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

Attention: Karen S. Stumpf

Gentlemen:

Subject: Ridomil 5G Fungicide
EPA Registration No. 100-628
Your Application Dated January 15, 1987

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

Please be reminded that this label is being accepted on the condition that you make the labeling revision iterated in our comment below.

- The proposed changes and rationales for not changing the label directions affected by the comments in our November 18, 1986 letter are acceptable, except for the response to Comment 2. Since the drip irrigation applications to citrus are described in your January 15, 1987 letter as being soil surface applications, the label wording should be revised to indicate that the granules are to be placed "on" the soil surface rather than "under" the soil surface (as implied by the phrase "directly under the drip emitter(s) at each tree").

Sincerely yours,

Lois A. Rossi
Acting Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

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Enclosure

88596 Mack:J-10:KENCO:3/23/87:4/1/87:NeeCee:if:EK:kim

CONCURRENCES

SYMBOL	ORIGINATOR						
SURNAME							
DATE							

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ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 30 1986

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

100-628

Ridomil® 5G

Fungicide

For control of Phytophthora and Pythium
diseases of avocados, citrus, conifers in nurseries,
cotton, nonbearing deciduous fruits and nuts,
peanuts, raspberries, and soybeans.

50 Pounds
Net Weight

Active Ingredient:

Metalaxyl: N-(2,6-dimethylphenyl)-N-	
(methoxyacetyl) alanine methyl ester	5.0%
<u>Inert Ingredients:</u>	<u>95.0%</u>
Total:	100.0%

Ridomil 5G is a granular fungicide

Keep Out of Reach of Children.

Caution

See additional precautionary statements
on back of bag.

See directions for use on back of bag.

EPA Reg. No. 100-628
EPA Est. 100-AL-1

Control No. 51120

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Agricultural Division
CIBA-GEIGY Corporation
Greensboro, NC 27419

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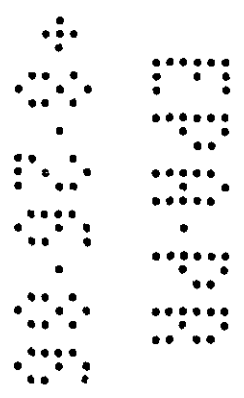
DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

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 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.



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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 POOR DISEASE CONTROL OR CROP INJURY.

Do not apply this product in such a manner as to directly or indirectly expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Reentry Statement

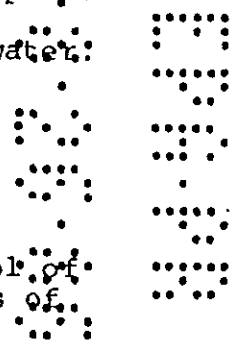
Do not enter treated areas without protective clothing until dust has settled.

Because certain states may require restrictive reentry intervals for various crops treated with this product, consult your State Department of Agricultural for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must inform workers of areas or fields that may not be entered without specific protective clothing until dust has settled and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION. Area treated with Ridomil 5G on (date of application). Do not enter without appropriate protective clothing until dust has settled. In case of accidental exposure, flush eyes or skin with plenty of water. Call physician if irritation persists. Remove and wash contaminated clothing before reuse."

General Information

Ridomil 5G is a systemic fungicide which provides control of certain diseases caused by members of the Oomycete class of fungi on selected crops.



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Note: Ridomil is a systemic fungicide having a specific mode of action. Ridomil could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, CIBA-GEIGY cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance or ways to control any possible Ridomil resistant strains of fungi which may occur.

Calculate the amount of Ridomil 5G needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \frac{\text{broadcast rate}}{\text{per acre}} = \frac{\text{amount needed}}{\text{per acre of field}}$$

Applicator Settings

It is important the user calibrate each individual granular applicator before its use. The settings in the chart in the Soybeans section of the label SHOULD ONLY BE USED AS A STARTING POINT. Even after calibration, it is best to check the actual application rate under your operating conditions. Application rates can vary due to changing moisture conditions, equipment wear, normal variation in product with density and particle size distribution.

Calibration: To calibrate a granular applicator, follow the procedure as outlined below:

1. Fill the hopper with Ridomil 5G.
2. Attach a plastic bag to the spout opening.
3. Refer to the appropriate chart in the Soybeans section of this label and adjust the setting on the applicator to match the desired rate per acre.
4. Measure off 1,000 linear feet and drive at the speed selected.
5. Weigh or measure the volume of each bag, change settings as needed to obtain the desired rate and repeat steps 2-5 until the setting delivers the correct number of ounces per 1,000 ft.
6. Repeat steps 1-5 for each applicator box.

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Conversions:

1. Time to cover 1,000 feet at:

- 4 mph = 2 mins. 50 secs.
- 5 mph = 2 mins. 16 secs.
- 6 mph = 1 min. 57 secs.

2. Ounces (wt.) of granules to approximate ounces (volume):

6 oz. wt. = 8 fl. oz. (1 level cup)

When calibrating granular applications, follow the recommendations below:

1. To reduce granule flow variability, adjust orifice openings by moving the controls in one direction only, such as from the closed position to open.
2. Granule flow through an orifice is not always proportional to ground speed, so make calibration checks at the same speed you plant at and maintain that ground speed as constant as possible when planting.
3. Granular pesticide products vary considerably in size, density and particle shape, so recalibrate applicators whenever you change brands and/or formulations. The same brand can even change from year to year.
4. Changing humidity and temperature during the day can change the flow rate of granules through the applicator's orifice. Recalibrate when conditions change and periodically readjust orifice settings to compensate.

5. Know the recommended rate. For banded applications, the area actually is the area covered by the band, not total cropland area planted. Some row-crop recommendations are based on treating in-the-row and these rates generally are specified as amounts (ounces) of granules per certain row length (often 1,000 feet). Others express rates as amount per treated acre which means the total area treated with the pesticide. If rates are expressed as amount per treated acre and banded applications are used, the amount of pesticide used per acre will be proportionately less. The formula above can be used to calculate the amount of Ridomil 5G needed per acre of crop when banded applications are made.
6. Calibrate frequently. There are several acceptable calibration methods. Learn one. Do the arithmetic first, then complete the material collection phase under field conditions.

Preharvest Intervals

Unless otherwise stated in the directions for use for a specific crop, there is no preharvest interval for Ridomil 5G.

Avocados

Ridomil 5G is a systemic fungicide which provides control of avocado root rot caused by Phytophthora cinnamoni. For best results, Ridomil should be used before or as soon as early symptoms of disease appear. For new plantings, the use of Phytophthora resistant root stocks with Ridomil 5G is recommended. Mature trees in advanced stages of decline cannot be cured with Ridomil. Applications are not needed during the winter months of November through February.

Sprinkler Irrigation: Apply 3/4-1 1/2 oz./sq. yd. evenly to the soil surface under the canopy of the tree. The table below shows the amount of Ridomil 5G to use based on the diameter of the tree canopy. Start applications at the beginning of the growing season or at transplanting and make two additional applications at three-month intervals.

Drip Irrigation: Place the recommended amount of Ridomil 5G (see table below) on the soil surface directly around the drip emitter at each tree. If there is more than one emitter per tree, distribute the total amount of Ridomil 5G among the emitters. Start applications at the beginning of the growing season or at transplanting and make two additional applications at three-month intervals.

<u>Diameter of Tree Canopy in Feet</u>	<u>Amount of Ridomil 5G Per 10 Trees</u>
5	1-2 lbs.
10	3 3/4-7 1/2 lbs.
15	8 3/4-17 1/2 lbs.
20	15 2/3-31 1/4 lbs.

Notes: 1) Do not make more than three applications per year and do not make the last application within 28 days of harvest or illegal residues may result. 2) Do not apply more than 960 lbs. Ridomil 5G per acre per year, or illegal residues may result.

Citrus

Includes grapefruit, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats and hybrids of these.

Use Ridomil 5G on citrus to control citrus foot rot, root rot, and trunk canker caused by Phytophthora spp. Apply to the soil as a broadcast application under the canopy of the trees. If rain is not expected within three days of application, water in with 1/2-1 inch of irrigation. For banded applications, use the formula in the General Information section for calculating the amount of Ridomil 5G needed per acre of trees. If the trees are on a drip irrigation system, distribute the amount of Ridomil 5G needed per tree (see table) to the soil directly under the drip emitter(s) at each tree. If there is more than one emitter at each tree, distribute the total amount of Ridomil 5G needed among the emitters.

Citrus in Nurseries (Arizona, California and Florida Only)

Make the first application of Ridomil 5G at the time of planting and make two additional applications at three-month intervals during the period when trees are actively growing. Apply 40-80 lbs./treated acre as a broadcast or banded application to the seedbeds, liners or bedded stock. For banded applications, use a band wide enough to cover the root systems of the plants.

Citrus Resets or New Plantings (Arizona, California and Florida Only)

Make the first application of Ridomil 5G to citrus resets or new plantings at the time of transplanting. Make up to three repeat applications at three-month intervals to coincide with root growth flushes during the growing season.

Water Ring Treatment: Uniformly spread 1 - 1 1/2 ozs. within the watering ring, then drench with five gallons water per tree.

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Soil Surface Treatment: Apply 40-80 lbs./treated acre (15-30 oz./1,000 sq. ft.) under the canopy of the trees. If natural rainfall is not expected within three days, lightly irrigate with 1/2-1 inch of water.

Established Plantings

Soil Surface Applications (Florida Only): Apply 40-80 lbs./treated acre (15 - 30 oz./1,000 sq. ft.) as a soil surface treatment under the canopy of the trees. Two additional applications may be made per year at three-month intervals. Use the table below as a guide for treating individual trees.

<u>Diameter of Trees Canopy (Ft.)</u>	<u>Amount of Ridomil 5G Per 10 Trees</u>
5	2 1/2 - 5 oz.
10	12 1/2 - 25 oz.
15	25 - 50 oz.
20	50 - 100 oz.

Soil Surface Applications (Arizona and California Only): Make one application in March-April. One or two additional applications can be made at three-month intervals to coincide with root flushes. Use the following table to determine the proper rate based on tree size and the number of applications per year. For applications based on broadcast rates, use Ridomil 5G at 160 lbs./treated acre (3 2/3 lbs./1,000 sq. ft.) when three applications are planned and at 220 lbs./treated acre (5 lbs./1,000 sq. ft.) when two applications are planned. Immediately after application irrigate with 1/2-1 inch sprinkler irrigation.

<u>Diameter of Tree Canopy (Ft.)</u>	<u>Lbs. of Ridomil 5G per Ten Trees</u>	
	<u>2 Applications/yr.</u>	<u>3 Applications/yr.</u>
5	1	2/3
10	4	3
15	9	7
20	15	12

Conifers in Nurseries

Ridomil 5G controls Phytophthora root rot of conifers.

Seedbeds and Plug-Plantings: Broadcast 12 1/2 lbs./treated acre over the beds at the time of seeding or transplanting. Additional applications should be made at approximately six-month intervals.

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2-0 Transplants*: Broadcast 25 lbs./treated acre over the beds at the time of transplanting. Additional applications should be made at approximately six-month intervals.

*Newly transplanted two-year old seedlings.

Cotton

Ridomil 5G provides control of seed rot and seedling diseases of cotton caused by Pythium spp. It does not control seedling diseases caused by other fungi.

Seed Rots and Seedling Diseases of Cotton Caused by Pythium spp.

Apply 1 1/4 - 2 1/2 lbs./13,000 linear feet of row (1 1/2 - 3 oz./1,000 linear ft.) as an in-furrow application at the time of planting. Mount the application tubes so the granules are mixed with the soil covering the seeds.

For broader spectrum disease control, Ridomil 5G can be applied with 10-20 lbs. Terraclor 10G/13,000 linear feet of row as an in-furrow application.

Note: Alternatively, Ridomil PC11G may be used if the predominant pathogens are Pythium spp. and Rhizoctonia spp.

Deciduous Fruits and Nuts in Nurseries and Field Plantings (Nonbearing)

Phytophthora Root Rot

Use of Ridomil 5G will aid in the control of crown, collar and root rot caused by Phytophthora spp. when used in conjunction with good cultural practices and rootstocks that are most tolerant to the disease. Ridomil 5G applications should be made before symptoms appear, especially in areas favorable for disease development. Ridomil 5G will not revitalize trees showing moderate to severe disease symptoms.

On new plantings, make the first application of Ridomil 5G two weeks after planting. Additional applications should be made at 2-3 month intervals or when conditions are most favorable for root, crown or collar rot development.

For established plantings, the application should be made in the spring before the plants start growth. Additional applications should be made at 2-3 month intervals or during periods most favorable for root, crown or collar rot development.

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Apply 80-160 lbs./treated acre (2-4 lbs./1,000 sq. ft.) uniformly under the canopy of the tree. Sufficient surface area should be treated in nurseries to cover the root zone of the trees. The treated area is based on the area under the tree canopy or the area of the row to be treated (similar to herbicide strips). Use the formula in the General Information section for calculating the amount of Ridomil 5G needed per acre of trees. Soil surface applications of Ridomil 5G will not be effective until the fungicide is moved into the root zone by rainfall or irrigation. Use the high rate in areas known to be infested with Phytophthora.

Notes: (1) Do not apply to plantings that will bear harvestable fruit within 12 months of the last application, or illegal residues may result. (2) Do not treat the roots directly or concentrate the granules around the tree trunks or injury may occur. (3) Do not apply to trees under stress, or injury may occur!

Peanuts

Ridomil 5G is a systemic fungicide for use in control of seedling and pod diseases of peanuts caused by Pythium spp.

Seedling Diseases: Apply 5 lbs./A in-furrow (6.5 oz./1,000 linear feet) or in a 7-inch band at the time of planting. With in-furrow applications, mount the application tubes so the granules are mixed with the soil covering the seed.

Pod Rot: Apply 10 lbs./12,400 linear feet (13 oz./1,000 linear feet) in an 8 to 12 inch band over the rows at early pegging. For best results, an irrigation should follow the application.

Notes: (1) Do not apply Ridomil 5G to wet foliage as foliar phytotoxicity and/or poor control may result. (2) Where pathogens other than Pythium spp. are present, use fungicides that control these diseases in combination with Ridomil. (3) Alternatively, Ridomil PC11G may be used if the predominant pathogens are Pythium spp. and Rhizoctonia spp.

Raspberries

Ridomil 5G is a systemic fungicide for use in the control of Phytophthora root rot.

Apply 5 lbs./1,000 ft. of row to the soil surface in a three foot band over the row (72.5 lbs./A on a broadcast basis). Make one application in the spring and another application in the fall after harvest.

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Note: Do not apply Ridomil 5G within 45 days of harvest, or illegal residues may result.

Soybeans

Ridomil 5G is a systemic fungicide for use in the control of Phytophthora root and stem rot and Pythium damping-off. Ridomil 5G may be applied in a 7-inch band over the seed row at planting or in the seed furrow. The seed furrow application will provide more consistent results if rain is not expected before the seeds germinate.

For best results against Phytophthora root and stem rot, use Ridomil 5G with soybean varieties that have some tolerance to the races of Phytophthora present in the field. The high rate of Ridomil 5G should be used in areas with a history of severe Phytophthora damage. Under severe late season Phytophthora pressure, Ridomil 5G may not provide complete control.

Pythium and Phytophthora: Apply 3-6 oz./1,000 linear feet of row in the seed furrow or as a 7-inch band over the row at planting. Apply amount recommended per acre according to the row spacing chart. Use the high rate in areas with a history of Phytophthora problems. When making in-furrow treatments, mount the application tubes so the granules are mixed with the soil covering the seed.

Suggested Rates Per Acre According to Row Spacing

Row Spacing	Linear Feet of Soybean Row Per Acre	Amount of Ridomil 5G Needed Per Acre
38 in.	13,756	2 2/3-5 1/3 lbs.
36 in.	14,520	2 3/4-5 1/2 lbs.
30 in.	17,424	3 1/3-6 2/3 lbs.
24 in.	21,780	4 1/6-8 1/3 lbs.
20 in.	26,136	5-10 lbs.

Note: Ridomil 5G is specific for Pythium and Phytophthora and will not control other diseases that may attack soybeans.

Suggested Application Settings for a 7" Band Width
or in the Seed Furrow

Ozs./1,000 ft.	← 4 MPH →				← 5 MPH →				←	
	3	4	5	6	3	4	5	6	3	4
Gandy	13	15	17.3	19	14.7	17.3	19.2	21	16	19
Allis Chalmers 1979 & After	1.3	1.4	1.5	1.8	1.35	1.5	1.85	2.0	1.45	1.8
Noble 1972 & Before	4	6	7 or 8	9	6	7 or 8	9	11	7	9
Noble 1973 & After	4	5	6	7	5	6	7	8 or 9	5	7
John Deere Metal Box	1/22	1/24	1/26	1/29	1/23	1/26	1/30	2/1	1/25	1/28
John Deere 1978 & Before Meter Scale 0...10...20...	8	10	12	14	10	12	14	16	11	14
John Deere 1979 & Later Meter Scale 0...5...15...	7	8	9	10	7 or 8	9	10	12	8	10
I. H. 1981 & After	1.4	1.55	1.75	1.85	1.5	1.75	1.85	2.0	1.65	1.9

5G or 2E can be made provided that the total amount of metalaxyl applied does not exceed the maximum allowed for the specific crop. The maximum amount of metalaxyl active ingredient allowed per crop is 2 lbs. or any combination of 4 qts. of Ridomil 2E or 40 lbs. of Ridomil 5G.

<u>Crop</u>	a.i. <u>Lbs. Metalaxyl</u>	Amount of <u>Ridomil 2E or 5G</u>
Cotton	2	4 qts. 2E or 40 lbs. 5G
Peanuts	2	4 qts. 2E or 40 lbs. 5G
Soybeans	2	4 qts. 2E or 40 lbs. 5G

Rotation (Plantback) Restrictions

<u>Rotation Crop</u>	<u>Planting Time From Last Ridomil 5G Application</u>
Apples	-0- days
Avocados	-0- days
Broccoli	-0- days
Cabbage	-0- days
Cauliflower	-0- days
Chinese Broccoli (gai lon, white flowering broccoli)	-0- days
Chinese Cabbage (Bok choy and napa)	-0- days
Citrus	-0- days
**Cucurbit Vegetables	-0- days
Deciduous Fruits and Nuts*	-0- days
Hops	-0- days
Head Lettuce	-0- days
Spinach	-0- days
***Legume Vegetables	-0- days
Onions	-0- days
Peanuts	-0- days
Pineapples	-0- days
Potatoes	-0- days
Raspberries	-0- days
Soybeans	-0- days
Tobacco	-0- days
Tomatoes	-0- days
Wheat	14 days
Corn	270 days
Root Crops	270 days
<u>Crops Not Intended for Food or Feed</u>	-0- days
<u>All Other Crops Intended for Food or Feed</u>	540 days

*These crops and other perennial crops may be planted immediately following last application of Ridomil 5G provided they will not bear harvestable fruit within 12 months.

**Cucurbit Vegetables: Includes balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds, cantaloupe, casaba, crenshaw, honeydew melon, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer squash, winter squash, watermelon, and cucurbit hybrids.

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***Legume Vegetables (Succulent or Dried): Includes field beans, French beans, kidney beans, lima beans, mung beans, navy beans, pinto beans, runner beans, snap beans, wax beans, broad beans (fava beans), chickpeas (garbanzo beans), lentils, lupines (sweet, white sweet, white and grain), garden peas, field peas, sugar peas, southern peas (blackeyed peas, crowder peas, cowpeas, catjang) and edible soybeans.

Storage and Disposal

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited.

Pesticide Disposal

Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide is a violation of federal law. Pesticide that cannot be used according to label instructions must be disposed of according to federal, state or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Disposal

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

For minor spills, 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 (919) 292-7100 day or night.

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Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

First Aid: In case of contact with eyes, flush with plenty of water. If on skin, wash with plenty of soap and water. Get medical attention if irritation persists. If swallowed, drink large quantities of water and induce vomiting by placing finger in back of throat; call a physician or contact your local Poison Control Center. Never give anything by mouth to an unconscious person. Avoid alcohol. In case of inhalation exposure, remove victim to fresh air.

Environmental Hazards

Do not apply to water bodies or wetland. Do not contaminate water by cleaning of equipment or disposal of waste.

Ridomil® trademark of CIBA-GEIGY

Terraclor® trademark of UniRoyal, Inc. for PCNB

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