

73545-18

09/28/2006

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## ENVIRONMENTAL PROTECTION AGENCY

Timothy M. Formella  
Manager, Product Registration  
Cerexagri, Inc.,  
King of Prussia, PA 19406

SEP 28 2006

Dear Mr. Formella:

SUBJECT: Topsin M 70WDG  
EPA Registration Number 73545-18  
Your label amendment submitted May 31, 2006 adding canola

The label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable.

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

If you have any questions, please contact Lisa Jones of my staff by phone at (703) 308-9424 or by e-mail at [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely,

*Mary L. Waller*

Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7505C)

Enclosure: Stamped Label

CONCURRENCES							
SYMBOL <	7505C						
SURNAME <	Lisa Jones						
DATE <	Sep 28, 2006						

EPA Form 1320-1 (12-70) OFFICIAL FILE COPY

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# TOPSIN<sup>®</sup> M 70WDG

## THIOPHANATE-METHYL FUNGICIDE

**ACTIVE INGREDIENT:**

Thiophanate-methyl (dimethyl [(1,2-phenylene)-bis(iminocarbonothioyl)]bis[carbamate])\*.. 70.0%

OTHER INGREDIENTS:..... 30.0%

TOTAL.....100.0%

\*Also known as dimethyl 4, 4'-o-phenylenebis[3-thioallophanate]

TOPSIN is a registered trademark of Nippon Soda Company, Ltd., and is licensed to NISSO TM LLC, and is covered by one or more of the following U.S. Patents: 3,769,308; 3,856,847; 4,020,095; and 4,029,813.

**KEEP OUT OF REACH OF CHILDREN****CAUTION****FIRST AID:****If swallowed:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**If in eyes:**

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**If on skin or clothing:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

EPA Registration No. 73545-18

EPA Establishment No. \_\_\_\_\_

**ACCEPTED**  
with **COMMENTS**  
In EPA Letter Dated  
**SEP 28 2006**

NET WEIGHT: \_\_\_\_\_ Pounds (\_\_\_\_\_ Kgs.)

Sold by:  
Cerexagri, Inc.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 73545-18

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. CAUSES MODERATE EYE IRRITATION. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

WPS Uses: Applicators and others who handle this pesticide for any use covered by the Worker Protection Standard, 40 CFR Part 170, must wear: long-sleeved shirt and long pants, chemical-resistant gloves made from any waterproof material, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish.

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 apply where runoff is likely to occur. Do not contaminate water when disposing of equipment washwaters.

**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 a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours unless otherwise noted on this label for specific crops.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical-resistant gloves made from any waterproof material, shoes plus socks.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Turf and Landscape Uses: Keep children and pets out of treated areas until sprays have dried.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in the original container in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, sweep up spillage and dispose of in accordance with the Pesticide Disposal Instructions listed below.

**PESTICIDE 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 instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** After bag has been emptied, dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**GENERAL INFORMATION****For Agricultural Uses**

Apply Topsin M 70WDG with ground or aerial equipment, using sufficient volume of spray to provide thorough coverage. Add required amount of Topsin M 70WDG to partially filled tank agitated by mechanical or hydraulic means, and then add remaining required amount of water. Continuous agitation is required to keep the material in suspension. Cerexagri does not recommend tank mixes with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur. No claim of compatibility with other pesticides is implied. Use the higher rate under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules.

Use the LBS Topsin M 70WDG/ACRE rate for concentrate sprays (less than 400 gallons on apples, less than 300 gallons on stone fruit). Use the LBS Topsin M 70WDG/100 GAL rate for dilute ground applications. For aerial applications, use a minimum of 5 gallons/A for row crops, and a minimum of 10 gallons/A for tree and vine crops. Higher spray volume will generally result in better coverage and better disease control.

**When used on all non-bearing fruit trees, nut trees, and grapes listed on the label:** Topsin M 70WDG may be used for control of the diseases listed on the label for these crops during the non-bearing years of new plantings, and on nursery stock. All use directions and limitations must be followed, except for the PHI, which is not applicable for non-bearing stock. Begin applications as disease is first observed or expected. Tank mixing with a protectant fungicide is strongly recommended for resistance management.

Chemigation instructions follow. Do not apply through any irrigation system unless these instructions are followed.

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For crops without labeled uses of thiophanate-methyl, observe a 30-day plantback restriction.

**RESISTANCE MANAGEMENT:** To avoid the development of tolerant or resistant strains of fungi, Topsin M 70WDG should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with Topsin M 70WDG. DO NOT USE PRODUCTS CONTAINING THIABENDAZOLE, OR OTHER PRODUCTS CONTAINING THIOPHANATE-METHYL IN COMBINATION, IN ROTATION, OR AS A SUBSTITUTE FOR TOPSIN M 70WDG AS THEY ARE OF SIMILAR CHEMISTRY AND WILL CONTRIBUTE TO THE DEVELOPMENT OF RESISTANCE. If after using Topsin M 70WDG as recommended, and the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of Topsin M 70WDG for at least one season. As long as these precautions are followed, Topsin M 70WDG can be useful for disease control, even if resistant strains are present.

#### **MIXING INSTRUCTIONS**

If other materials are to be added to the tank, especially fertilizers high in nitrogen or boron, wait until the Topsin M 70WDG is fully dissolved before adding them. Once all materials have been added, fill the tank with the remaining volume of water. Maintain continuous agitation at all times, and use the spray suspension as soon as possible.

## Agricultural Use Applications

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Almonds	Brown Rot Blossom Blight (Monilinia) Scab (Cladosporium) Jacket Rot (Monilinia, Sclerotinia, Botrytis) Leaf Blight (Seimatosporium)	1 - 1½		Apply as needed between pink bud and petal fall. Topsin M 70WDG may be applied alone at pink bud for Brown Rot control. For all other applications, Topsin M 70WDG should be applied with a contact fungicide, such as Ziram 76DF or Maneb 75DF, for broad spectrum control and resistance management. Do not apply more than 3 lbs of product (2.1 lbs a.i.)/A/season.
Apples	Apple Scab (Venturia) Black Pox* (Helminthosporium papulosum) Flayspeck (Zygophiala) Powdery Mildew (Podosphaera) Sooty Blotch (Gloeodes) Black Rot (Botryosphaeria obtusata) Brooks Fruit Spot (Mycosphaerella) White Rot* (Botryosphaeria dothidia)	1 - 1½	¼ - ⅜	Apply at 5 to 10-day intervals from green tip through petal fall; continue at 7 to 14-day intervals in cover sprays.  Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season.  Pre-harvest interval: 1 day  Follow resistance management guidelines under Directions for Use.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
<p>Beans, dry and succulent</p> <p>Including:</p> <p>Lima bean</p> <p>Snap bean</p> <p>Kidney bean</p> <p>Mung bean</p> <p>Navy bean</p> <p>Pinto bean</p> <p>Wax bean</p> <p>Broad bean</p> <p>Fava bean</p> <p>Asparagus bean</p> <p>Blackeyed pea</p> <p>Cowpea</p> <p>Sweet lupine</p> <p>White lupine</p> <p>White Sweet lupine</p> <p>Grain lupine</p> <p>Chick pea</p> <p>Garbanzo bean</p>	<p>White Mold (Sclerotinia)</p> <p>Gray Mold (Botrytis)</p> <p>Anthracnose (Colletotrichum)</p>	<p>1½ - 2</p> <p><b>OR</b></p> <p>1 - 1½</p>		<p>For one application: Apply when 100% of plants have at least one open bloom or when conditions are favorable for disease development.</p> <p><b>OR</b></p> <p>For multiple applications: Make the first application when 10% to 30% of plants have at least one open bloom and follow with sequential applications on a 4 to 7-day interval. Apply prior to the development of disease for best results.</p> <p>Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season.</p> <p>Pre-harvest interval: <b>California only</b>, 14 days for succulent beans, 28 days for dry beans and lima beans.</p> <p>Pre-harvest interval: <b>all other States</b>, 14 days for succulent beans and lima beans, 28 days for dry beans.</p>



Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Canola, Crambe  In North Dakota, Minnesota, and Montana (east of Interstate 15 only)	White Mold Sclerotinia Stem Rot (Sclerotinia sclerotiorum)	1 – 2 in a single applica- tion <b>OR</b> 1 per applica- tion when applying twice		Apply at 20 to 50% flowering for single application.  <b>OR</b> Apply twice with the first application at 20% - 30% flowering and the second application at 40% - 50% flowering.  Do not apply more than 2 lbs. of product (1.4 lbs. a.i.)/A/season. Thorough coverage of the flowers, stems, and branches is essential for control of White Mold.
Cucurbits (Cantaloupe, Casaba, Cucumbers, Melons, Pumpkins, Summer and Winter Squash, and Watermelons)	General Information			Do not apply more than 3 lbs of product (2.1 lbs a.i.)/A/season from any combination of application timings. Topsin M 70WDG can be used in a tank mix with Penncozeb® (mancozeb) or chlorothalonil for additional disease control and resistance management. Follow resistance management guidelines under Directions for Use.
	Acremonium/ Cephalosporium Hypocotyl Rot	$\frac{1}{2}$		Apply in-furrow, on top of the seeds at planting. Do not use less than 10 gallons of water per acre.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
	Anthracnose* (Colletotrichum) Gummy Stem Blight* (Didymella) Powdery Mildew (Erysiphe, Sphaerotheca) Target Spot* (Corynespora)	½		Begin applications when plants begin to run or when disease first appears, and repeat at 7-14 day intervals or as needed. For Target Spot, use at 7-day intervals as needed.
	Belly Rots* (Rhizoctonia, Fusarium)	½		Apply in sufficient volume to allow runoff to the soil. Will not control Pythium or Phytophthora.
	Suppression of Vine Decline (Monosporascus) Charcoal Rot (Macrophomina)	½		Apply through buried drip irrigation (chemigation) to the root zone. For disease suppression, apply at 14-day intervals, beginning at emergence and continuing to harvest. Applications weekly or biweekly, beginning 4 to 6 weeks prior to harvest will also offer suppression, but may not be as effective as a season-long program.
Garlic (clove treatment)	Penicillium Clove Rot		1	Completely immerse garlic cloves in suspension for at least 5 minutes. Continuously agitate the solution tank by hydraulic or mechanical means. After treatment, remove cloves from solution and drain. Dry cloves after treatment and

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
				prior to planting.
<b>Grapes</b>  Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 7 days unless appropriate PPE for early entry is worn.	General Information			Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season. Pre-harvest interval: 14 days REI: 7 days for foliar sprays Follow resistance management guidelines under Directions for Use.
	<b>WEST OF THE ROCKY MOUNTAINS:</b> Bunch Rot (Botrytis) Powdery Mildew (Uncinula)	1 - 1½		Apply at first bloom and repeat 14 days later or as needed if severe disease conditions exist. Make an additional application 3 to 4 weeks before harvest or when sugar begins to build; repeat 14 days later if conditions favorable for disease persist. For Powdery Mildew, continue applications through the season. Use in combination or rotation with sulfur (Microthiol® Disperss®) and/or other systemic fungicides.
	<b>EAST OF THE ROCKY MOUNTAINS:</b> Bitter Rot (Melanconium) Black Rot (Guignardia) Powdery Mildew (Uncinula) Phomopsis Cane and Leaf Spot (Phomopsis)	¾ - 1½		Apply when foliage first develops and repeat at 14 to 21-day intervals or as needed.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Onions* Garlic* (In furrow)	White Rot (Sclerotium cepivorum)	2 broad- cast		Spray directly into the open furrow at the time of planting seed, sets or bulbs. Not for this use through any type of irrigation system.
Peanuts	Early Leaf Spot (Cercospora) Late Leaf Spot (Cercosporidium) Rust (Puccinia) Limb Rot (Rhizoctonia) Web Blotch (Ascochyta)	½		Begin applications when disease first appears and repeat at 7 to 14-day intervals as needed. Use the 7-day interval under severe disease pressure. Do not apply more than 2 lbs of product (1.4 lbs a.i.)/A/season. Pre-harvest interval: 14 days  Topsin M 70WDG should not be used alone. Use only in combination with a non-benzimidazole fungicide such as Penncozeb® 75DF (mancozeb) at 1½ lbs per acre or chlorothalonil. Follow resistance management guidelines under Directions for Use.
Pears Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days unless appropriate PPE for early entry is worn.	Pear Scab (Venturia) Sooty Blotch (Gloeodes) Flyspeck (Zygophiala) Powdery Mildew (Podosphaera) Leaf Spot (Fabraea)	1	¼	Apply at 5 to 10-day intervals from green tip through petal fall; continue at 7 to 14-day intervals in the cover sprays. Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season. Pre-harvest interval: 1 day REI: 3 days Follow resistance management guidelines under Directions for Use.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Pecans	Brown Spot (Cercospora) Downy Spot (Mycosphaerella) Liver Spot (Gnomonia) Powdery Mildew (Microsphaera) Scab (Fusicladium) Stem End Blight (Botryosphaeria) Zonate Leaf Spot (Cristulariella)	1		Begin applications when first leaves are showing and repeat at 3 to 4-week intervals until shuck split. Do not apply after shuck split.  Do not apply more than 3 lbs of product (2.1 lbs a.i.)/A/season.  Follow resistance management guidelines under Directions for Use.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
<p>Pistachios</p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days unless appropriate PPE for early entry is worn.</p>	<p>Shoot Blight (Botrytis, Botryosphaeria)</p>	<p>1½ - 2</p>		<p>Apply at bloom.</p> <p>Apply in a minimum of 100 gallons per acre by ground or 20 gallons per acre by air.</p> <p>For aerial application, fly over every row or center.</p> <p>Do not apply more than 2 lbs of product (1.4 lbs a.i.)/A/season.</p> <p>REI: 3 days</p>
<p>Potatoes</p>	<p>White Mold (Sclerotinia sclerotiorum)</p>	<p>1 - 1½</p>		<p>Make first application at row closure to full bloom of the primary flower clusters (prior to petal drop). Repeat the application within 7 to 10 days and at 7 to 10-day intervals if conditions for disease development are favorable.</p> <p>Thorough coverage of the flowers, stems, and branches is essential for disease control.</p> <p>Apply prior to the development of disease for the best results.</p> <p>Use a minimum of 6 gallons/A for aerial application.</p> <p>Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season.</p> <p>Pre-harvest interval: 21 days</p> <p>May be tank mixed with Penncozeb (mancozeb) for Early and Late Blight control.</p>

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Soybeans	General Information			Do not apply more than 2 lbs product (1.4 lbs a.i.)/A/season. Do not graze or feed treated vines or hay to livestock.
	Anthracnose (Colletotrichum) Brown Spot (Septoria) Frogeye Leaf Spot (Cercospora) Pod and Stem Blight (Diaporthe, Phomopsis) Purple Seed Stain (Cercospora)	$\frac{1}{2}$ - 1		Apply from full bloom to when pods are $\frac{1}{8}$ " to $\frac{1}{4}$ " in length. Make a second application 14 to 21 days later. Do not make the second application later than 14 days after pods average $\frac{1}{4}$ " in length or when beans form in the pod. Use the high rate under severe disease pressure.  FOR SEED BEANS ONLY---For seed quality, make a single application when beans form in the pod.
	White Mold (Sclerotinia)	$\frac{3}{4}$ - 1		Make one application at early bloom (R-1 to R-2 stage) followed by a second application 7 to 14 days later if conditions are favorable for continued disease pressure. Thorough coverage of the flowers, stems, and branches is essential for disease control. Use a minimum of 5 gallons water/A by air.
	Aerial Blight (suppression)	1		Make initial application when disease threatens and repeat 14 to 21 days later if needed.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
<u>Stone Fruit</u>	General Information			Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season. Pre-harvest interval: 1 day Follow resistance management guidelines under Directions for Use.
- Apricots	Brown Rot Blossom Blight, Fruit Brown Rot (Monilinia)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at early bloom (red bud). Make a second application at full bloom. If needed, under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
- Cherries Sweet and Sour	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at early bloom (early popcorn). Make a second application at full bloom. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
	Cherry Leaf Spot (Coccomyces)	1⅛ - 1½	⅜ - ½	Applications may be made at petal fall or before (when leaves first unfold) and at first, second, and third cover at 10 to 14-day intervals and one spray 14 to 21 days after harvest.
	Powdery Mildew (Podosphaera, Sphaerotheca)	1 - 1½ (in CA use 1½) <b>PLUS</b> 1⅛ - 1½	⅓ - ½  <b>PLUS</b> ⅜ - ½	Apply at early bloom (early popcorn). Make a second application at full bloom, <b>PLUS</b> Apply at shuck fall and first cover.



Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
- Nectarines	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
- Peaches	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
	Peach Scab (Cladosporium)	1 - 1½ (in CA use 1½)  <b>PLUS</b> 1¼ - 1½	⅓ - ½  <b>PLUS</b> ⅜ - ½	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. <b>PLUS</b> Apply at shuck split and at first cover sprays.
- Plums and Prunes	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at early bloom (green tip). Make a second application at full bloom. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
	Black Knot (Dibotryon)	1 - 1½ (in CA use 1½)	⅓ - ½	Apply at pre-bloom, petal fall, and at first, second or third cover sprays at 10 to 14-day intervals.
	Leaf Spot (Coccomyces)	1 - 1½ (in CA use 1½)	⅓ - ½	Applications may be made at petal fall, shuck split, and at first, second, and third cover sprays at 10 to 14-day intervals and 1 spray 14 to 21 days after harvest.
Straw- berries	Fruit Rot (Botrytis) Leaf Blight (Dendrophoma) Leaf Scorch (Diplocarpon) Powdery Mildew (Sphaerotheca)	¾ - 1		Begin applications at early bloom and continue at 7 to 10-day intervals. Use the higher rate under conditions of severe disease pressure. Do not apply more than 4 lbs of product (2.8 lbs a.i.)/A/season. Pre-harvest interval: 1 day Follow resistance management guidelines under Directions for Use.
Sugar Beets	General Information			Do not apply more than 3 lbs of product (2.1 lbs a.i.)/A/season. Pre-harvest interval: 21 days Follow resistance management guidelines under Directions for Use.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
	Cercospora Leaf Spot (Cercospora)	$\frac{1}{2}$ - 1		Apply when conditions become favorable for disease development before the disease appears and follow with a non-benzimidazole fungicide within 14 days of application or as needed. Topsin M 70WDG should be tank mixed with a protectant fungicide such as Penncozeb or TPTH when resistant strains of Cercospora are present in the field. Do not make more than one application of Topsin M 70WDG per season for Cercospora Leaf Spot.
	Powdery Mildew (Erysiphe)	$\frac{1}{2}$ - 1		Apply as soon as disease symptoms appear and follow with a non-benzimidazole fungicide at a 14-day interval or as needed. Topsin M 70WDG can be tank mixed with Microthiol <sup>®</sup> Disperss <sup>®</sup> at 5 to 10 lbs/A for additional disease control and resistance management.

Crop/ Restrictions	Diseases	Lbs Topsin M 70WDG per Acre	Lbs Topsin M 70WDG per 100 gallons	Remarks/Restrictions
Triticale and Fall-seeded Wheat  <b>For this use in Idaho, Oregon, and Washington ONLY</b>	Foot Rot, Strawbreaker, Eye Spot (Pseudocercospora)	1		Apply Topsin M 70WDG at the rate indicated in a single application by air or ground after tillering but before stem elongation has begun. Use sufficient water to obtain thorough coverage. Do not apply more than 1 lb of product (0.7 lb a.i.)/A/season. Do not cut for hay within 90 days of application. Do not allow livestock to graze in treated areas before harvest.

\* Not for this use in California

NOTE: Dilute sprays are not to exceed maximum rate per acre.

**DIRECTIONS FOR USE ON CONIFERS**  
(Not for this use in California)

CROP	DISEASE	LIMIT/ ACRE/ CROP	RATE, MINIMUM GALLONAGE	REMARKS
Conifers (Pine) Austrian Red Scots Christmas Trees	Tip Blight (Diplodia)	48 oz. (3 lb.)	16 oz/A 100 gal/A	Apply at bud break. Repeat 10 to 14 days later, just before needles emerge from sheath; repeat again 10 to 14 days after needle emergence.
(Fir) Douglas	Swiss Needle Cast (Phaenocarpa) Rhabdocline	80 oz. (5 lb.)	16 oz/A 50 gal/A	Apply initially in early May. Repeat at 4-week intervals.

	Needle Cast			
<ul style="list-style-type: none"> <li>- Add a spreader/sticker to improve coverage.</li> <li>- Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers.</li> <li>- Do not graze livestock in treated areas.</li> </ul>				
Conifers (seedling treatment) Longleaf	Brown Needle Blight (Scirrhia)	N/A	1 oz./9.5 oz. dry Kaolinite clay for seedling roots	Wet seedling roots in clean water, then apply Topsin M 70WDG /Kaolinite mixture to wet roots.  Do not apply mixture to seedling foliage.
Loblolly Longleaf Slash	Fusarium and Rhizoctonia Root Rot	N/A	2 oz./ 50 oz. Kaolinite clay, plus enough water to make a slurry	Thoroughly cover seedling roots with Topsin M 70WDG /Kaolinite slurry.  Do not apply mixture to seedling foliage.
<ul style="list-style-type: none"> <li>- During treatment, avoid excessive drying of roots or exposure to temperatures greater than 90°F or less than 32°F.</li> <li>- Topsin M 70WDG does not control Pythium or Phytophthora.</li> </ul>				

### GENERAL INFORMATION for Turf and Ornamental Uses

Topsin M 70WDG is a broad spectrum fungicide exhibiting preventative, curative, and systemic properties. It is useful on a wide variety of turf and ornamental disease problems. Apply Topsin M 70WDG with ground equipment, using sufficient volume of spray to provide thorough coverage. Use the higher rates under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules.

Chemigation instructions follow. Do not apply through any irrigation system unless these instructions are followed.

Mixing instructions: When high pH tank mixes exist, the interval between mixing and application should be minimized. The buffering of tank water to pH 6-7 prior to the addition of Topsin M 70WDG is recommended. Add required amount of Topsin M 70WDG to partially filled tank (1/2 total volume), agitate by mechanical or hydraulic means, add tank mix product if used (see below), agitate again and then add remaining required amount of water. Continuous agitation is recommended to keep the material in proper suspension. For best results, use spray mixture the same day it is prepared.

Tank mixing instructions: Topsin M 70WDG is compatible with most commonly used

pesticides. If tank mixing with other materials, add products in the following order: wettable powders, dry flowables, liquid flowables, emulsifiable concentrates, and soluble materials such as fertilizers. No claim of compatibility with other products is implied. Do not tank mix with copper-containing materials or with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur. Consult the intended tank mix partner product label for appropriate application rates and use instructions. Follow the label directions for the most restrictive of label precautions and limitations. This product may not be mixed with any product containing a label prohibition against such mixing. Read and observe the most restrictive precautionary statements and other information appearing on product labels used in mixtures. Topsin M 70WDG may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

**RESISTANCE MANAGEMENT:** To avoid the development of tolerant or resistant strains of fungi, Topsin M 70WDG should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with Topsin M 70WDG. **DO NOT USE PRODUCTS CONTAINING THIABENDAZOLE OR OTHER PRODUCTS CONTAINING THIOPHANATE-METHYL IN COMBINATION, IN ROTATION, OR AS A SUBSTITUTE FOR TOPSIN M 70WDG AS THEY ARE OF SIMILAR CHEMISTRY AND WILL CONTRIBUTE TO THE DEVELOPMENT OF RESISTANCE.** If after using Topsin M 70WDG as recommended, and the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of Topsin M 70WDG for at least one season. As long as these precautions are followed, Topsin M 70WDG can be useful for disease control, even if resistant strains are present.

**TURF APPLICATION –Not for homeowner use. For use by individuals/firms licensed or registered by the state to apply ornamental or turf pest control products. Not for use on turf being grown for sale or other commercial use as sod.**

For use on all fine turf applications such as commercial and residential lawns, parks, athletic fields, golf course greens, tees, and fairways, and cemeteries, consisting of cool and warm season grasses such as Bentgrass, Bluegrass, Bermudagrass, Fescue, Ryegrass, St. Augustinegrass, Zoysiagrass, or their mixtures. When used in accordance with the label, Topsin M 70WDG is not phytotoxic to any of the above mentioned grasses. Topsin M 70WDG has both preventive and curative activity, and is to be used for the prevention and control of the diseases mentioned below.

**Ground Application:** Apply Topsin M 70WDG with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation through appropriate sprinkler irrigation systems. Spray uniformly over the area to be treated. Apply recommended amounts in sufficient water to obtain thorough coverage of treatment area (2-4 gal of finished spray per 1,000 sq ft is suggested). When treating golf greens, always treat aprons and approaches. Use the highest recommended rate under conditions of severe disease pressure. For best results, apply after mowing or avoid mowing for at least twelve hours after application.

Lightly water the treatment area with one to two tenths inch of water to move the fungicide into active root zone. Excessive irrigation may move Topsin M 70WDG below active root zone and reduce application effectiveness. Green design and drainage will influence irrigation practices. When tank mixing with contact action fungicides for foliar diseases, applications should be allowed to dry on leaf surfaces. Normal watering may proceed after sprays have dried.

#### General Restrictions

- Do not graze animals on treated turf.
- Do not feed clippings to livestock or poultry.
- Do not apply with fixed wing or rotary aircraft.
- Minimum retreatment interval on turf is 14 days.

Restrictions for use on residential or public turf (commercial and residential lawns, parks, athletic fields, cemeteries):

- Do not apply more than 1.4 oz product/1000 ft<sup>2</sup> in one application
- Do not apply more than 5.7 oz product/1000 ft<sup>2</sup> per year

Restrictions for use on golf courses:

- Do not apply more than 4.3 oz product/1000 ft<sup>2</sup> to tees or greens in one application
- Do not apply more than 11.5 oz product/1000 ft<sup>2</sup> to tees or greens per year
- Do not apply more than 2.9 oz product/1000 ft<sup>2</sup> to fairways (except Florida) per year
- In Florida, do not apply more than 1.4 oz product/1000 ft<sup>2</sup> to fairways per year

	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Anthracnose: basal <i>Colletotrichum graminicola</i> Anthracnose: foliar <i>Colletotrichum graminicola</i>	3 – 4.3 1.4 – 3	2.9	1.4	For prevention in historic areas of disease pressure, apply twice at 14-day intervals when soil temperature reaches 60°F. For curative control, apply when disease first appears and continue at 14-day intervals as needed. Rotations and/or tank mix combinations with chlorothalonil or triadimefon can be used.
Bermudagrass decline: <i>Gaeumannomyces graminis</i> var. <i>graminis</i> Take-All-Patch: <i>Gaeumannomyces graminis</i> var. <i>avenae</i>	3 – 4.3	2.9	1.4	Apply in mid-July or when disease symptoms first appear and repeat at 14-day intervals for suppression. Use higher rates under most severe disease pressure. Follow proper agronomic recommendations to maintain plant vigor.
Cool Season Brown Patch: <i>Rhizoctonia cerealis</i> Necrotic Ring Spot: <i>Leptosphaeria korrea</i> Spring Dead Spot: <i>Leptosphaeria korrea</i>	3 – 4.3	2.9	1.4	For prevention, apply in fall before turf has stopped all growth activity. Make second application in early spring when soil temperatures reach 55-60°F or when disease first appears. For curative action, apply when disease first appears in early spring and continue at 14-day intervals.
Coprinus Snow Mold: <i>Coprinus psychromorbidus</i>	3 – 4.3	2.9	1.4	Make 2 treatments at 21-day intervals in late fall to early winter, with the last application made just prior to first permanent snow cover.
Fusarium Blight: <i>Fusarium roseum</i> , <i>F. triticum</i>	3 – 4.3	2.9	1.4	Apply when disease first appears at 14-day intervals. Tank mix with mancozeb (Penncozeb) may be used.

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	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Dollar Spot: <i>Moellerodiscus</i> , <i>Lanzia</i> Large Brown Patch: <i>Rhizoctonia solani</i> Ascochyta Leaf Blight: <i>Ascochyta</i> Copper Spot: <i>Gloeocercospora sorghi</i> Fusarium patch: <i>Fusarium</i> <i>nivale</i> Red Thread: <i>Corticium</i> <i>fuciforme</i> Zoysia Patch: <i>Rhizoctonia</i> <i>solani</i>	1.5 – 3	2.9	1.4	Apply when disease first appears and continue at 14-day intervals. Rotations and/or tank mix combinations with chlorothalonil or mancozeb (Penncozeb) can be used.
Gray Leaf Spot (Blast): <i>Pyricularia grisea</i>	3 – 4.3	2.9	1.4	Make preventative application before expected period of disease development. Continue applications at 14-day intervals.
Leaf Spot: <i>Drechlsera</i> Leaf, crown, and root diseases: <i>Bipolaris</i> , <i>Curvularia</i> , <i>Exserohilum</i>	3 – 4.3	2.9	1.4	Apply when disease first appears and make applications at 14-day intervals as needed. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb (Penncozeb) are recommended under severe conditions.
Pink Snow Mold: <i>Microdochium nivale</i>	1.5 – 4.3	2.9	1.4	Apply in late fall to early winter before turf has stopped all growth activity. A second application may be used in combination with chlorothalonil or mancozeb (Penncozeb) at recommended rates before snow cover or during spring thaw.

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	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Rusts: <i>Puccinia</i> , <i>Uromyces</i>	3 – 4.3	2.9	1.4	Make 2 applications at 14-day intervals when disease first appears. Rotations and/or tank mix combinations with chlorothalonil or mancozeb (Penncozeb) are recommended.
Stripe Smut: <i>Ustilago striiformis</i>	3 – 4.3	2.9	1.4	Apply at 14-day intervals when disease first appears. For prevention, apply in spring and fall.
Summer Patch: <i>Magnaporthe poae</i>	3 – 4.3	2.9	1.4	For prevention, make 3 applications starting late April or early May using 21-day intervals. Rotations and/or tank mix combinations may be used as part of the three-application program. For suppression, apply at 14-day intervals when disease first appears.

\* in Florida, the maximum application per season is 1.43 oz product/1000 sq ft

\*\* public turf (commercial and residential lawns, parks, athletic fields, cemeteries)

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**ORNAMENTAL APPLICATIONS**

Nursery Greenhouse, Landscape &amp; Interiorscape

Annual and Perennial Flowers, Bedding Plants, Foliage Plants, Ground Covers, plus Deciduous and Evergreen Trees and Shrubs

**Homeowners: Do not apply to home orchards/fruit trees and nut trees.****Certified applicators:****If this product is used on a tree producing fruits or nuts which will be used for food or feed:**

- Do not apply to home orchards/backyard fruit or nut trees after fruit or nut set.
- Do not apply to fruit or nut trees other than almond, apple, pear, pecan, pistachio, apricot, cherry, nectarine, peach, plum or prune.
- For bearing fruit and nut trees, use the following application rates. (For a list of diseases controlled see the table below for Foliar Application).

Crop	Application Rate Ounces product/Acre	Seasonal Maximum Ounces product/Acre
Almond, Apple, Pear, Pecan, Apricot, Cherry, Nectarine, Peach, Plum or Prune	16 (11.2 oz a.i./A)	48 (33.6 oz a.i./A/season)
Pistachio	16 (11.2 oz a.i./A)	32 (22.4 oz a.i./A/season)

Topsin M 70WDG is a broad spectrum systemic fungicide which controls a variety of foliar, stem, and root diseases on a wide range of commercially important plants. Topsin M 70WDG is also effective as a pre-plant dip on cuttings and bulbs. For soil drench applications, best plant protection is achieved with preventative treatments repeated every 21-28 days. For foliar applications, begin treatments when disease first appears, or during suspected periods of disease development. Make additional applications every 7-14 days or as otherwise instructed for the prevention or control of the listed diseases. Use of a wetting agent is recommended for plants that have leaves that are difficult to wet properly. Use of a spreader-sticker is recommended to enhance product performance in wet weather conditions or during periods of overhead irrigation.

Topsin M 70WDG may be applied as a ground application using hand held, mechanical or motorized spray equipment, or as a chemigation spray or through an applicable sprinkler irrigation system; or as an aerial application where applicable. See specific instructions below.

Note: The "Directions For Use" of this product reflect the cumulative inputs from both historical field use and product testing programs. However, it is impossible to test this product on all

species and cultivars. A preliminary trial is suggested on a small scale before a full treatment is applied to any plant type not shown on this label but found in a similar use site with a listed disease problem. Wait 5-7 days after treatment to evaluate results. This product is not recommended for use on Swedish Ivy (*Neprolepis exaltata*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

Some plants may occasionally show some sensitivity to Topsin M 70WDG applications, primarily as seedlings. Symptoms rarely affect marketability of the plants. Please check compatibility under your conditions on small groups of plants to see if there is any sensitivity.

Application Instructions for Non-bearing Ornamentals: Apply material with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation thorough appropriate sprinkler irrigation, flood, or drip systems. Begin applications when disease first appears and repeat at 7-14 day intervals or as needed during the growing season. Use the shortest interval when conditions are unusually favorable for the development of disease. For hand held, mechanical, or motorized applications, mix 6 - 18 oz of Topsin M 70WDG per 100 gal per acre and apply as a full coverage spray to drip for the prevention and control of the diseases listed below. Spray volume may range up to 400 gallons of finished spray per acre depending upon plant species and plant growth stage. For applications through irrigation systems, refer to aerial use rates indicated in the foliar application chart.

Special Instructions For Proportional Injectors (e.g. Dosatron, Dosmatic, Anderson, and similar equipment): Determine the treatment rate as indicated below in the ground application column for crop and pathogen. Determine the injection ratio for the individual system to be used for application. For systems using a 1:100 ratio, measure and add the exact amount of recommended material per 100 gallons to each gallon of water in a stock bucket or tank. For systems using a 1:200 ratio, multiply the recommended amount per 100 gallons by 2. For systems using a 1:50 ratio, divide the recommended amount per 100 gallons by 2. For systems using a 1:16 ratio, divide the recommended amount per 100 gallons by 6. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. An injection ratio of 1:100 is recommended for most greenhouse and nursery systems.

**Note to Homeowners:**

Do not apply more than 40 ounces of product per acre per season.

Do not apply to home orchards/bearing fruit trees or nut trees.

**FOLIAR APPLICATION**

These application rates are only for use on ornamentals and non-bearing fruit or nut trees.

Certified applicators must follow the application rates and restrictions listed above if fruit or nuts from treated trees will be used as food or feed.

Diseases Controlled	Rate oz product/100 gallons per acre	Instructions
Anthracnose	9 - 12	Apply as buds break or at first sign of disease development. Repeat at 7-14 day intervals as needed during infection period.
Black Spot of Rose <i>Diplocarpon rosae</i>	9 - 12	Apply in early summer or at first sign of disease. Repeat at 7-14 days as needed during disease period.
Brown Rot and Blight <i>Monilinia</i> , <i>Sclerotinia</i> , <i>Whetzellinia</i>	9 - 12	Apply in late spring or at first sign of disease development. Repeat every 7-14 days as needed during infection period.
Fusicladium and Venturia Leaf Scabs on: Non-bearing Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	9 - 12	Apply as buds break. Repeat every 7-14 days as needed during infection period. Effective control requires coverage during leaf expansion. Rotations and/or tank mix combinations with mancozeb (Penncozeb), chlorothalonil or propiconazole can be utilized.
Leaf Spots and Blights caused by: <i>Ascochyta</i> , <i>Blumeriella</i> , <i>Botrytis</i> , <i>Cercospora</i> , <i>Coccomyces</i> , <i>Corynespora</i> , <i>Curvularia</i> , <i>Didymellina</i> , <i>Entomosporium</i> , <i>Fabraea</i> , <i>Fusarium</i> , <i>Ramularia</i> , <i>Rhizoctonia</i> , <i>Marssonina</i> , <i>Mycosphaerella</i> , <i>Myrothecium</i> , <i>Phoma</i> , <i>Physalospora</i> , <i>Schizothyrium</i> , <i>Septoria</i> , <i>Sphaceloma</i>	9 - 12	Apply when disease symptoms first appear. Repeat every 7-14 days as needed during disease period. Rotations and/or tank mix combinations with mancozeb (Penncozeb) or chlorothalonil can be utilized.
Ovulinia Blight	6 - 12	Apply as flowers open. Repeat every 7-14 days as needed during infection period.
Powdery Mildews <i>Erysiphe</i> , <i>Microsphaera</i> , <i>Phyllactinia</i> , <i>Podosphaera</i> , <i>Oidium</i> ,	9 - 18	Apply when disease first appears and repeat every 7-14 days during infection period. Rotations and/or tank mix combinations with mancozeb (Penncozeb) or triadimefon can be utilized.

Diseases Controlled	Rate oz product/100 gallons per acre	Instructions
<i>Sphaerotheca</i>		
Rust Diseases caused by: <i>Puccinia</i> , <i>Gymnosporangium</i> , <i>Uromyces</i>	9 - 12	Apply in late spring or when symptoms first appear. Repeat every 7-14 days as needed during disease period. Rotations and/or tank mix combinations with mancozeb (Penncozeb) or chlorothalonil are recommended.
Tip Blight of Pine <i>Sphaeropsis sapinea</i> , <i>Diplodia pinea</i>	12 – 18	Begin application in spring when new growth starts. Make a second application just before needles emerge from the sheath and a third application 14 days later. Thorough coverage is essential for optimal disease control.
Twig Blights, Cankers, and Diebacks <i>Diaporthe</i> , <i>Kabatina</i> , <i>Phoma</i> , <i>Phomopsis</i>	12 – 18	Apply when symptoms first appear. Repeat every 7-14 days as needed during infection period.

## SOIL DRENCH APPLICATION

Germination of seedlings of some species and cultivars planted in soil drenched with Topsin M 70WDG may be delayed slightly, but the plants typically recover, and will be protected from seedling root infection. Soil drenches on young plants may cause a slight chlorosis (yellowing) of lower leaves, but typically do not affect the upper foliage. Other plants may also show a temporary stunting.

Diseases Controlled	Rate oz product/100 gallons	Instructions
Stem, Crown, and Root Rots caused by: <i>Botrytis</i> , <i>Cylindrocladium</i> , <i>Fusarium</i> , <i>Gliocladium</i> , <i>Myrothecium</i> , <i>Penicillium</i> , <i>Ramularia</i> , <i>Rhizoctonia</i> , <i>Sclerotinia</i> Black Root Rot: <i>Thielaviopsis</i>	6 – 12	Apply as a drench or directed spray using hand held, mechanical, or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems, after seeding or sticking of cuttings (6 oz) or after transplanting (9-12 oz) to propagation beds, containers, pots, trays, or nursery or landscape beds at a rate to thoroughly soak the growing media through the root zone. A general guide is 0.25-3 pints of finished mixture per sq ft depending on the media type and depth (about 4 oz per 4 inch pot or 8 oz per 6 inch pot). Repeat every 21-28 days for adequate crop protection. Note: Topsin M 70WDG does not control <i>Pythium</i> or <i>Phytophthora</i> . Tank mix combinations with metalaxyl, mefenoxam, etridiazole, fosetyl-Al or propamocarb are required for the control of <i>Pythium</i> and <i>Phytophthora</i> .

## PLANT DIP APPLICATIONS

Diseases Controlled	Rate oz product/100 gallons	Instructions
Plant or Cutting Diseases caused by: <i>Botrytis</i> , <i>Cylindrocladium</i> , <i>Fusarium</i> , <i>Gliocladium</i> , <i>Myrothecium</i> , <i>Penicillium</i> , <i>Ramularia</i> , <i>Rhizoctonia</i> , <i>Sclerotinia</i> , <i>Thielaviopsis</i>	12 – 18	Immerse plants or cuttings for 10-15 min. Remove and allow to drain. Note: Follow accepted hygiene practices to minimize the introduction and spread of water borne bacterial and water mold fungal diseases.

Diseases Controlled	Rate oz product/100 gallons	Instructions
Bulb, Corm, and Rhizome Rots caused by: <i>Botrytis</i> , <i>Cylindrocladium</i> , <i>Fusarium</i> , <i>Gliocladium</i> , <i>Myrothecium</i> <i>Penicillium</i> , <i>Ramularia</i> , <i>Rhizoctonia</i> , <i>Sclerotinia</i> , <i>Thielaviopsis</i>	12 - 18	Soak cleaned bulbs for 15 to 30 minutes in warm solution (80-85 °F). For storage disease prevention, treat bulbs preferably within 48 hours after digging. After treatment, dry well before storing. If bulbs are for forcing, treat bulbs that have been heat-cured. Note: Follow accepted hygiene practices to minimize the introduction and spread of water borne bacterial and water mold fungal diseases.

### DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS

USE IN CALIFORNIA BY CHEMIGATION ONLY FOR BEANS, CUCURBITS (CUCUMBERS, MELONS, PUMPKINS, SQUASH, WATERMELONS), PEANUTS, POTATOES, SOYBEANS, STRAWBERRIES, AND SUGAR BEETS.

### GENERAL INSTRUCTIONS

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set or hand move; or drip (mini-micro sprinklers, strip tubing, trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Do not connect chemigation system to any public water system. Public water system means a system for the provision of piped water for human consumption if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

### SYSTEM REQUIREMENTS

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve



to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **APPLICATION INSTRUCTIONS**

Observe the requirements in the System Requirements section above.

Apply Topsin M 70WDG only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.

Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.

Application of more than recommended quantities of irrigation water per acre may result in decreased product performance.

Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area.

Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

Topsin M 70WDG may be applied in conjunction with chemically neutral liquid fertilizers.

Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

### **SPRAY PREPARATION:**

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

Prepare a suspension of Topsin M 70WDG in a mix tank. Fill the tank with  $\frac{1}{2}$  or  $\frac{3}{4}$  the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Topsin M 70WDG and then the remaining volume of water.

**Sprinkler Irrigation - Notes**

Observe all System Requirements and Application Instructions above.

Set sprinkler system to deliver a maximum of 0.4 inch of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of Topsin M 70WDG into the irrigation water line so as to deliver the desired rate per acre. The suspension of Topsin M 70WDG should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. When treatment with Topsin M 70WDG has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Where sprinkler distributed patterns do not overlap sufficiently, unacceptable disease control may result.

Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state.

**Drip (Mini-Micro Sprinklers, Strip Tubing, Trickle) Irrigation - Notes**

Observe all System Requirements and Application Instructions above.

A pesticide supply tank is recommended.

**WARRANTY AND DISCLAIMER**

Cerexagri, Inc. warrants that this material 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 risks referred to therein. CEREXAGRI, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT ALLOWABLE BY STATE LAW, CEREXAGRI, INC. OR SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS REPUTATION, OR CUSTOMERS; LABOR COST; OR OTHER EXPENSES INCURRED IN PLANTING OR HARVESTING.

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