



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

JAN 13 1998

Mr. Craig Martens
Manager, Regulatory Services
PBI/Gordon Corporation
P.O. Box 014090
1217 West 12th Street
Kansas City, MO 64101

Dear Mr. Martens:

Subject: Label Amendments
Barrier 2% Dichlobenil Granules
EPA Reg. No. 2217-678
Your submission dated November 14, 1997

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you make the labeling changes before you release the product for shipment bearing the amended labeling:

1. On page 3 of 9, clarify the following paragraph:

For established plantings with bark, wood chips or decorative cover, wet bark, wood chips or decorative cover thoroughly before Barrier 2% Dichlobenil Granules are applied. Treat area as directed. If additional bark is desired, spread bark over treated area before final watering.

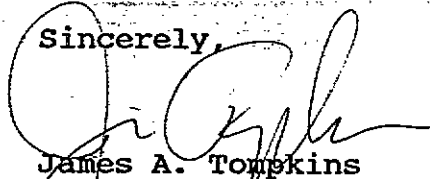
The following change is suggested:

For established plantings with bark, wood chips or decorative cover thoroughly wet (bark, wood chips or decorative cover) before Barrier 2% Dichlobenil Granules are applied. Treat area as directed. If additional bark is desired, spread bark over treated area before final watering.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

Sincerely,



James A. Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

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BARRIER[®] 2% DICHLOBENIL GRANULES

ACCEPTED
with COMMENTS
In EPA Letter Dated

JAN 13 1998

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

2217-678

ACTIVE INGREDIENT:

Dichlobenil: 2,6-dichlorobenzonitrile..... 2.0%

INERT INGREDIENTS:..... 98.0%

TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for additional Precautionary Statements and First Aid.

NET WEIGHT 1.25, 5, 10, or 20 POUNDS

503/ APXXXXXX

EPA REG. NO. 2217-678

EPA EST. NO. XXX-XX-X

MANUFACTURED BY:



KANSAS CITY, MO 64108



40211

READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Humans & Domestic Animals

CAUTION: Harmful if swallowed. Do not breathe dust. Do not allow contact with eyes or skin.

IMPORTANT! Always wash hands, face, and arms with soap and water before smoking, eating, drinking, or toileting. Keep all unprotected persons, children, livestock, and pets away from treated area or where there is a danger of drift. Do not rub eyes or mouth with hands. If you feel sick in any way, STOP work and get help right away. See First Aid Section Statement of Practical Treatment.

FIRST AID Statement of Practical Treatment

IF SWALLOWED: Induce vomiting by drinking water and touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF INHALED: Remove victim to fresh air.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

IF ON SKIN: Wash with plenty soap and water.

ENVIRONMENTAL HAZARDS:

Cover, collect, or incorporate granules spilled on the soil surface. For terrestrial uses, 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 disposing of equipment washwater.

DIRECTIONS FOR USE

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

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes and being grown in ornamental gardens or lawns and grounds.

STORAGE & DISPOSAL

STORAGE: Store in original container in a locked storage area inaccessible to children or pets. Storage area should be cool and dry. Keep container tightly closed using disc seal inside cap. Do not store near seeds, bulbs, or in greenhouse.

PESTICIDE DISPOSAL: Securely wrap original container in several layers of newspaper and discard in trash.

CONTAINER DISPOSAL FOR 1.25 LB. SHAKER CONTAINER -

CONTAINER DISPOSAL: Do not reuse container. Rinse thoroughly before discarding in trash.

CONTAINER DISPOSAL FOR BAGS -

CONTAINER DISPOSAL: Do not reuse bag. Discard bag in trash.

BEFORE APPLICATION:

- ◆ For the best results, the area to be treated should be free of existing weeds, surface debris, litter, decaying leaves or vegetation. Trash-free areas are ideal for the movement of this herbicide into the root zone following rainfall or irrigation.
- ◆ Thoroughly work and smooth the area to be treated.
- ◆ Carefully measure area to be treated and determine the number of square feet. If area to be treated is large, it should be divided into smaller sections, and each treated individually.
- ◆ For established plantings with bark, wood chips or decorative cover, wet bark, wood chips or decorative cover thoroughly before Barrier® 2% Dichlobenil Granules are applied. Treat area as directed. If additional bark is desired, spread bark over treated area before final watering.

APPLICATION RATE FOR 1.25 LBS. SHAKER CONTAINER

APPLICATION RATE:

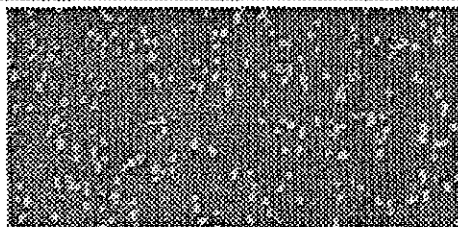
Shake granules uniformly onto soil at the rate of $\frac{3}{4}$ ounce of product for each 10 square feet to be treated. This 20 ounce (1.25 lbs.) shaker package treats up to 270 square feet. As a guide for proper distribution of granules refer to the following diagram

FOR ANNUAL WEED CONTROL:

- Apply in early spring before weeds emerge and after removing existing weeds.

FOR PERENNIAL WEED CONTROL:

- Apply anytime between late fall (after a killing frost) and mid-winter.



4.6 lbs. of product/1,000 sq.ft.

APPLICATION RATE FOR CONTAINER SIZES OF 5, 10, AND 20 POUNDS

APPLICATION RATE:

FOR ANNUAL WEED CONTROL:

- Apply in early spring before weeds emerge and after removing existing weeds.
- Apply 4.6 pounds of product per 1,000 square feet for annual weed control.

FOR PERENNIAL WEED CONTROL:

- Apply anytime between late fall (after a killing frost) and mid-winter.
- Apply 7.0 pounds of product per 1,000 square feet for perennial weed control. Application rates above the recommended rate may cause injury to ornamentals.

Table 1. Application rates of Barrier® 2% Dichlobenil Granules for annual and perennial weed control in landscape plantings.

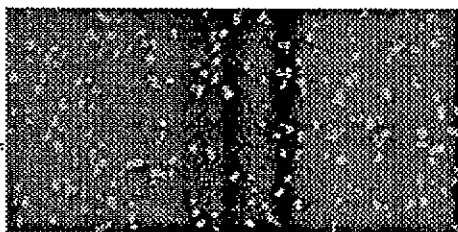
WEEDS	Pounds per 1,000 Sq.Ft.	Product Ounces per 10 Sq.Ft.	Bag Size, Pounds	Approximate Treated Area for this Bag Size, Sq.Ft.
Annual Weeds:	4.6 lbs.	$\frac{3}{4}$ oz.	5 lb.	1,100 sq.ft.
			10 lb.	2,220 sq.ft.
			20 lb.	4,400 sq.ft.
Perennial Weeds:	7.0 lbs.	1 $\frac{1}{2}$ oz.	5 lb.	715 sq.ft.
			10 lb.	1,430 sq.ft.
			20 lb.	2,860 sq.ft.

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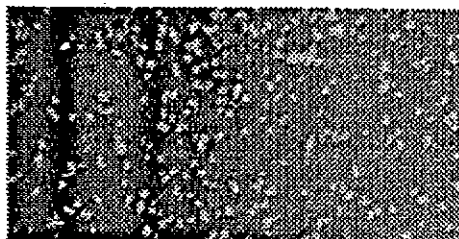
EQUIPMENT CALIBRATION:

- ◆ Determine the size of the treatment area, follow the recommended application rate and calibrate the granular spreader.
- ◆ Drop spreaders, rotary (centrifugal) spreaders, and hand cranked centrifugal spreaders may be used.
- ◆ A single pass distribution is recommended. Operate the equipment in intervals corresponding to the width or swath of the spreader. For drop spreaders, overlap the wheel tracks to ensure complete coverage. Close the spreader openings when turning to change the directions or when stopping.

These diagrams show the distribution pattern of the granules and will help with your equipment calibration:



4.6 lbs. of product/1,000 sq.ft.



7.0 lbs. of product/1,000 sq.ft.

AFTER APPLICATION:

- ◆ Water, sprinkle, or irrigate the soil to $\frac{1}{4}$ to $\frac{1}{2}$ inch depth. Do not flood; avoid puddling and washing. Rainfall or irrigation moves the dichlobent into the root zone.
- ◆ If practical, shallow incorporation may increase the effectiveness of weed control. Apply and incorporate immediately after application. Avoid disturbing soil in the treated area to maintain weed control.
- ◆ If desired, spread bark, wood chips or other decorative cover over treated area after it has been watered.

WEEDS CONTROLLED:

When used as directed, this product will control annual and perennial weeds such as, but not limited to:

Annual Bluegrass	Foxtail	Redroot Pigweed
Artemisia	Gisekia	Rosarypea
Bluegrass	Groundsel	Russian Knapweed
Bull Thistle	Henbit	Russian Thistle
Camphorweed	Horsetail	Shepherdspurse
Canada Thistle	Jerusalem oak Goosefoot	Smartweed
Carpetweed	Knotweed	Smooth Brome
Chickweed	Leafy Spurge	Spanishneedles
Citronmelon	Lambsquarter	Spurge
Climbing Milkweed	Maypop Passionflower	Stranglevine
Coffeeweed	Morningglory	Teaweed
Crabgrass	Natalgrass	Texas Panicum
Cudweed	Orchardgrass	Timothy
Curly Dock	Pepperweed	Wild Artichoke
Dandelion	Pineappleweed	Wild Carrot
Dogfennel	Plantain	Wild Mustard
Evening Primrose	Purslane	Wild Radish
Falsedandelion	Quackgrass	Witchgrass
Fescue	Ragweed	Yellow Rocket
Fiddleneck	Red Deadnettle	Yellow Woodsorrel
Florida Purslane (Pusley)		

LANDSCAPE PLANTINGS:

Barrier® 2% Dichlobenil Granules is recommended for use around the established landscape ornamentals listed below. Established ornamentals are described as plants that have been planted or transplanted at least four (4) months.

Barrier® 2% Dichlobenil Granules is not recommended for flower gardens, wildflowers, foliage plants, or flowering bulbs.

Amur corktree	Filbert (Ornamental)	Mountain ash
Arborvitae	Flowering almond	Nandina
Ash	Flowering quince	Oak
Azalea ¹	Forsythia	Osmanthus (Holly-olive)
Barberry	Gardenia	Paxistima
Beauty bush	Goldenrain tree	Pecan (Ornamental)
Birch	Hackberry	Photinia
Boxelder	Heather	Pine ²
Boxwood	Holly (Ilex spp.) ²	Pittosporum
Camellia	Honeylocust	Podocarpus
Caragana	Honeysuckle	Poplar
Cleyera (Cleyera japonica)	Ivy (Hedera helix)	Privet
Cotoneaster	Juniper	Pyracantha
Cottonwood	Kinnikinnick	Rhododendron
Crabapple (Ornamental)	Laurel	Rockrose
Deutzia	Leucothoe	Rose
Dogwood	Lilac	Russian olive
Eastern red cedar	Linden	Spirea
Elm	Locust	Squawcarpet
Elwood false cypress ²	Magnolia	Weigela
English walnut (Ornamental)	Maple ²	Willow ²
Euonymus	Mock orange	Yew (Taxus)

¹ Kurume hybrid azalea, Mollis hybrid azalea, hardy hybrids and hardy native species only.

² Except *I. crenata*, *I. rotunda*, *I. vomitoria*

² Not for use on these species within the State of California. Pine species are sensitive to injury from Barrier® 2% Dichlobenil Granules if applied within two years after transplanting.

USE PRECAUTIONS FOR LANDSCAPE PLANTINGS:

- ◆ Use only on the ornamental plants listed on this label. Do not apply to transplant or cutting beds or to newly set transplants, and do not seed or transplant into treated areas. Do not use in greenhouses or enclosed areas.
- ◆ Do not use on extremely light, sandy soils. Do not apply to sloping areas as runoff may occur and result in injury to lawns and other plants in adjacent areas.
- ◆ Do not exceed recommended rates as injury may occur.
- ◆ Avoid applications which will allow this product to lodge in the foliage of plants, particularly coniferous species. Do not allow this product to accumulate and be in contact with trunks at or below the soil line.
- ◆ Do not plant rotational crops, on which dichlobenil is not registered, in treated soil within one (1) year after application.
- ◆ Do not apply over snow or frozen soil.

APPLE, BLUEBERRY, CHERRY, GRAPE, AND PEAR:

Apply only to established plants which have been planted for at least four (4) months. Do not apply within three (3) months before or following grafting or budding of root stocks or planting new grafts. Wait thirty (30) days after application before harvesting stone fruits (cherry).

FOR 1.25 LBS. SHAKER CONTAINER:

- Apply $\frac{1}{2}$ ounce of product per 10 square feet of area for annual weed control.
- Apply $1\frac{1}{2}$ ounce of product per 10 square feet of area for perennial weed control.

FOR CONTAINER SIZES OF 5, 10, AND 20 POUNDS:

- Apply 4.6 pounds of product per 1,000 square feet of area for annual weed control.
- Apply 7.0 pounds of product per 1,000 square feet of area for perennial weed control. Refer to the Equipment Calibration section.

Table 2. Application rates of Barrier® 2% Dichlobenil Granules for annual and perennial weed control for apple, blueberry, cherry, grape, and pear established in home gardens.

WEEDS	Pounds per 1,000 Sq.Ft.	Product Ounces per 10 Sq.Ft.	Bag Size, Pounds	Approximate Treated Area for this Bag Size, Sq.Ft.
Annual Weeds:	4.6 lbs.	$\frac{1}{2}$ oz.	5 lb.	1,100 sq.ft.
			10 lb.	2,220 sq.ft.
			20 lb.	4,400 sq.ft.
Perennial Weeds:	7.0 lbs.	$1\frac{1}{2}$ oz.	5 lb.	715 sq.ft.
			10 lb.	1,430 sq.ft.
			20 lb.	2,860 sq.ft.

BLACKBERRY AND RASPBERRY:**FOR 1.25 LBS. SHAKER CONTAINER:**

- Apply this product only to established plantings.
- Use this product before new shoots emerge in the spring. Apply $\frac{1}{2}$ ounce of product per 10 square feet of area.

FOR CONTAINER SIZES OF 5, 10, AND 20 POUNDS:

- Apply this product only to established plantings.
- Use this product before new shoots emerge in the spring. Apply 4.6 pounds of product per 1,000 square feet of area for annual and perennial weed control. Refer to the Equipment Calibration section.

Table 3. Application rates of Barrier® 2% Dichlobenil Granules for annual and perennial weed control in blackberry and raspberry establishment in home gardens.

WEEDS	Pounds per 1,000 Sq.Ft.	Product Ounces per 10 Sq.Ft.	Bag Size, Pounds	Approximate Treated Area for this Bag Size, Sq.Ft.
Annual and Perennial Weeds:	4.6 lbs.	$\frac{1}{2}$ oz.	5 lb.	1,100 sq.ft.
			10 lb.	2,220 sq.ft.
			20 lb.	4,400 sq.ft.

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LIMITED WARRANTY AND DISCLAIMER.

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

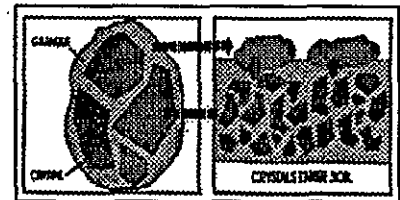
THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. This limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

APPENDIX - Supplemental advertising that may be offered to end users.

Barrier® 2% Dichlobenil Granules with its preemergent action is ideal for vegetation control under mulch or bark, around roses and ornamentals, or in flagstone and gravel walkways. It works its way down to the soil and forms a vapor barrier which provides season-long weed control.

1. This remarkable herbicide of razor-thin crystals is uniquely processed to make a precise granule.
2. Granules are spread on soil surface. Rainfall, irrigation, or shallow incorporation moves the herbicide into the root zone. Because of soil adsorption, lateral movement is minimal.
3. Temperature and soil moisture activate the barrier crystals and they begin to form a herbicide barrier. This continues for an entire growing season, and the spent crystals disappear.
4. In this vapor barrier no plant cell division can occur. Seeds trying to germinate in the barrier will die. Sprouts below this zone will be killed as they try to penetrate the barrier.
5. Existing vegetation such as shallow-rooted grasses, and annual weeds in this barrier will likewise be affected and die after two to three weeks.
6. Certain perennial weeds coming out of dormancy and attempting new growth within the treated barrier will run into the same dead end. They will be killed by the vapor.
7. Woody ornamentals, shrubs and trees that have deep roots extending well below the treated zone are tolerant to the soil applications of Barrier® 2% Dichlobenil Granules.



How Can Barrier® 2% Dichlobenil Granules Help You?

You spent a lot of time and money putting in those shrubs and you expect your ornamental beds to improve the appearance of your house and increase its value. Besides looking awful, weeds rob your plants of nutrients, water, and even sunlight. They are hard to dig out and come back again and again.

Your time is better spent enjoying the yard than maintaining it.

Barrier® 2% Dichlobenil Granules stop weeds and grasses before they get started and ends hard weeding chores.

Barrier® 2% Dichlobenil Granules - the long lasting and economical solution to ornamental weed control.

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How Do Barrier® 2% Dichlobenil Granules Work?

Barrier® 2% Dichlobenil Granules are spread over the soil surface and are activated by moisture in the soil and by watering after application. Once activated, Barrier® 2% Dichlobenil Granules form a 'gas blanket' just beneath the soil surface. This herbicide layer remains in undisturbed soil for 6 to 8 months.

The herbicide in Barrier® 2% Dichlobenil Granules is absorbed by actively growing roots and shoots which enter this active layer. Once it is absorbed, growth stops and the root or germinating seedling gradually dies.

Why Apply Barrier® 2% Dichlobenil Granules In The Fall?

Apply Barrier® 2% Dichlobenil Granules in the fall to get extended weed control of many grasses plus hard-to-kill perennials.

An application of Barrier® 2% Dichlobenil Granules in October or November gives control of weeds throughout the winter and is still active for that flush of weed seed germination in the spring. A year's worth of weeding with only one treatment!

Fall application is also the best time to get the upper hand on those tough perennial weeds such as thistle, horsetail, field morningglory, dock, and dandelion.

Apply as directed on label. If fall rains are expected - let Nature do the watering.