

707-179

PM 2-1

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| US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (TS-767) WASHINGTON, DC 20460 | EPA REGISTRATION NO. 707-179 | DATE OF ISSUANCE JAN 8 1985 |
| | TERM OF ISSUANCE | |
| | NAME OF PESTICIDE PRODUCT Dithane M-45 DF/70 Agricultural Fungicide | |

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION
 (Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

$\frac{161}{18}$ $\frac{155931}{1}$

Rohm and Haas Company
 Independence Mall West
 Philadelphia, PA 19105

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 indorsement 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 sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment:
 - a. Add the phrase "EPA Registration No. 707-179."
 - b. Under apples, the States of Ohio, Pennsylvania, and South Carolina are listed twice in the restrictions column.
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.

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 stamped copy of the label is enclosed for your records.

Henry M. Jacoby
 Product Manager (21)
 Fungicide-Herbicide Branch
 Registration Division (TS-767)

Enclosure

ATTACHMENT IS APPLICABLE

| | |
|---|----------------|
| SIGNATURE OF APPROVING OFFICIAL <i>Henry M. Jacoby</i> | DATE 1/8/86 |
|---|----------------|

20636

ROHM AND HAAS COMPANY

INDEPENDENCE MALL WEST
PHILADELPHIA, PENNSYLVANIA 19103



DITHANER^R M-45 DF/70 AGRICULTURAL FUNGICIDE

EPA Reg. No. _____

ACTIVE INGREDIENTS:

Mancozeb (A coordination product of zinc ion
and manganese ethylene bisdithiocarbamate) 70%

In which the ingredients are:

Manganese++ 14%
Zinc++ 1.75%
Ethylene bisdithiocarbamate ion (C₄H₆N₂S₄)-- 54.25%

INERT INGREDIENTS 30%
100%

EPA Reg. No. 707-
EPA Est. No. 707-PA-1
U.S. Patent 3,379,610

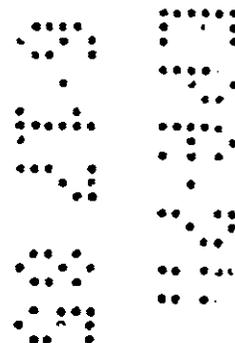
ACCEPTED
with **COMMENTS**
in EPA Letter Dated:

JAN 8 1986

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

707-179

(6942E-15Z)
5/16/85



30626

DITHANE(R) M-45 DF/70 AGRICULTURAL FUNGICIDE
EPA REG. NO. _____

DIRECTIONS FOR USE

NOTE: Before using this product, read the entire Precautionary Statements, Directions for Use and the Conditions of Sale and Warranty. If the Conditions of Sale and Warranty are not acceptable, return product unopened within thirty days of purchase to place of purchase.

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

REENTRY AND WORKERS PROTECTION STATEMENTS

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. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

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 be given if there is reason to believe that written warnings cannot be understood by workers. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written warnings must include the following information:

CAUTION

(Insert area of field description) treated with DITHANE M-45 DF/70 fungicide on (insert date of application). Do not enter treated areas without protective clothing until sprays have dried. In case of accidental exposure: Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to DITHANE M-45 DF/70 fungicide and describe his condition. For further information see the "Statement of Practical Treatment."

Oral warnings must include the same information that is in the written warnings.

(6942E-15Z)

GENERAL USE INFORMATION

DITHANE M-45 DF/70 fungicide is a broad-spectrum protectant fungicide recommended for the control of fruit, field, vegetable, and ornamental crop diseases. Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of an agricultural surfactant will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and fungicide retention during periods of wet weather.

USE RATE DETERMINATION

Carefully read, understand, and follow label use rates and limitations.

Under low disease conditions, minimum per application label rates can be used while maximum label rates and shortened spray schedules are recommended for severe or threatening disease conditions.

For proper application, determine the number of acres to be treated, the recommended label use rate, and the gallonage to be applied per acre. Prepare only the amount of spray solution required to treat the measured acreage. Careful calibration of spray equipment is recommended prior to use.

When applied via hand sprayers, 1 pound DITHANE M-45 DF/70 fungicide per 100 gallons or acre is equivalent to 1 level tablespoon per gallon spray solution.

MIXING

Slowly place into spray tank as it is being filled or thoroughly premix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, growth regulators, micronutrients, and spray adjuvants after DITHANE M-45 DF/70 fungicide has been placed into suspension.

When preparing spray solutions for use in a hand sprayer, premix as a slurry in a small container, and then add to sprayer containing 1/3 to 1/2 the desired final water volume.

COMPATIBILITY

DITHANE M-45 DF/70 fungicide is compatible with most commonly used agricultural fungicides, insecticides, and growth regulators. When preparing tank mixes, user should consult spray compatibility charts or State Extension Service Specialists prior to actual use.

SPRAY ADJUVANTS

The addition of agricultural surfactants, to DITHANE M-45 DF/70 fungicide spray will improve initial spray deposits, fungicide redistribution, and spray adjuvants. The following spray adjuvants have been especially formulated to optimize the performance of foliar applied agricultural chemicals:

(E-152)

- TRITON(R) CS-7 A spreader-binder designed specifically for use in concentrate and low volume sprays applied by aircraft or ground equipment.
- TRITON(R) 8-1956(R) A water-dispersible, resin-based nonionic surfactant which resists re-wetting and removal by rain. Effective with dilute sprays applied by ground equipment.
- TRITON(R) AG-98 A low foam nonionic general purpose spray adjuvant. May be used in dilute or concentrate sprays applied by aircraft or ground equipment.

Place DITHANE M-45 DF/70 fungicide into suspension prior to adding an adjuvant to the spray mixture. Read and carefully observe the cautionary statements and all other information appearing on both product labels prior to spray preparation.

APPLICATION

Ground:

Thorough coverage foliar sprays generally result in optimum disease control. To achieve good coverage use proper spray pressure, gallonage per acre, nozzles (generally hollow cone), discs (generally D-5 to D-7), nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

Hand Sprayers:

Thoroughly spray plant foliage until run-off.

Aerial:

A uniform initial spray deposit over the crop canopy generally results in optimum disease control. Each aircraft should be prechecked for droplet size, uniformity of spray pattern, swath width, and spray volume.

Nozzle selection - Hollow cone brass nozzles with a D series orifice disc and core (whirlplate) are recommended. Nozzles should point straight down or slightly backward.

Swath width - For most field and vegetable crops, swaths just beyond the wingspan of 36 to 40 feet for light aircraft and up to 45 feet for heavier aircraft are suggested. Optimum swath for helicopters is usually 5 to 10 feet beyond normal boom length.

Spray volume - On vegetable and field crops, 2 to 3 gallons of spray per acre is generally optimum; orchards and vineyards can be handled with spray volumes of 5 gallons per acre. Some tall or dense foliage crops, requiring greater penetration to the lower leaf surface, will require higher spray volumes.

Altitude - For most crops, the spray boom should be positioned 5 to 10 feet above the crop canopy.

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Flagging - Swaths should be marked at the end of the field with permanent flags or by a flagman. Swaths should be measured accurately with a chain or other device except when rows can be accurately counted.

DISEASE MONITORING:

DITHANE M-45 DF/70 fungicide is a broad spectrum protectant fungicide. If not applied on a routine protectant spray schedule, crops should be scouted on a weekly basis. Fungicide application should be made, at the recommended label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental conditions favorable for disease development.

RESTRICTIONS:

Users should carefully read, understand, and follow all use restrictions prior to using DITHANE M-45 DF/70 fungicide.

DIRECTIONS FOR USE:

| Crop | Diseases Controlled | Rate of DITHANE M-45 DF/70 Fungicide Per Application <u>lb./A</u> | Remarks (Also Refer to Directions For Use) |
|--------------------|--|--|---|
| VEGETABLES: | | | |
| Asparagus | Rust | 2 $\frac{1}{4}$ | Start applications when rust first appears and repeat at 10 day intervals. Four applications are usually sufficient. |
| Cantaloupes | Refer to melons | | |
| Carrots | Alternaria leaf spot Cercospora leaf spot | 1 $\frac{3}{4}$ to 2 $\frac{1}{4}$ | Apply in 75 to 125 gallons spray per acre. Start applications when disease first threatens and repeat every 7 to 10 days as needed. The addition of a TRITON surfactant to spray solutions will improve performance. |
| Celery | Early blight Late blight | 2 $\frac{1}{4}$ | Start applications in the plant bed when plants first come through the ground. Make further applications at 3 to 5 day intervals until plants are set in the field. Continue field applications on a 7 day schedule. Remove excess residue remaining at harvest by stripping, trimming, and washing. The addition of a TRITON surfactant to spray solutions will improve performance. |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Rate of DITHIANE M-45 DF/70 Fungicide Per Application lb./A</u> | <u>Remarks (Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|-----------------------------|--|--|---|--|
| Corn (sweet, popcorn) | Helminthosporium leaf blights common rust | 1 3/4 | Use sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4 to 7 day intervals. The addition of TRITON B-1956 or TRITON CS-7 to spray solutions will improve performance. | Do not apply within 7 days of harvest. Do not feed treated forage to livestock. |
| Cucumbers | Refer to melons | | | |
| Fennel | Refer to celery. | | | Do not apply within 7 days of harvest. |
| Melons | Alternaria leaf spot Anthracnose Cercospora leaf spot Downy mildew Gummy stem blight Scab | 2 1/4 to 3 1/3 | Start applications when plants are in the two leaf stage and repeat at 5 to 7 day intervals. Use sufficient water and direct spray, to provide thorough coverage of both upper and lower leaf surfaces. | Do not apply within 5 days of harvest. |
| Muskmelons | Refer to melons | | | |

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| Crop | Diseases Controlled | Rate of DITHANE M-45 DF/70 Fungicide | | Remarks (Also Refer to Directions For Use) | Restrictions |
|--------------------------|---|---|-------|---|--|
| | | Per Application | lb./A | | |
| Onions (dry bulb) | Botrytis leaf blight Downy mildew Purple blotch Neck rot | 3 1/3 | | Follow a protective spray schedule starting when diseases are first reported in the area and repeat at 7 day intervals throughout the season. The addition of a TRITON surfactant to spray solutions will improve performance. Do not allow spray or drift to contact bulbs after lifting, from soil. | Do not apply within 7 days of harvest. |
| (furrow drench) | Smut | 3 1/3 | | Apply 3 1/3 lbs. per acre as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons water per acre. | Do not use more than 2.4 lbs. actual per acre (29,000 linear feet of furrow) with an 18 inch row spacing). |
| Potatoes | Early blight Late blight | 1 to 2 1/4 | | Begin application when plants are 4 to 6 inches high by applying 1 lb. per acre. As the vines increase in size, apply 1 1/2 to 2 1/4 lbs. per acre on a 7 to 10 day spray schedule throughout the season. Reduce the spray interval under heavy disease conditions or weather conditions favorable for rapid disease development. The addition of a TRITON surfactant to spray solutions will improve performance. | |
| (Seedpiece treatment) | Fusarium decay Seedborne common scab | - | | Dip whole or cut potato tubers in 1 1/3 lb. DITHANE M-45 DF/70 fungicide per 50 gallons of water. Place treated tubers in a clean container following treatment and plant as soon as possible. Spread treated seedpieces in a cool place if held before planting. | Do not use treated seed potatoes for food or feed purposes. |
| Squash, summer | | | | Refer to melons | |

| Crop | Diseases Controlled | Rate of DITHANE M-45 DF/70 Fungicide Per Application | | Remarks (Also Refer to Directions For Use) | Restrictions |
|-------------------------|--|--|---------------|--|--|
| | | lb./A | lb./100 gals. | | |
| Tomatoes | Anthracoese Early blight Gray leaf spot Late blight Leaf mold | 1 3/4 to 3 1/3 | - | Start applications when seedlings emerge or transplants are set and repeat at 7 day intervals throughout the season. The addition of a TRITON surfactant to spray solutions will improve performance. | Do not apply within 5 days of harvest. |
| Watermelons | Refer to melons | | | | |
| FRUITS AND NUTS: | | | | | |
| Apples | Bitter rot Black rot Brown rot Fly speck Rusts Scab Sooty blotch | 1 1/3 | 1 to 2 1/4 | For apple scab control, apply every 7 to 14 days throughout the season starting with a green tip or delayed dormant spray and continue through cover sprays. For control of rust diseases, begin applications during bloom period and for other diseases listed, begin applications at first cover spray. When using low volume air blast sprays, adjust the mixing rate accordingly. To avoid uneven, blotchy residues from high volume dilute sprays add 2 to 3 ounces TRITON D-1956 per 100 gallons of spray in the last 1 or 2 applications before harvest. Concentrate applications usually leave a uniform, even deposit. | Do not apply within 21 days of harvest in Arkansas, Delaware, Illinois, Indiana, Kansas, Kentucky, Maryland, Missouri, New Jersey, North Carolina, Ohio, Pennsylvania, South Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia, or within 30 days of harvest in other states not mentioned above. Do not graze livestock in treated areas. |
| Bananas | Sigatoka | 2 1/2 to 4 1/2 | - | Apply when leaves first appear and repeat every 2 to 3 weeks or as required. Use sufficient water to provide adequate coverage. The addition of a TRITON surfactant to spray solutions will improve performance. | |

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| Crop | Diseases Controlled | Rate of DITHANE M-45 DF/70 Fungicide Per Application | | Remarks (Also Refer to Directions For Use) | Restrictions |
|-----------------------------|--|--|---------------|--|---|
| | | lb./A | lb./100 gals. | | |
| Crabapples | Refer to apples | 1 1/3 | 1 to 2 1/4 | | Do not graze livestock in treated areas. Do not apply within 15 days of harvest. |
| Cranberries | Fruit rots | 3 1/3 to 6 3/4 | - | Start applications at mid-bloom and repeat at 7 to 10 day intervals as required. | Do not apply within 30 days of harvest. |
| Grapes (California only) | Bunch rot Deadarm Downy mildew | 1 3/4 to 4 1/4 | - | Apply in sufficient water to provide thorough coverage starting when new shoots are 1/2 to 1 1/2 inches long. Repeat when shoots are 3 to 5 inches long, when shoots are 8 to 10 inches long, and then at 10 to 14 day intervals until fruit is set. | Do not apply after fruit is set (California only). |
| (Other areas) | Black rot Deadarm Downy mildew | | | | Do not apply within 66 days of harvest. |
| Papaya | Anthracnose Phytophthora fruit rot | 2 1/4 to 2 3/4 | - | Start applications at flowering and continue at 7 to 14 day intervals. Direct spray to crown and blossom area. Use 6 to 8 ounces TRITON B-1956 spreader-sticker per acre. | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Rate of DITHANE M-45 DF/70 Fungicide Per Application</u> | | <u>Remarks</u> (Also Refer to Directions For Use) | <u>Restrictions</u> |
|-------------|----------------------------|---|----------------------|--|---|
| | | <u>lb./A</u> | <u>lb./100 gals.</u> | | |
| Pears | Refer to apples | | | | Do not apply within 15 days of harvest. Do not graze livestock in treated areas. |
| | Pear psylla nymphs | 1 1/3 | 1 3/4 | Effective control of young nymphs can be obtained by using 2 to 3 consecutive sprays. Applications should start at petal fall and continue at 7 to 10 day intervals. As new growth occurs, it must be protected by spraying. Timing of sprays should coincide with the initial appearance of pear psylla nymphs. Specific timing of sprays should be obtained from State Agricultural Experiment Station workers or State Extension Service specialists. | |
| | (Postharvest sprays) | | 1 3/4 to 2 1/4 | Use a full coverage spray of 800 to 1000 gallons spray per acre. Timing of spray should be under direction of State Agricultural or Extension Service workers. | |
| Quince | Refer to apples | | | | Do not apply within 15 days of harvest. Do not graze livestock in treated areas. |

| Crop | Diseases Controlled | Rate of | Remarks | Restrictions |
|--|---|--|---|---|
| | | DITHANE M-45 DF/70 Fungicide Per Application lb./A | | |
| FIELD CROPS: | | | | |
| Barley | Refer to wheat | | | |
| Corn (Field, Hybrid Seedcorn) | Helminthosporium leaf blights common rust | 1 2/3 | Start application when disease symptoms first appear and depending on severity of infection, continue on a 7 to 14 day schedule. The addition of TRITON B-1956 or TRITON CS-7 to spray solutions will improve performance. | Do not apply within 14 days of harvest. |
| Cotton (Southwest U.S. Only) | Rust | 1 1/3 to 2 1/4 | Start applications when rust first appears and repeat at 10 to 14 day intervals until disease threat is past. | Do not apply within 14 days of harvest. Do not graze livestock in treated areas or feed treated forage to livestock. |
| Oats | Refer to wheat | | | |
| Peanuts | Cercospora leaf spot Rust | 1 to 2 1/4 | Start applications when disease first appears or is reported in area. Repeat sprays at 10 to 14 day intervals. Reduce sprays to a 7 day interval during humid weather. | Do not apply within 14 days of harvest. Do not feed treated forage to livestock. |
| Rye | Refer to wheat | | | |

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| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Rate of DITHANE M-45 DF/70 Fungicide Per Application lb./A</u> | <u>Remarks (Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|-------------|---|---|--|---|
| Sugar Beets | Cercospora leaf spot | 1 3/4 to 3 1/3 | Start application when disease first threatens and repeat every 7 to 10 days as needed. The addition of a TRITON surfactant to spray solutions will improve performance. | Do not apply within 14 days of harvest. Do not feed treated tops to livestock. |
| Wnr | Helminthosporium blights and leaf spots Leaf rust Tan spot Septoria leaf spot Septoria glume blotch | 2 1/4 | Start application at onset of disease or when plants are in the tillering to jointing stage and repeat at 7 to 10 day intervals. The addition of a TRITON surfactant to spray solutions will improve performance. | Do not make more than three applications during the season. Do not apply within 26 days of harvest. Do not graze livestock in treated areas within 26 days after application. |

| Crop | Diseases Controlled | Slurry Seed Treatment Rate for | | Remarks (Also Refer to Directions For Use) | Restrictions |
|------------------------------|---|---|-------------|--|---|
| | | DITHANE M-45 DF/70 Fungicide oz./bu. | oz./100 lb. | | |
| SEED TREATMENT: | | | | | |
| Barley | Covered smut False loose smut Damping-off Seed rot Seedling blights | 1.5 to 2.3 | 3 to 4.8 | Seeds to be treated should be cleaned and well cured prior to treatment. DITHANE M-45 DF/70 fungicide may be applied to dry seed with conventional slurry seed treating equipment. For best results, the seed must be completely and uniformly covered with fungicide. For seed treatment, a dye must be added to DITHANE M-45 DF/70 fungicide which will impart an unnatural color to the seed. | Treated seed should be labeled, "Must not be used for food, feed, or oil purposes". |
| Corn (field) | Damping-off Seed rots Seedling blights | 1.7 to 3.4 | 3 to 6.2 | | |
| Cotton (acid delinted) | Damping-off Seedling blights | -- | 3.4 | | |
| (reginned) | Damping-off Seedling blights | -- | 6.8 | | |
| Flax | Damping-off Seed rots Seedling blights | 2.3 to 4.6 | 4.1 to 8.1 | | |

| Crop | Diseases Controlled | Slurry Seed Treatment Rate for DITHANE R-45 DF/70 Fungicide Per Application | | Remarks (Also Refer to Directions For Use) | Restrictions |
|----------------------|---|--|-------------|--|--------------|
| | | oz./bu | oz./100 lb. | | |
| Oats | Damping off Seed rots Seedling blights Smuts | 1.5 to 2.3 | 4.6 to 7.2 | | |
| Peanuts (shelled) | Damping-off Seed rots Seedling blights | 2.3 to 4.6 | 9.1 to 18.3 | | |
| Rice | Damping-off Seed rots Seedling blights | -- | 2.3 to 4.6 | Apply before, during or after soaking in water. | |
| Rye | Dunt Damping-off Seed rots Seedling blights | 1.5 to 2.3 | 2.6 to 4.1 | | |
| Safflower | Seedborne rust (<i>Puccinia carthami</i>) | -- | 2.3 | | |
| Sorghum | Covered kernel smut Damping-off Seed rots Seedling blights | 1.7 to 2.9 | 3.1 to 5.1 | | |
| Tomatoes | Damping-off Seed rots Seedling blights | -- | 9.1 | | |

| <u>Crop</u> | <u>Diseases Controlled</u> | Rate of DITIANE M-45 DF/70 Fungicide Per Application | | <u>Remarks</u> (Also Refer to Directions For Use) | <u>Restrictions</u> |
|-------------|--|--|--------------------|--|---------------------|
| | | <u>oz./bu</u> | <u>oz./100 lb.</u> | | |
| Wheat | Bunt Damping-off Seed rots Seedling blights | 1.5 to 2.3 | 2.5 to 3.8 | | |

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| <u>Crop</u> | <u>Diseases Controlled</u> | Rate of DITHANE M-45 DF/70 Fungicide Per Application <u>oz./1000 Ft.²</u> | Remarks <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|-------------|--|---|---|---|
| TURF: | Helminthosporium wetting-out Rust (leaf, stem, stripe) | 4½ | GENERAL USE DIRECTIONS: Start application when grass greens-up in spring or when disease first appears and repeat at 7 to 14 day intervals or until disease threat is past. | Do not graze treated areas. Do not feed clippings to livestock. |
| | Copper Spot Fusarium blight Red thread Slime mold | 4½ to 9 | When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7-day spray schedule. | |
| | Algae | 7 | Apply in sufficient water to provide adequate coverage. | |
| | Dollar spot | 7 to 9 | | |
| | Rhizoctonia brown patch | 4½ | Apply on a 7-day spray schedule. | |
| | Pythium blight | 9 | Begin applications at first sign of disease and repeat applications at 5-day intervals, or more frequently, if conditions are especially favorable for disease development. | |
| | Fusarium snow mold | 7 to 9 | Apply at 2 to 6 week intervals during winter. | |

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Crop Diseases Controlled Remarks
(Also Refer to Directions For Use) Restrictions

ORNAMENTALS:

GENERAL INSTRUCTIONS:

For outdoor or greenhouse use, apply the equivalent of 1 3/4 lbs. DITHANE M-45 DF/70 fungicide per 100 gals.

The addition of TRITON B-1956 to spray solutions will improve performance.

Begin spraying when plants are well leafed out or at first sign of disease in a full coverage spray at 7 to 10 day intervals throughout season or follow State Extension Service recommendations for disease control on the following ornamental plants:

| | |
|------------------|--|
| African violet | Botrytis blight |
| Anthurium | Anthrachnose spadix rot |
| Arborvitae | Cercospora blight |
| Ash, mountain | Entomosporium leaf spot Guignardia leaf blotch |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|-------------------------|--|--|--|
| Ash, white | Anthracnose Cylindrosporium leaf spot | | |
| Aster, perennial | Puccinia rusts | | |
| Aucuba japonica | Alternaria leaf spot Anthracnose | | |
| Azalea | Petal blight Cylindrocladium rot Phytophthora twig and bud blight | Apply in a full coverage spray, 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes. | |
| Begonia | Botrytis blight | | |
| Buffaloberry | Cylindrosporium leaf spot | | Do not use fruit for food or feed purposes. |
| Camellias | Petal blight | Refer to azalea | |
| Carnation | Septoria leaf spot Rust | | |
| Cedar, red (Juniper) | Cercospora blight Phomopsis blight | | |
| Chrysanthemum | Ascochyta blight Botrytis petal spot Rust | Apply twice weekly during blooming period. | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|--|---|---|---------------------|
| Conifers | Lophodermium needle cast Pine gall rust Scirrhia brown spot | Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two week intervals as long as needed. | |
| Cordylone | Cercospora leaf spot | | |
| Crabapple (ornamental) | Cedar - apple rust Scab Sphaeropsis leaf spot | | |
| Cypress, Arizona (Cupressus sp.) | Cercospora blight Monochaetia canker | | |
| Dahlia | Botrytis blight | | |
| Dieffenbachia | Leptosphaeria brown spot | | |
| Dogwood, flowering | Anthracnose Ellisone leaf spot Septoria leaf spot | Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed. | |

501-20

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|---------------------------|---|--|---------------------|
| Dracaena | Fusarium leaf spot | | |
| Elm | Black Leaf spot | | |
| Euonymus | Anthraxnose | | |
| Fatsia | Anthracnose | | |
| Fern | Rhizoctonia blight | | |
| Ficus | Cercospora leaf spot | | |
| Firethorn (Pyracantha) | Fusicladium scab | | |
| Fir, Douglas | Swiss needle cast | | |
| Fuchsia | Botrytis blight Rust | | |
| Geranium | Rust | | |
| Gladiolus | Botrytis blossom blight Curvularia leaf spot | Make regular weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather. On flower spikes, reduce spray concentration to 3/4 lb. per 100 gals. | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|---------------------------|---|---|---------------------|
| Hawthorn | Cedar - apple rust Fabraea leaf spot Frogeye leaf spot Hawthorn rust Scab | | |
| Holly | Purple spot | | |
| Hollyhock | Anthrachnose Cercospora leaf spot Puccinia rusts | | |
| Honeysuckle | Herpobasidium blight | | |
| Horsechestnut, Buckeye | Alternaria leaf spot Guignardia leaf blotch | | |
| Hydrangeas | Botrytis blight Cercospora leaf spot | | |
| Iris | Didymellina leaf spot Myrosporium ink spot | | |
| Juniper | Phomopsis blight | | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|------------------------|--|--|--|
| Laurel, mountain | Cercospora leaf spot Petal blight | Refer to azalea | |
| Ligustrum | Cercospora leaf spot | | |
| Lily | Botrytis blight | | |
| Magnolia | Gloeosporium leaf spot | | |
| Maple | Alternaria leaf spot Phyllosticta leaf spot | | Do not use on sugar maples intended for the production of maple syrup. |
| Marigold | Botrytis blossom blight | | |
| Narcissus | Botrytis blight (fire) Smoulder | | |
| Oak | Actinopelte leaf spot Taphrina leaf blister | | |
| Orchid (Dendrobium) | Botrytis blossom blight | | |
| Pachysandra | Volutella blight | Use a drenching spray of 2 1/4 lbs. per 50 gallons of water per 5,000 sq. ft. of bed. Start application at first sign of disease and apply at least 5 applications at 10 to 14 day intervals. | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|--------------------|--|---|---------------------|
| Pansy | Anthracnose | | |
| Peony | Botrytis blossom blight Phytophthora blight | Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts. | |
| Peperomia | Cercospora leaf spot | | |
| Philodendron | Dactylaria leaf spot Phytophthora leaf spot | | |
| Photinia | Entomosporium leaf spot | | |
| Poinsettia | Sphaceloma scab | | |
| Rhododendron | Cercospora leaf spot Discosia leaf spot Petal blight | Refer to azalea | |
| Rose | Black spot Cercospora leaf spot Rust | | |
| Schefflera | Alternaria blight | | |
| Skunkbush sumac | Cylindrosporium leaf spot | | |
| Snapdragon | Rust | | |
| Statice | Cerospora frog-eye | | |

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Remarks</u> <u>(Also Refer to Directions For Use)</u> | <u>Restrictions</u> |
|------------------|-------------------------------------|---|--|
| Syngonium | Cephalosporium leaf spot | | |
| Tulip | Botrytis blight (fire) | | |
| Venus flytrap | Anthracoze | | |
| Viburnum | Downy Mildew Ramularia leaf spot | | |
| Walnut | Anthracoze | | Do not use treated walnuts for food or feed purposes. |
| Zinnia | Alternaria leaf blight | | |

(6942E-15Z)

070626

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Rate of DITHANE M-45 DF/70 Fungicide Per Application</u> | <u>Remarks (Also Refer to Directions for Use)</u> |
|-----------------------|---|---|--|
| MISCELLANEOUS: | | | |
| Asparagus crowns | Crown rot | 1 lb. per 100 gals. | <p>Place loosely packed crowns into a burlap bag and soak, with gentle agitation, in the fungicide solution for 5 minutes. Remove bag, drain well, and plant crowns as soon as possible.</p> <p>A tank large enough to hold a single burlap bag will treat 2 bags of crowns. Clean dipping suspension should then be prepared in a clean tank.</p> <p>Dirty crowns should be pre-washed to remove excess soil.</p> |
| Caprifig | Endosepsis (Fusarium) Assorted molds | 1 lb. per 25 gals. | <p>Prepare mame figs by making a shallow cut through the eye and then hand dividing to avoid wasp injury. Submerge mame figs in the fungicide suspension for a minimum of 15 minutes.</p> <p>The fungicide suspension should be stirred frequently to prevent settling out.</p> <p>Fresh dipping solutions should be used after treatment 4 or 5 batches of figs. After treatment, figs should be drained prior to placement in trees.</p> |

27.2.36

| <u>Crop</u> | <u>Diseases Controlled</u> | <u>Rate of DITHANE M-45 DF/70 Fungicide Per Application</u> | <u>Remarks (Also Refer to Directions For Use)</u> |
|-------------|----------------------------|---|---|
| Conifers | Foliar | 4½ lbs. per 100 gals. | <p>For use in nursery and newly transplanted plantings.</p> <p>Apply at 21-day intervals during periods of sprinkler irrigations and at monthly intervals during the rest of the year when beds are not covered with snow.</p> <p>The addition of TRITON B-1956 to spray solutions is recommended.</p> |
| Pineapples | Phytophthora heart rot | 3 2/3 lbs. per 10 gals. | <p>Dip planting material in fungicide solution prior to planting. Stir solution frequently to prevent settling out.</p> <p>A new solution should be prepared when at least two-thirds of the volume has been used or sooner if soil from plant material has noticeably discolored the solution.</p> <p>Depending on the cleanliness and size of planting stock, up to 100 gallons of fungicide solution should be used to treat the propagative materials used to plant one acre.</p> |

92626

(6942E-15Z)

| <u>CROP</u> | <u>CO-APPLIED FUNGICIDE</u> | <u>FOR IMPROVED CONTROL OF:</u> | <u>USE RATE PER APPLICATION</u> | <u>DITHIANE M-45 DF/70 FUNGICIDE USE RATE PER APPLICATION</u> | <u>(A)</u> |
|-------------|-------------------------------|---|---------------------------------|---|------------|
| Apples | BENLATE 50 WP ^a) | Powdery mildew | 2 to 3 ozs./100 gals. | 3/4 to 1 lb./100 gals. | |
| | TOPSIN-M 70 WP ^a) | | | | |
| | BAYLETON 50 WP | | 1/2 to 2 ozs./100 gals. | 1 to 2 1/2 lbs./100 gals. | |
| | KARATHIANE MI | Powdery mildew Mite suppression | 1/2 to 3/4 lbs./100 gals. | | |
| | KARATHIANE LC | | 4 to 6 fl. ozs./100 gals. | | |
| Barley | BAYLETON 50 WP | Powdery mildew Rust (leaf, stem, stripe) | 2 to 4 ozs./A | 2 1/2 lbs./A | |
| Celery | BENLATE 50 WP ^a) | Early blight Late blight | 4 oz./A | 1 3/4 to 2 1/2 lbs./A | |
| | TOPSIN-M 70 WP ^a) | | | | |
| | FIXED COPPERS | Bacterial leaf spot | Manufacturers label use rate | 2 1/2 lbs./A | |
| Cucumbers | Refer to melons | | | | |

| <u>CROP</u> | <u>CO-APPLIED FUNGICIDE</u> | <u>FOR IMPROVED CONTROL OF:</u> | <u>USE RATE PER APPLICATION</u> | <u>DITHANE M-45 DF/70 FUNGICIDE USE RATE PER APPLICATION</u> | <u>REMARKS (ALSO REFER TO USE DIRECTIONS)</u> |
|-------------|------------------------------|---|---------------------------------|--|---|
| Grapes | BAYLETON 50 WP | Powdery mildew | 2 to 6 ozs./A | 1 3/4 to 4 1/2 lbs./A | |
| | KARATHANE WD | Powdery mildew | 1 to 2 1/2 lbs./A | | Do not use in California. |
| | KARATHANE LC | | 4 to 8 fl. ozs./100 gal. | | |
| | BENLATE 50 WP | | 3/4 to 1 lb./A | | |
| Melons | BENLATE ^{a)} | Target spot Gummy stem blight Powdery mildew Anthracnose | 4 to 8 ozs./A | 2 1/2 to 3 1/2 lbs./A | |
| | KARATHANE WD | Powdery mildew | 8 to 12 ozs./A | | Do not use in California. |
| | KARATHANE LC | | 3 to 4 fl. ozs./100 gal. | | |
| | DIFOLATAN 80 SPRILLS | Gummy stem blight | 1 1/2 to 2 lb./A | | Do not use on squash or pumpkins. |
| Peanuts | BENLATE 50 WP ^{a)} | Early leaf spot Late leaf spot Ascochyta web blotch | 4 ozs./A | 1 to 2 1/2 lbs./A | |
| | TOPSIN-M 70 WP ^{a)} | | | | |

| <u>CROP</u> | <u>CO-APPLIED FUNGICIDE</u> | <u>FOR IMPROVED CONTROL OF:</u> | <u>USE RATE PER APPLICATION</u> | <u>DITHANE M-45 DF/70 FUNGICIDE USE RATE PER APPLICATION</u> | <u>REMARKS (ALSO REFER TO USE DIRECTIONS)</u> |
|--|--------------------------------|------------------------------------|---------------------------------|--|---|
| Pears | BAYLETON 50 WP | Powdery mildew | 1/2 to 2 ozs./100 gals. | 1 to 2 1/4 lbs./100 gal. | |
| | KARATHANE WD | Powdery mildew Mite suppression | 1/2 to 3/4 lbs./100 gals. | | Do not use in California. |
| | KARATHANE LC | | 4 to 6 ozs./100 gal. | | |
| Potatoes | Triphenyl Tin Hydroxide (TPTH) | Early Blight | 1/2 to full label use rate | 1 3/4 to 2 1/4 lbs./A | |
| Pumpkins | Refer to melons | | | | DIFOLATAN may not be used on pumpkins. |
| Roses, Flowers, Ornamentals, and shade trees | BENLATE 50 WP | Powdery mildew Leaf spots | 1/2-1 lb./100 gal. | 1 3/4 lb./100 gal. | |
| | TOPSIN-M 70 WP | | | | |
| | KARATHANE WD | Powdery mildew Mite suppression | 6 to 8 oz./100 gal. | | |
| Squash, summer | Refer to melons | | | | DIFOLATAN may not be used on squash. |

| <u>CROP</u> | <u>CO-APPLIED FUNGICIDE</u> | <u>FOR IMPROVED CONTROL OF:</u> | <u>USE RATE PER APPLICATION</u> | <u>DITHIANE M-45 DF/70 FUNGICIDE USE RATE PER APPLICATION</u> | <u>REMARKS (ALSO REFER TO USE DIRECTIONS)</u> |
|-------------|--------------------------------|--|---------------------------------|---|---|
| Sugar Beets | BENLATE 50 WP ^a) | Cercospora leaf spot | 4 oz./A | 1 3/4 to 2 1/4 lbs./A | |
| | TOPSIN-M 70 WP ^a) | | | | |
| | MERTECT 340-F ^a) | | 6 fl. oz./A | | |
| | Triphenyl Tin Hydroxide (TPTH) | | 1/2 to full label rate | | |
| Tomatoes | Fixed Coppers | Bacterial leaf spot | Manufacturers Label use rate | 1 3/4 to 3 1/4 lbs./A | |
| | DYRENE 50 WP | Gray leaf spot | 1/2 to 1 lb./A | | |
| | BENLATE 50 WP | Botrytis gray mold Sclerotinia white mold | | | |
| Wheat | BAYLETON 50 WP | Powdery mildew Rust (leaf, stem, stripe) | 2 to 4 ozs./A | 2 1/4 lbs./A | |

(6942E-152)

BAYLETON and DYRENE are registered trademarks of the parent company of Farbenfabriken Bayer GmbH, Leverkusen.

BENLATE is a registered trademark of E.I. DuPont de Nemours and Co., Inc.

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MERTECT is a registered trademark of Merck and Co., Inc.

TOPSIN-M is a registered trademark of Nippon Soda Co., Ltd.

CONDITIONS OF SALE AND WARRANTY:

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

HEC:tf
(6942E-15Z)

Container

DITHANE M-45 DF/70

AGRICULTURAL FUNGICIDE

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May cause irritation of nose, throat, eyes and skin. Do not breathe dust or spray mist. PROTECTIVE CLOTHING consisting of long pants, long sleeved shirt, gloves, hat and boots must be worn during mixing and loading.

STATEMENTS OF PRACTICAL TREATMENT

IF SWALLOWED: Dilute by giving 2 glasses of water to drink and call a physician. Never give anything by mouth to an unconscious person.

IF INHALED: Move subject to fresh air.

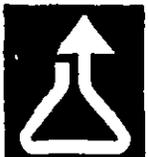
IF IN EYES: Flush eyes with large amounts of water for at least 15 minutes. Consult a physician if irritation persists.

IF ON SKIN: Wash affected skin areas with soap and water.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or wetlands. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes.

Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions on back panel and attached use directions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.



**ROHM
HAAS**
PHILADELPHIA, PA. 19103

ACTIVE INGREDIENTS

| | |
|--|--------|
| Mancozeb | |
| A coordination product of zinc ion and manganese ethylene bisdithiocarbamate | 70% |
| In which the ingredients are | 14% |
| Manganese ++ | 1.75% |
| Zinc ++ | 54.25% |
| Ethylene bisdithiocarbamate ion (C ₂ H ₄ N ₂ S ₄) | 30% |
| INERT INGREDIENTS | 100% |
| TOTAL | 100% |

EPA Reg. No.
EPA Est. No.

U.S. Patent 3,379,610
©Copyright 1984 Rohm and Haas Company

NET CONTENTS **3 LBS. (1.36 kg)**

CONDITIONS OF SALE AND WARRANTY

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User or beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. SEE PAMPHLET IN BOTTOM FLAP FOR USE DIRECTIONS.

RE-ENTRY AND WORKER PROTECTION STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. SEE USE DIRECTION FOR ADDITIONAL RE-ENTRY STATEMENTS.

STORAGE AND DISPOSAL

STORAGE: Keep away from fire and sparks. Store in a cool, dry, well ventilated area. Do not allow to become wet or overheated in storage. decomposition, impaired activity, or fire may result. Keep container closed when not in use.

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use 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.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Then dispose in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep or shovel into containers for disposal or reworking. Keep dusting to a minimum. Flush contaminated area with a large amount of water to a chemical or sanitary sewer containing a settling pit.

9948-108

MAC

54Y-1485 REV. — Rohm and Haas — OC — 6/7/84
Disc. 34 — File 1



ACCEPTED
with COMMENTS
EPA Letter Dated:

JAN 8 1986

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

707-179