oz. per acre per application.

For outdoor use, do not apply more than 48 oz. per acre per year.

For indoor use, do not apply more than 100 oz. (48 oz. in CA only) per acre per year.

Phytotoxicity

Endeavor has been evaluated for phytotoxicity on many greenhouse, nursery, and ornamental plants. All plants tested under university research and commercial production conditions have not shown phytotoxicity at labeled rates of Endeavor. While many species and cultivars have been tested, a small group of each specie and cultivar should be evaluated for phytotoxicity two weeks prior to making applications to the entire crop. Applications should not be made to poinsettia after bract formation.

Resistance Management

Endeavor belongs to a class of chemicals not previously used as pesticides and not known to be cross-resistant to other classes of insecticides. However, insect pests are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the crop and use area. Such strategies may include rotating with insecticides with different modes of action. Consult your local pest control advisor or extension office for details. If resistance to this product develops in your area, it may not provide adequate control. If you experience difficulty with control, and resistance is a likely cause, consult your local Novartis Crop Protection representative or local agricultural authorities for the best alternative method of control. *Novartis encourages responsible product stewardship to ensure effective long-term control of the insect pests on this label.*

Spray Equipment

- Use sufficient water to provide thorough, uniform coverage.
- Use sprayer nozzles that provide accurate, uniform application.
- Calibrate sprayer to insure delivery of adequate spray volume per unit area.
- To avoid spray drift, do not apply when conditions favor drift beyond the target area.
- Avoid spray overlap, as crop injury may occur.

Endeavor™

Mixing Procedures

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area.

Endeavor Alone: Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the Endeavor to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Endeavor has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Endeavor + Tank Mixtures: Endeavor is compatible with most insecticide and fungicide products. However, the physical compatibility of Endeavor with tank mix partners should be tested before use. To determine the physical compatibility of Endeavor with other products, use a jar test.

Using a 1 1/2 qt. jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

If mixture is physically compatible, add 1/2 of the required amount of water to the mix tank. Start the agitator before adding any tank mix partners. Add products in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Endeavor, liquid flowables, liquids, and emulsifiable concentrates.

Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

Note: If using Endeavor in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including Endeavor. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using Endeavor in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

Chemigation

Do not apply this product through any type of irrigation system.

Application Directions

When target pests appear and conditions do not favor drift beyond the target area, apply foliar spray mixture uniformly to all plant surfaces, particularly the stem and leaf undersides, to point of runoff. Avoid spray overlap that could cause phytotoxicity. Use the following rates and retreatment intervals.

Pests	Type of Application and Sites	Application Rates for Endeavor	Retreatment Intervals
Whiteflies, including: Silverleaf Whitefly (<i>Bermisia argentifolii</i>)	Ground Foliar Spray	2.5-5.0 oz./100 gals. of water	7 days – severe insect pressure
Greenhouse Whitefly (<i>Trialeurodes vaporariorum</i>)	Ornamentals	Maximum rate of 10 oz./acre	14 days – normal insect pressure
Aphids, including: Green Peach Aphid (<i>Myzus persica</i>)			
Melon Aphid (<i>Aphis gossypii</i>)			

Note: On hard to wet plants, add a nonionic or organosilicone-based surfactant to improve coverage. Follow product's use directions and rate recommendations.

Restrictions

Do not apply more than 10 oz. per acre per application.

For outdoor use, do not apply more than 48 oz. per acre per year.

For indoor use, do not apply more than 100 oz. per acre per year.

In CA only: For indoor use, do not apply more than 48 oz. per acre per year.

Endeavor™

STORAGE AND DISPOSAL

Storage

Store in a cool, dry place. Product is hygroscopic. Keep the container tightly closed.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Pesticide Disposal

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Container Disposal

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID	
Have container or label when seeking treatment advice.	
If product:	Then:
Gets on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center, doctor, or 1-800-888-8372 for treatment advice.
Gets in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 5 minutes. • Remove contact lenses if present. • Continue to rinse eyes for 10-15 minutes. • Call a poison control center, doctor, or 1-800-888-8372 for treatment advice.
Note to Doctor	• If ingested, induce emesis or lavage stomach. Treat symptomatically.

Personal Protective Equipment

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations
Users should: <ul style="list-style-type: none"> • Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. • Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Endeavor™

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water.

Endeavor™ trademark of Novartis
U.S. Patent No. 5,153,200

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Made in Switzerland

Novartis Crop Protection, Inc.
Turf and Ornamental Products
Greensboro, North Carolina 27419
www.cp.us.novartis.com

NCP 913B-L1A 0499



This booklet manufactured using post-consumer, recycled paper.

Endeavor™ INSECTICIDE

For control of aphids and whiteflies on landscape ornamentals, container grown ornamentals, nonbearing fruit and nut trees in nurseries, Christmas trees, ground covers, and ornamental plants in greenhouses, lath and shadehouses, and interiorscapes

Active Ingredient:
Pymetrozine (CAS No. 123312-89-0) . . . 50.0%
Other Ingredients: 50.0%
Total: 100.0%

Endeavor is a water-dispersible granule.
EPA Reg. No. 100-913
EPA Est. 67545-AZ-1
For Professional Use Only
Endeavor™ trademark of Novartis
U.S. Patent No. 5,153,200
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Made in Switzerland
Novartis Crop Protection, Inc.
Turf and Ornamental Products
Greensboro, NC 27419
www.cp.us.novartis.com
NCP 913B-L1A 0499

**6 x 2.5 OUNCE
PACKETS**

15 OUNCES
TOTAL NET WEIGHT PER BOX
U.S. Standard Measure

See Directions for Use in attached booklet.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

KEEP OUT OF REACH OF CHILDREN CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals
Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID
Have container or label when seeking treatment advice.
If product gets on skin, then: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center, doctor, or 1-800-888-8372 for treatment advice.

If product gets in eyes, then: Hold eye open and rinse slowly and gently with water for 5 minutes. Remove contact lenses if present. Continue to rinse eyes for 10-15 minutes. Call a poison control center, doctor, or 1-800-888-8372 for treatment advice.

Note to Doctor: If ingested, induce emesis or lavage stomach. Treat symptomatically.

Environmental Hazards
Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water.

Storage
Store in a cool, dry place. Product is hygroscopic. Keep the container tightly closed.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Chemigation
Do not apply this product through any type of irrigation system.

ACCEPTED
with COMMENTS
in EPA Letter dated:

DEC 8 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act, this pesticide was registered under FIFRA Reg. No.

100-913



10-4-99
DK

Attn: Dan Placock
703-305-6596

From Nam Padgett
phone 336-632-567

2724-69228 08-08-99 NCP 01-02 (10-04-99)

Endeavor - 2.5 oz. - 3 x 5 pouch - Mech

NCP 2724 ...

Endeavor™

INSECTICIDE

Contains pymetrozine
(CAS No. 123312-89-0)

ACCEPTED
with COMMENTS
in EPA Letter dated:

KEEP OUT OF REACH OF CHILDREN.

DEC 8 1999

CAUTION

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, this product is registered under EPA Reg. No.

See additional Precautionary Statements and Directions for Use in booklet on outer container.

100-913

EPA Reg. No. 100-913

EPA Est. 67545-AZ-1

Store packet in original box.

NCP 913B-L2A 0499

Novartis Crop Protection, Inc.
1-800-388-8372

PMS 347 Green