

PM 04

100-913

packet

09/30/99

1/17



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number

100-913

Date of Issuance:

September 30,
1999

Term of Issuance Conditional

NOTICE OF PESTICIDE:

Registration
 Reregistration

Name of Pesticide Product:

Endeavor™

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

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

Attention: Dr. Robert Wurz

116 / 18 5-569 365

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted in and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(C) provided that:

- A. within 6 months of receipt of a letter outlining any deficiencies in the analytical methods now undergoing trials for validation, you submit the missing information or data.
- B. within 15 months of receipt of this notice, you submit the following two product chemistry tests:
 1. Storage Stability (63-17)
 2. Corrosion Characteristics (63-20)

Signature of Approving Official:

Daniel B. Pearson

Date:

SEP 30 1999

- C. within one (1) year of this notice, you submit the following data:
1. Ecological Effects Data
Acute Estuarine/Marine Toxicity (shrimp), 72-3(c)
 2. Environmental Fate Data
Photodegradation on Soil (161-3)
- D. within two (2) years of this notice, you submit the following data:
1. Toxicology Data:
Developmental Neurotoxicity Study (870-6300 or 83-6)
 2. Ecological Effects Data:
Avian Reproduction (mallard), 71-4(b)
- E. within three (3) years of this notice, you submit the following data:
1. Environmental Fate Data:
Drinking water monitoring
- D. you make the following label changes before you release the product for shipment:
1. To clarify the three parts of your labeling for this product, place the following notations on the appropriate labeling:
 - a. Booklet (affixed to and covering Box Label)
 - b. Box Label (covered by Booklet)
 - c. Packet Label
 2. On Pages 2 and 4 of your Booklet, delete "also" before "ornamental plants".
 3. Delete ":" after "Chemigation".
 - ✓ 4. Change subheading "Application" to "Application Directions".
 5. On the Box Label after "water-dispersible granule", revise text to read:

See Directions for Use on attached booklet.
 6. We reviewed your Packet Label, and no changes are needed.
- E. Submit two copies of the revised final printed labeling (booklet, box, and packet labels) before you release the product for shipment.

3/17

Endeavor™

3

EPA Reg. No 100-913

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A copy of the label stamped "Accepted" is enclosed for your records.

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

Enclosure: Stamped Label

C:\Pymetrozine\Endeavor Notice of Registration, 100-913.wpd

(9/29/99)

Booklet (affixed to and covering Box Label)

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 also ornamental plants in greenhouses, lath- and shade-houses and interiorscapes.

Active Ingredient:

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

ACCEPTED with COMMENTS in EPA Letter Dated

SEP 30 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

100-913

Endeavor™ is a water-dispersible granule.

EPA Reg. No. 100-913

EPA Est. 67545-AZ-1

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)

6 X 2 1/2 OUNCE PACKETS
15 OUNCES
TOTAL NET WEIGHT PER BOX
U.S. Standard Measure

NCP 913B-L1A 0499

Product ID.

Made in Switzerland

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.

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 protect 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 also ornamental plants in greenhouses, lath- and shade-houses 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.

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 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

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

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.

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	<ul style="list-style-type: none"> • 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:

- 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.

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

©1999 Novartis

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 913B-L1A 0499

[QUARK/ENDEAVOR/ENDEAVOR-A] - ccg - 9/29/99

(Base Label)

Box Label
Covered by
Booklet

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 also ornamental plants in greenhouses, lath- and shade-houses and interiorscapes.

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

~~AGREEMENT~~
with COMMENTS
in EPA Letter Dated

Endeavor is a water-dispersible granule.

SEP 30 1999

See directions for use in attached booklet. Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

AGRICULTURAL USE REQUIREMENTS ¹⁰⁰⁻⁹¹³

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.

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

6 X 2½ OUNCE PACKETS
15 OUNCES
TOTAL NET WEIGHT PER BOX
U.S. Standard Measure

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:	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.

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.

Physical or Chemical Hazards

Do not use, pour, spill, or store near heat or open flame.

For minor spills, leaks, etc., follow 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.

Storage

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

Chemigation

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

©1999 Novartis

Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 913B-L1A 0499

Product ID.

[QUARK/ENDEAVOR/ENDEAVOR-A] - ccg - 9/29/99

17/17

Packet Label

PACKET LABEL

Endeavor™

INSECTICIDE

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

KEEP OUT OF REACH OF CHILDREN.

CAUTION

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

ACCEPTED
with COMMENTS
in EPA Letter Dated

EPA Reg. No. 100-913

SEP 30 1999

EPA Est. 67545-AZ-1

NCP 913B-L2A 0499

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

Store packet in original box. 100-913

Novartis Crop Protection, Inc.
1-800-888-8372

[QUARK/ENDEAVOR/ENDEAVOR-PKT] - scg - 9/29/99