

100-741

9-29-92

TERM OF ISSUANCE

CONDITIONAL

NAME OF PESTICIDE PRODUCT

ALAMO FUNGICIDE

NOTICE OF PESTICIDE: REGISTRATION
 RENEWAL

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Reg #: 100-741 M-21 1313

Ciba-Geigy Corporation
Agricultural Division
P. O. Box 18300
Greensboro, NC 27419

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to 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 U.S. 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.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an endorsement or approval of this product by this 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 section 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

- Add the phrase "EPA Registration No. 100-741".

3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

Juan Xerxes

DATE

9-29-92

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

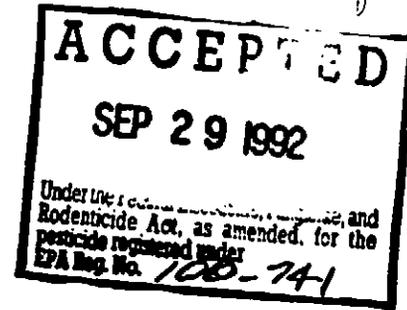
A stamped copy of the labeling is enclosed for your records.

Susan T. Lewis
Susan T. Lewis
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosures

3913

Master Label Booklet



ALAMO®
FUNGICIDE

A trunk-injected systemic fungicide for control of certain wilt diseases in oaks and American elm.

Active Ingredient: Propiconazole:

1-[[2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-methyl]-1-H-1,2,4-triazole	14.3%
<u>Inert Ingredients:</u>	<u>85.7%</u>
Total:	100.0%

EPA Reg. No. 100-
EPA Est. 100-AL-1

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

PRECAUCIÓN AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

See additional precautionary statements and directions for use inside booklet.

4 Fluid Ounces
U. S. Standard Measure
(118 ml)

CIBA-GEIGY

4 9 13

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 the 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 field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the 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 CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY 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. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY 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 CIBA-GEIGY.

DIRECTIONS FOR USE

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

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

General Information

Alamo is a systemic fungicide for use as a root flare injection for prevention and treatment of 1) oak wilt (Ceratocystis fagacearum) of live oak, Northern red oak, and Northern pin oak trees and 2) Dutch elm disease (Ceratocystis ulmi) of American elm trees. These fungi infect the vascular system and cause plugging throughout the tree. Alamo is to be used by trained

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arborists and others trained in injection techniques and in the identification of oak wilt and Dutch elm disease. Alamo should be injected into flare roots in a high volume of water to ensure distribution throughout the vascular system of the tree.

Important: Live oak trees exhibiting less than 30% crown loss from oak wilt will have the best chance of responding to treatment by Alamo. Preventative application into Northern red oak, Northern pin oak, and American elm is more effective than therapeutic treatment into trees with disease symptoms. Trees in advanced stages of disease development may not respond to treatment.

Uninfected trees will generally absorb the full amount of Alamo:water solution within 8 hours when injected under pressure. Oaks exhibiting specific symptoms or those symptomless trees immediately adjacent to a diseased tree should be considered infected. Symptomless trees separated by a primary plow line from diseased trees may be at less risk of infection (no potential contact between root systems of trees with and without symptoms). Infected trees will absorb the material more slowly due to the vascular plugging caused by the disease. If the Alamo:water solution is not absorbed within 24 hours, the tree is considered high risk and has a poor chance of survival.

Alamo does not provide control of elm yellows, a disease of elms not involving a fungus (elm yellows is incited by a mycoplasma-like organism).

Tree Preparation

1. Carefully remove 2-4 inches of soil from the base of the tree to uncover the top of the root flares. Brush away loose soil.
2. Drill holes through the bark, into the sapwood. Drill hole diameter should be adequate to allow insertion of injection tees and formation of air tight contact between active xylem and the delivery point of the injection tees. Generally, a drill hole diameter of 7/32"-5/16" for elms and 5/16" for oaks is appropriate. Follow manufacturer's instructions for the particular injection device used in the treatment.

Drill hole depth should be adequate to deliver the product into active xylem tissue. Generally, 3/4" depth is appropriate but trees with thick bark may require increased drill hole depth to reach the active xylem layer.

Space holes 3-6 inches apart around the base of the tree. Do not drill in the valleys between the flare roots or into cankered areas. Drill above these areas into the trunk, then continue again into sound sapwood on the flares. Disinfect the drill bit between trees with a 20% solution of household bleach, ethanol, or other disinfectant.

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3. Insert into the drilled holes the injection ports ("tees") which are connected to plastic tubing. The tubing should have inlet and outlet valves.

Important: In general, a 10 inch DBH (diameter at breast height) tree will require approximately 20 tees.

4. Mix the specified amount of Alamo and water thoroughly in the tank before beginning the injection treatment.

Tree Measurement

Measure the diameter of the tree using a tree diameter-tape (D-tape) at 4 1/2 feet above the ground. This is the diameter at breast height (DBH).

Preparation of Injection Solution

Refer to the appropriate section below to determine the correct volumes of water and Alamo to use.

Injection

For pressurized injections, with the outlet valve open, connect the tank to the inlet valve and begin pumping solution until all air bubbles come out of the outlet valve. Direct the solution into a container and return the solution to the tank. Shut off the outlet valve. Pressurize tank to 20-30 psi. Check for leaks and gently tap in tees if necessary. Maintain continuous pressure on the injection system until the full amount of solution is in the tree (2-8 hours) or until no more solution is taken up after a minimum hookup time of 24 hours.

After injection is complete, remove injection tees and leave drill holes unplugged. Soil should be replaced around the tree. Do not treat the drill holes with wound paint or other sealing compounds.

Contact your local extension agent for more details on tree injection.

Retreatment

At the initial injection of Alamo, take notes on the level of disease in each tree. Reevaluate disease level in trees 12-24 months after treatment for the potential need for retreatment with Alamo. After this 12-24 month period, continue to evaluate trees for the need for retreatment on an annual basis. Preventive applications should be considered 24 months after the initial injection. Trees in high disease risk areas or high value trees should be evaluated for possible retreatment 12 months after each treatment.

Follow application procedures described above for repeat injections, new drill holes will be needed for subsequent treatments.

Oak Wilt in Live, Northern Red, and Northern Pin Oak

Live Oak

Use the following formulas to determine the amount of material to use for each tree:

A. Water volume

$$\text{DBH} \times 1 = \text{liters of water}$$

B. Amount of Alamo

1. Preventative Treatments

$$\text{DBH} \times 2 = \text{ml of Alamo}$$

2. Therapeutic Treatments

(For trees with specific oak wilt symptoms and less than 30% crown loss, or symptomless trees immediately adjacent to a tree with symptoms.)

$$\text{DBH} \times 3 = \text{ml of Alamo}$$

Refer to the table below as an example:

DBH (inches)	Alamo (ml)		Water Volume (liters)
	Preventive Treatment	Therapeutic Treatment	
5	10	15	5
10	20	30	10
17	34	51	17
23	46	69	23
35	70	105	35

Northern Red and Northern Pin Oak

Use the following formulas to determine the amount of material to use for each tree:

A. Water volume

$DBH \times 2 = \text{liters of water}$

B. Amount of Alamo

$DBH \times 3 = \text{ml of Alamo}$

Refer to the table below as an example:

DBH (inches)	Alamo (ml)	Water Volume (liters)
5	15	10
10	30	20
17	51	34
23	69	46
35	105	70

Important: In Minnesota, treat oaks after June 15. Wounds in oaks in Minnesota between May 15 and June 15 attract insects that transmit the oak wilt pathogen.

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Dutch Elm Disease in American Elm

A. Water volume

Use the following formula to determine the amount of water to use:

$$DBH \times 1 = \text{liters of water}$$

B. Amount of Alamo

Refer to this table as an example of the amounts of Alamo and water to use for injection into American elm:

DBH (inches)	Alamo (ml)	Water Volume (liters)
≤6.5	10	6
8	15	8
10	23	10
12	32	12
15	50	15
17	62	17
20	85	20
23	110	23
25	130	25

Important:

- 1) Alamo has been shown to be effective on trees 6-7 inch DBH; rates in the above table have been extrapolated from trials on 6-7 inch DBH trees using the following equation:

$$10 \times \frac{\text{antilog}(0.236 + (1.9 \log \text{cm dbh}))}{354.58} = \text{ml of Alamo to inject}$$

- 2) Alamo will be most effective when used in conjunction with other cultural practices recommended for management of Dutch elm disease (removal of dead elm trees, pruning of diseased tree limbs and branches, control of bark beetles, etc.). For further information on these and other cultural practices, consult your local extension agent.

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Storage and Disposal

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

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of unused pesticide, injection mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instructions, contact your local 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

Do not reuse empty container. Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. Stay out of smoke from burning containers.

For minor spills, leaks, etc., follow all precautions listed 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.

Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING/AVISO

Causes substantial but temporary eye injury. Wear goggles or face shield. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing vapor. Wear rubber gloves and a long-sleeved shirt when mixing, handling, and applying the product. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Statement of Practical Treatment

If in eyes: Immediately flush eyes with a steady, gentle stream of water. Get medical attention.

If on skin: Wash thoroughly with soap and water. Get medical attention if irritation occurs.

If swallowed: Do not induce vomiting. Drink plenty of water and contact a physician, hospital, or local Poison Control Center.

If inhaled: Move victim to fresh air.

Notes to Physician: If ingested, lavage stomach to avoid aspiration. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.

Environmental Hazards

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

Physical or Chemical Hazards

Do not use or store near heat or open flame.

Alamo® trademark of CIBA-GEIGY Corporation

U.S. Patent No. 4,079,062

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Agricultural Division
CIBA-GEIGY Corporation
Greensboro, NC 27419

CGA

Product ID:

This booklet manufactured using post-consumer, recycled paper.

Booklet Back Panel

ALAMO®

FUNGICIDE

A trunk-injected systemic fungicide for control of certain wilt diseases in oaks and American elm.

Active Ingredient: Propiconazole:

1-[[2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-methyl]-1-H-1,2,4-triazole 14.3%

Inert Ingredients: 85.7%

Total: 100.0%

See directions for use in attached booklet.

EPA Reg. No. 100-
EPA Est. 100-AL-1

Alamo™ trademark of CIBA-GEIGY Corporation

U.S. Patent No. 4,079,062

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4 Fluid Ounces
U.S. Standard Measure
(118 ml)

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

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Physical or Chemical Hazards

Do not use or store near heat or open flame. In the event of a 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.

Agricultural Division
CIBA-GEIGY Corporation
Greensboro, NC 27419

CGA

Product ID:

CIBA-GEIGY

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