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Ridomil® MZ58

Fungicide

For control of certain diseases of
potatoes, tomatoes, onions, cucumbers,
melons, and squash

ACCEPTED
JUN - 2 1987
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-629-1

Five Lbs.
Net Weight

Active Ingredients:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester	10.0%
Zinc ion and manganese ethylene bisdithiocarbamate,*	48.0%
a coordination product of	
manganese ⁺⁺	9.6%
zinc ⁺⁺	1.2%
ethylene bisdithiocarbamate ion	37.2%

Inert Ingredients:	42.0%
Total:	100.0%

*Same as the active ingredient found in Dithane® M-45 and Manzate® 200.

Ridomil MZ58 is a wettable powder

Keep Out of Reach of Children.

WARNING

AVISO

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

See additional precautionary statements on back of bag.

See Directions For Use on panel at right.

EPA Reg. No. 100-629

EPA Est. No. 100-AL-1

CIBA-GEIGY

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.

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 such a manner as to directly or through drift expose workers or other persons, except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

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

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

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture 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 sprays have dried, 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: "WARNING. Area treated with Ridomil MZ58 on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental eye exposure, flush eyes with plenty of water. Get medical attention. In case of contact with skin, wash thoroughly with soap and water. Call physician if irritation occurs. Remove and wash contaminated clothing before reuse."

General Information

Ridomil MZ58 contains 10% of the active ingredient metalaxyl, and 48% of the active ingredient mancozeb. Metalaxyl is a systemic fungicide for use on selected crops to control diseases caused by members of the Phycomycete family of fungi. Mancozeb is effective against a wide range of fungal pathogens.

Note: Metalaxyl is a systemic fungicide having a specific mode of action and 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. If treatment is not effective following the use of Ridomil MZ58 as recommended, a resistant strain of fungi may be present. If the treatment is ineffective due to the presence of a metalaxyl resistant strain of fungi, neither Ridomil MZ58 nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance in your particular crop and disease control situation. Do not use Ridomil MZ58 for disease control in greenhouse crops.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap as crop injury may result.

Mixing Instructions

Add one-half to three-fourths of the required amount of water to the spray tank, add the proper amount of Ridomil MZ58, then add the rest of the water. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

Ridomil MZ58 is usually compatible with Bravo[®], Dithane M-22, Dithane M-45, D.z.n[®], Difolatan[®], Manzate, and Manzate 200.

To assure the compatibility of Ridomil MZ58 with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

IMPORTANT

Do not allow Ridomil MZ58 to become wet or overheated during storage. This may lead to chemical changes which will impair

the fungicidal effectiveness of Ridomil MZ58 and may also generate flammable vapors. Keep bag closed when not in use.

Cucumbers, Melons, and Squash

Ridomil MZ58 provides effective control of downy mildew caused by Pseudoperonospora cubensis when used as a foliar spray in a preventative disease control program.

Apply 1 1/2-2 lbs. Ridomil MZ58 per acre in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals until the threat of disease is over. Under heavy disease pressure, use the higher rate of Ridomil MZ58.

Notes: (1) To minimize the potential for resistance, do not make more than 4 applications of Ridomil MZ58 per crop. (2) If downy mildew continues to be a problem after making 4 applications of Ridomil MZ58, use other fungicides registered for downy mildew control. (3) Do not make the last application within 5 days of harvest or illegal residues may result.

Onions (Dry Bulb and Seed Onions)

Ridomil MZ58 provides effective control of downy mildew caused by Peronospora destructor when used as a foliar spray in a preventative disease control program.

Apply 1 1/2-2 lbs. Ridomil MZ58 per acre in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals until the threat of disease is over. Use a suitable spreader-sticker at rates recommended on the product label. Under heavy disease pressure, use the higher rate of Ridomil MZ58.

Notes: (1) To minimize the potential for resistance, do not make more than 4 applications of Ridomil MZ58 per crop. (2) If downy mildew continues to be a problem after making 4 applications of Ridomil MZ58, use other fungicides registered for downy mildew control. (3) Do not make the last application within 7 days of harvest, or illegal residues may result.

Potatoes

Ridomil MZ58, when used as a foliar application in a preventative disease control program, will provide effective control of late blight and tuber rot caused by Phytophthora infestans, Pythium leak caused by Pythium spp, and pink rot caused by Phytophthora ethroseptica. Make applications of Ridomil MZ58 in

sufficient water to obtain thorough coverage for ground applications and in a minimum of 3 gals. of water per acre for aerial applications.

Late Blight: Apply 1 1/2-2 lbs. Ridomil MZ58 per acre. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals until the threat of disease is over. Under heavy disease pressure, use the higher rate of Ridomil MZ58.

Tuber Rot, Pythium Leak and Pink Rot: Apply 2 lbs. Ridomil MZ58 per acre. Make the first application at flowering and another one 14 days later. If the field has a history of tuber disease problems, make a third application 14 days after the second application.

Note: If applications of Ridomil MZ58 are being made for late blight control that correspond to the timing of applications for tuber disease control, additional applications for tuber disease control are not needed.

For supplemental control of early blight, add 0.8 lb. of Manzate 200 80W, Dithane M-45 80W, Manzate 80W or Dithane M-22 80W to the Ridomil MZ58 spray or make an additional application of any registered early blight fungicide between each Ridomil MZ58 spray. Where early blight disease pressure is heavy, use early blight fungicides according to product use directions, and use Ridomil MZ58 only when late blight threatens. Do not apply more than 0.8 lb. per acre per application of Manzate 200 80W, Dithane M-45 80W, Manzate 80W, or Dithane M-22 80W in combination with Ridomil MZ58.

Notes: (1) Do not apply Ridomil MZ58 within 7 days of harvest or illegal residues may result. (2) To minimize the potential for resistance, do not make more than 4 applications of Ridomil MZ58 per crop. (3) If late blight is still a problem after making 4 applications of Ridomil MZ58, use other fungicides registered for late blight control. (4) Do not tank mix with amobam or Polyram®.

Tomatoes

Ridomil MZ58, when used as a foliar application in a preventative disease control program, will provide effective control of late blight caused by Phytophthora infestans.

Apply 1 1/2-2 lbs. Ridomil MZ58 per acre as a foliar spray in sufficient water to provide thorough coverage. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals until the threat of disease is over. Under heavy disease pressure, use the higher rate of Ridomil MZ58.

Note: When conditions are favorable for development of diseases other than late blight, any registered fungicides which control those diseases may be applied according to their label directions. When making applications of Manzate 200, Dithane M-45, Manzate, or Dithane M-22, 1 1/2 lbs./A of Ridomil MZ58 may be added to the spray mix every 14 days for control of late blight. Do not apply more than 2 lbs. per acre per application of Dithane M-45 80W, Manzate 200 80W, Dithane M-22 80W, or Manzate 80W in combination with Ridomil MZ58. Observe all precautions and restrictions that appear on the labels of other products applied with Ridomil MZ58.

Notes: (1) Do not apply Ridomil MZ58 within 5 days of harvest or illegal residues may result. (2) To minimize the potential for resistance, do not make more than 4 applications of Ridomil MZ58 per crop. (3) If late blight continues to be a problem after making 4 applications of Ridomil MZ58, use other fungicides registered for late blight control. (4) Do not tank mix with amobam, Polyram, nabam, thiram, zineb, or ziram.

Plant Back Restrictions

<u>Crop</u>	<u>Planting Time From Last Application of of Ridomil MZ58</u>
Apples	-0- Days
Asparagus	-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
Cotton	-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
Crops <u>Not Intended</u> for Food or Feed	-0- Days
Other Crops <u>Intended</u> for Food or Feed	540 Days

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

**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, garden peas, field peas, sugar peas, southern peas (blackeyed peas, crowder peas, cowpeas, catjang) and edible soybeans.

Storage and Disposal

Pesticide and Storage Disposal

Store in a dry place. Do not contaminate water, food or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate 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.

Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING

Causes eye irritation. Do not get in eyes.

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist. Avoid contact with skin or clothing. Protective clothing (long pants, long sleeve shirt, gloves, hat, and boots) must be worn during mixing and loading. This product may cause allergic skin reaction in some individuals.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. If swallowed, drink large quantities of water and induce vomiting by placing finger in back of throat, and contact local poison control center. Avoid alcohol. Never give anything by mouth to an unconscious person. In case of inhalation exposure, move from the contaminated area.

Note to Physician: There is no specific antidote for Ridomil MZ58. Lavage stomach. Give a saline laxative and supportive therapy.

Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

Ridomil® trademark of CIBA-GEIGY for metalaxyl
U.S. Patent No. 4,151,299

Bravo® trademark of SDS BioTech Corporation for chlorothalonil

Difolatan® trademark of Chevron Chemical Company for captafol

Dithane® trademark of Rohm and Haas Company for maneb/mancozeb

D.z.n® trademark of CIBA-GEIGY for diazinon

Manzate® trademark of E. I. duPont de Nemours & Company for maneb/mancozeb

Polyram® trademark of BASF Corporation for metiram

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