

66222-145

05-19-2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Ms. Anne Stout  
Product Registration  
Maktheshim Agan of North America  
MANA, Inc.  
4515 Falls of Neuse Rd, Suite 300  
Raleigh, NC 27609

MAY 19 2010

SUBJECT: Application for Pesticide Notification (PRN 98-10)  
Request General Label Change/Typographical Error, Page 10 (\*PINE)  
EPA Reg. No. 66222-145  
Application Dated March 28, 2010

Dear Registrant:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 03/28/10 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 66222-145	2. EPA Product Manager Linda Arrington	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Thiophanate Methyl 85 WDG	PM# 2/ Registration Support Branch	
5. Name and Address of Applicant (Include ZIP Code) Makhteshim Agan of North America, Inc. 4515 Falls of Neuse Rd., Suite 300 Raleigh, NC 27609 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

- ☐ Amendment - Explain below.
- ☐ Resubmission in response to Agency letter dated \_\_\_\_\_
- ☒ Notification - Explain below.
- ☒ Final printed labels in response to Agency letter dated \_\_\_\_\_
- ☐ "Me Too" Application.
- ☐ Other - Explain below.

NOTIFICATION

MAY 19 2010

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of correction of typographical error (notification needed for state registration support).

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula for this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

## Section - III

## 1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container

3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/>
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____		

## Section - IV

## 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Anne Stout	Title Registration Specialist	Telephone No. (Include Area Code) 901-861-4400
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Specialist	
4. Typed Name Anne Stout	5. Date 3-28-10	



March 28, 2010

Registration Support Branch  
Document Processing Desk (NOTIF)  
U.S. Environmental Protection Agency  
Registration Division (7504P)  
Ariel Rios Building  
1200 Pennsylvania Ave, NW  
Washington, DC 20460

Re: Thiophanate Methyl 85 WDG; EPA Reg. No. 66222-145  
Notification of Correction of Typographical Error as Outlined in PRN 98-10

To Whom It May Concern:

Makhteshim Agan of North America, Inc. is notifying the Agency of the correction of a typographical error in the language to the referenced product(s) as specified in PRN 98-10. Although EPA considers typographical errors to be non-notifications, we must prove to several states that we have notified the Agency of the correction. We certify the following:

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula for this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

In support of this submission, the following documents are attached:

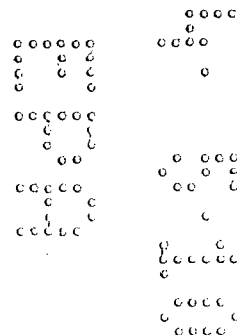
- Application for registration (EPA Form 8570-1)
- One copy of final printed labeling with the correction clearly marked in yellow

Should you have any questions regarding this submission, please contact me at 901-861-4400 or by email at [annies@manainc.com](mailto:annies@manainc.com).

Sincerely,

Anne Stout  
Registration Specialist

Enclosures



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# THIOPHANATE METHYL 85 WDG

## FUNGICIDE

Contains thiophanate-methyl, the active ingredient used in Topsin® and Cleary's 3336  
Thiophanate methyl 85WDG is not manufactured or distributed by Cerexagri.

ACTIVE INGREDIENT:	% BY WT.
Thiophanate-methyl: (dimethyl[(1,2-phenylene)-bis(iminocarbonothioyl)]bis[carbamate]).....	85.0%
OTHER INGREDIENTS:.....	15.0%
<b>TOTAL</b>	<b>100.0%</b>

EPA Reg. No. 66222-145

EPA Est. No. 37429-GA-002

**Manufactured for:**  
Makhteshim Agan of North America, Inc.  
4515 Falls of Neuse Rd., Suite 300  
Raleigh, NC 27609

**NOTIFICATION**

**MAY 19 2010**

**NET CONTENTS: 5 LB**

## KEEP OUT OF REACH OF CHILDREN CAUTION

### FIRST AID

<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **You may also contact PROSAR at 1-877-250-9291 for emergency medical treatment information.**

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

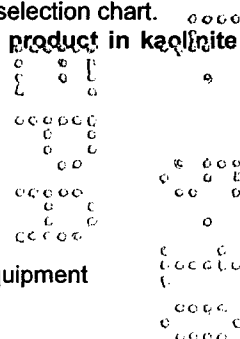
Some materials that are chemical resistant to this product are barrier laminate, neoprene rubber (>14mils) and polyethylene. If you want more options, follow the instructions for category A on an EPA chemical resistance selection chart.

**Handlers mixing, loading, and applying the product as a dip (including application of product in kaolinite clay to conifer seedling roots) must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- A chemical-resistant apron

**All other mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves for all mixers and loaders and for applicators using hand-held equipment
- Shoes plus socks



**User Safety Requirements:** Follow manufacturer's instructions for cleaning/maintaining personal protective equipment, PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been heavily contaminated with this product. Do not reuse them.

#### USER SAFETY RECOMMENDATIONS

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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 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 intervals. 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). The REI for each crop is listed in the directions for use associated with each crop.

Exemption: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 over long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR Part 170]. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter until sprays have dried.

#### GENERAL INFORMATION

Apply Thiophanate Methyl 85WDG with ground or aerial equipment using sufficient volume of spray to provide thorough coverage. Add required amount of Thiophanate Methyl 85WDG 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. Do not tank mix 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 LB/Acre rate for concentrate sprayers (less than 400 gallons) and aerial application. Use the LB/100 GAL rate for dilute ground application.

**CHEMIGATION INSTRUCTIONS:** Chemigation instructions follow Directions for Use. Do not apply through any irrigation system unless these instructions are followed.

When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

#### RESISTANCE MANAGEMENT

To avoid the development of tolerant or resistant strains of fungi, Thiophanate Methyl 85WDG should always be tank mixed with a fungicide of different chemistry and/or a fungicide of different chemistry should be alternated with Thiophanate Methyl 85WDG at each application. MAKHTESHIM AGAN OF NORTH AMERICA, INC. DOES NOT RECOMMEND THE USE OF PRODUCTS CONTAINING THIABENDAZOLE IN COMBINATION OR IN ROTATION WITH THIOPHANATE METHYL 85WDG. If after using Thiophanate Methyl 85WDG as recommended and the treatment is not effective, a tolerant or resistant

strain of fungi may be present. Discontinue the use of Thiophanate Methyl 85WDG for at least one season. Do not use products containing thiabendazole as substitutes for Thiophanate Methyl 85WDG, as they are of similar chemistry and will contribute to the development of resistance. As long as these precautions are followed, Thiophanate Methyl 85WDG can be useful for disease control even if resistant strains are present.

### DIRECTIONS FOR USE IN CHEMIGATION SYSTEMS

**Use in California by Chemigation Systems Only in Beans, Cucurbits (cucumbers, melons, pumpkins, squash, watermelons), Peanuts, Potatoes, Soybeans, and 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, big gun, 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 non-uniform distribution of treated water.

If you have questions about calibration, you should contact Cooperative 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 the chemigation system to any public water system. Public water system means a system for the provision of piped water for human consumption if such 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 which 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.

### INSTRUCTIONS FOR SPRINKLER (OVERHEAD) IRRIGATION

Observe the requirements in the System Requirements section above. Do not apply when wind speed favors drift beyond the area intended for treatment.

Apply Thiophanate Methyl 85WDG only through systems containing anti-syphon 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 ensure simultaneous shutoff.

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 large volume of a more dilute suspension per unit time.

Application of more than the 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.

Thiophanate Methyl 85WDG 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.

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

**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 Thiophanate Methyl 85WDG in a mix tank. Fill the tank with ½ or ¾ the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Thiophanate Methyl 85WDG and then the remaining volume of water.

### APPLICATION INSTRUCTIONS: Sprinkler Irrigation-Notes

Observe all Systems Requirements and Instructions above. Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of

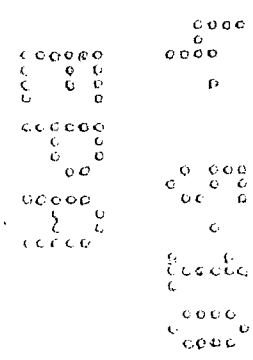
Thiophanate Methyl 85WDG into the irrigation water line so as to deliver the desired rate per acre. The suspension of Thiophanate Methyl 85WDG should be injected with a positive displacement pump into the main line ahead of a right angle to ensure adequate mixing.

**NOTE:** When treatment with Thiophanate Methyl 85 WDG has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

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

Observe all system requirements and application instructions above.

CROP USES				
CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
<b>ALMONDS</b>	Brown Rot Blossom Blight ( <i>Monilinia</i> ) Scab ( <i>Cladosporium</i> ) Jacket Rot ( <i>Monilinia</i> , <i>Sclerotinia</i> , <i>Botrytis</i> ) Leaf Blight ( <i>Seimatosporium</i> )	0.8-1.2	-	Apply as needed between early pink bud and petal fall. For control of Scab, Jacket Rot and Leaf Blight, apply in combination with a contact fungicide. Refer to the Resistance Management section above for additional instructions. Do not apply more than 2.47 lb of product per acre per season. Restricted Entry Interval (REI) is 3 days. Preharvest interval is 1 day.
<b>APPLES</b> (preharvest)	Apple Scab ( <i>Venturia</i> ) Bitter Rot ( <i>Glomerella</i> ) Flyspeck ( <i>Zygophiala</i> ) Powdery Mildew ( <i>Podosphaera</i> ) Sooty Blotch ( <i>Gloeodes</i> ) Black Rot ( <i>Physalospora</i> ) Brooks Fruit Spot ( <i>Mycosphaerella</i> ) White Rot ( <i>Sclerotium</i> ) (Not in California)	0.6-0.8	0.2-0.3	Apply at 5- to 10-day intervals from green tip through petal fall; continue at 7-14 day intervals as cover sprays. Do not apply more than 3.3 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section above for additional instructions. Preharvest interval is 1 day. Restricted Entry Interval (REI) is 2 days.
<b>BEANS</b> (Except California) including Dry and Succulent including Lima bean, Snap bean, Kidney bean, Mung bean, Navy bean, Pinto bean, Wax bean, Broad bean, Fava bean, Asparagus bean, Blackeyed pea, Cowpea, Sweet lupine, White Sweet lupine, Grain lupine, Chick pea, Garbanzo bean	Gray Mold ( <i>Botrytis</i> ) White Mold ( <i>Sclerotinia</i> ) Anthracnose	0.8-1.6	-	Make first application when 10%-30% of plants have at least one open bloom and/or conditions are favorable for disease development. A maximum of 3.2 lb of product per acre per crop cycle may be used with a minimum 7-day spray interval. Preharvest interval: 14 days for snap and lima beans, 28 days for dry beans. Restricted Entry Interval (REI) is 1 day for all beans except 3 days for dry beans.



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CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
<b>BEANS</b> (California Only) including Dry and Succulent including Lima bean, Snap bean, Kidney bean, Mung bean, Navy bean, Pinto bean, Wax bean, Broad bean, Fava bean, Asparagus bean, Blackeyed pea, Cowpea, Sweet lupine, White Sweet lupine, Grain lupine, Chick pea, Garbanzo bean	Gray Mold ( <i>Botrytis</i> ) White Mold ( <i>Sclerotinia</i> ) Anthracnose	0.8-1.6	-	Apply once at 50%-70% of full bloom.
		0.8-1.6	-	<b>OR</b> Apply twice with the first application at 10%-30% of full bloom and a second application at 4 to 7 days later or at peak bloom. Preharvest interval: 14 days for snap beans, 28 days for lima or dry beans. Restricted Entry Interval (REI) is 1 day for all beans except 3 days for dry beans.
<b>CANOLA</b> North Dakota, Minnesota, and Montana (east of Interstate 15) Only	White Mold Sclerotinia Stem Rot ( <i>Sclerotinia sclerotiorum</i> )	0.8-1.6 in a single application <b>OR</b> 0.8 per application in 2 applications	-	Apply once at stage of 20%-50% flowering.  <b>OR</b> Apply twice with first application at stage of 20%-30% flowering with second application at stage of 40%-50% flowering. Thorough coverage of flowers is essential for controlling White Mold. Do not exceed 1.6 lb of product per acre per season. Restricted Entry Interval (REI) is 12 hours.
<b>CUCURBITS</b> (cucumbers, melons, pumpkins, summer and winter squash)	*Anthracnose ( <i>Colletotrichum</i> ) *Gummy Stem Blight ( <i>Didymella</i> ) Powdery Mildew ( <i>Erysiphe</i> ) *Target Spot ( <i>Corynespora</i> ) Note: * Not registered for use in CA unless accompanied by a supplemental label	0.2-0.4 for ground applications <b>OR</b> 0.4 for aerial applications	-	Begin applications when plants begin to run or when disease first appears and repeat at 7- to 14-day intervals as needed. For Target Spot, use 7-day intervals as needed. Do not apply more than 2.5 lb of product per acre per season. Preharvest interval is 1 day. Restricted Entry Interval (REI) is 1 day.
	Belly Rots ( <i>Rhizoctonia/Fusarium</i> spp.)	0.4	-	For Belly Rots, apply in sufficient volume to allow runoff to the soil. Will not control Pythium sp. Do not apply more than 2.5 lb of product per acre per season. Preharvest interval is 1 day. Restricted Entry Interval (REI) is 1 day.
	Suppression of vine decay caused by <i>Monosporascus cannonballus</i>	0.4	-	For disease suppression, apply at 14-day intervals beginning at emergence and continuing to harvest. Applications weekly or biweekly, beginning 4-6 weeks prior to harvest, will also offer suppression but may not be as effective as a season-long program. Do not apply more than 2.5 lb of product per acre per season. Preharvest interval is 1 day. Restricted Entry Interval (REI) is 1 day.



CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
GARLIC	Penicillium Clove Rot	-	0.8	Immerse garlic cloves completely in suspension for at least 5 minutes. Continuously agitate the solution tank by mechanical or hydraulic means. After treatment, remove cloves from solution and drain them over sand. Dry cloves after treatment and before planting. Restricted Entry Interval (REI) is 12 hours.
GRAPES West of Rocky Mountains	Botrytis Bunch Rot ( <i>Botrytis cinerea</i> ) Powdery Mildew ( <i>Uncinula necator</i> )	0.8-1.2	-	Apply at first bloom and repeat 14 days later or whenever severe disease conditions exist. Make second application 3-4 weeks before harvest or when sugar begins to build. Make third application 14 days later if conditions favorable to disease development persist. For powdery mildew, continue applications throughout the season. Combine with sulfur or in rotation with sulfur and/or DMI fungicides. Do not exceed 3.2 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 14 days. The Restricted Entry Interval (REI) is 2 days.
GRAPES East of Rocky Mountains	Bitter Rot ( <i>Melanconium</i> ) Black Rot ( <i>Guignardia</i> ) Powdery Mildew ( <i>Uncinula</i> )	0.6-1.2	-	Apply when foliage first develops and repeat at intervals of 14-21 days or as needed. Do not exceed 3.2 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 14 days. The Restricted Entry Interval (REI) is 2 days.
ONIONS & GARLIC (In furrow)	*White Rot ( <i>Sclerotium</i> spp.)  *Not registered for use in CA	0.4-0.6 ounce product per 1000 ft of row (12 inch row spacing) OR 1.6 lb broadcast	-	Spray directly into the open furrow at the time of planting seed, sets, or bulbs. Do not apply through any type of irrigation system. Do not apply more than 1.6 lb of product per acre per year. The Restricted Entry Interval (REI) is 3 days.
PEANUTS	Leaf Spot ( <i>Cercospora</i> ) Rust ( <i>Puccinia</i> ) Limb Rot ( <i>Rhizoctonia</i> ) Web Blotch ( <i>Ascochyta</i> )	0.4	-	Begin applications 35 days after planting or when disease first appears and repeat at 14-day intervals or as needed. Use the 14-day interval under severe disease pressure. Do not apply more than 1.65 lb of product per acre per season. Use only in combination with another non-benzimidazole fungicide such as mancozeb at label recommended rates. Review <b>RESISTANCE MANAGEMENT</b> section for additional guidance. Preharvest interval is 14 days. The Restricted Entry Interval (REI) is 1 day.

CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
PEARS	Pear Scab ( <i>Venturia pirina</i> ) Sooty Blotch ( <i>Gloeodes pomigena</i> ) Flyspeck ( <i>Microthyriella rubi</i> ) Powdery Mildew ( <i>Oidium</i> spp.) Fabraea leaf spot ( <i>Fabraea maculate</i> )	0.8	0.2	Apply in a minimum spray volume of 10 gallons/A for aerial applications and do not apply through irrigation equipment. Apply at intervals of 5-10 days from green tip through petal fall. Apply again at intervals of 7-14 days in cover sprays. Do not exceed 3.2 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. The Restricted Entry Interval (REI) is 2 days.
PECANS	Brown Spot ( <i>Cercospora</i> ) Downy Spot ( <i>Mycosphaerella</i> ) Powdery Mildew ( <i>Microsphaera</i> ) Scab ( <i>Fusicladium</i> ) Stem End Blight ( <i>Botryosphaeria</i> ) Zonate Leaf Spot ( <i>Chistulariella</i> ) Liver Spot ( <i>Gnomonia</i> )	0.4-0.8	-	Use the higher rate for trees over 30 feet tall and for aerial application in AR, GA, LA, MS, OK, and TX. Begin application when first leaves are showing and repeat at 3- to 4-week intervals until shuck split. Do not spray after shuck split. Do not apply more than 2.5 lb of product per acre per season. The Restricted Entry Interval (REI) is 3 days. Preharvest interval (PHI) is 1 day.
PISTACHIOS	Shoot Blight ( <i>Botrytis</i> , <i>Botryosphaeria</i> )	1.2-1.6	-	Apply at bloom. Do not apply more than 1.6 lb of product per acre per season. Apply in a minimum of 100 gallons by ground or 20 gallons per acre by air. For aerial application, fly over every row or center. The Restricted Entry Interval (REI) is 3 days.
POTATOES (Not for use in California)	White Mold ( <i>Sclerotinia sclerotiorum</i> )	0.8-1.2	-	Make initial application just before row closure. Repeat application within 7-14 days and at intervals of 7-14 days if conditions for disease development are favorable. Thoroughly cover lower stems and branches for control. Do not exceed 3.2 lb of product per acre per season. May be tank mixed with other fungicides labeled for blight control. AERIAL APPLICATION FOR WHITE MOLD ON THIS CROP IS NOT RECOMMENDED. Preharvest interval is 21 days. The Restricted Entry Interval (REI) is 2 days.

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CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
SOYBEANS	Anthracnose ( <i>Colletotrichum</i> ) Brown Spot ( <i>Septoria</i> ) Frog-eye Leaf Spot ( <i>Cercospora</i> ) Stem and Pod Blight ( <i>Diaporthe</i> , and the imperfect stage <i>Phomopsis</i> ) Purple Seed Stain ( <i>Cercospora</i> )	0.4-0.8	-	Apply from full bloom when pods are 1/8-1/4 inch in length. Make a second application 14-21 days later. Do not make the second application later than 14 days after pods average 1/4 inch 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 at the high rate when beans form in the pod. Do not make more than 2 applications per year. Do not graze or feed treated vines or hay to livestock. Preharvest interval is 21 days. Restricted entry interval (REI) is 1 day.
	White mold ( <i>Sclerotinia</i> )	0.6-0.8	-	Make one application at early bloom (R-1 to R-2 stage) followed by a second application 7-14 days later if conditions are favorable for continued disease pressure. Use a minimum of 5 gallons by air. Do not make more than 2 applications per year. Do not graze or feed treated vines to livestock. Preharvest interval is 21 days. Restricted entry interval (REI) is 1 day.
	Aerial Blight (suppression)	0.8	-	Make initial application when disease threatens and repeat 14-21 days later if needed. Do not make more than 2 applications per year. Do not graze or feed treated vines to livestock. Preharvest interval is 21 days. Restricted entry interval (REI) is 1 day.
STONE FRUITS: APRICOTS CHERRIES NECTARINES PEACHES PLUMS/PRUNES	Brown Rot Blossom Blight ( <i>Monilinia</i> ) Brown rot of fruit ( <i>Monilinia</i> )	0.8-1.2 (In CA, use the high rate)	0.4 in apricots, cherries, nectarines, and plums/prunes  0.4-0.6 in peaches	Apply at early bloom (red bud) for apricots, early bloom (early popcorn) for cherries, early bloom (pink bud) for nectarines and peaches, and early bloom (green tip) for plums/prunes. Make a second application at full bloom. In addition, for fruit brown rot, apply 1 or 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10-14 day intervals between full bloom and final preharvest spray. Do not apply more than 3.3 lb of product per acre per season. Refer to the Resistance Management section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 2 days.

CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
CHERRIES	Cherry leaf spot ( <i>Coccomyces</i> )	0.8-1.2	0.3-0.4	Apply at petal fall or before when leaves first unfold and at first, second, and third cover sprays at 10- to 14-day intervals and one spray 14-21 days after harvest. Do not apply more than 3.3 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 2 days.
	Powdery Mildew ( <i>Podosphaera</i> spp. and <i>Sphaerotheca</i> spp.)	0.8-1.2 <b>PLUS</b> 0.8-1.2	0.4 <b>PLUS</b> 0.3-0.4	Apply at early bloom (early popcorn). Make a second application at full bloom. <b>PLUS</b> Apply at shuck fall and first cover. Do not apply more than 3.3 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 2 days.
PEACHES	Peach Scab ( <i>Cladosporium</i> ) Brown Rot Blossom Blight	0.8-1.2 <b>PLUS</b> 0.8-1.2	0.4-0.6 <b>PLUS</b> 0.3-0.4	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 spray. Treatments must be 10 days apart. Do not apply more than 3.3 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 2 days.
PLUMS/PRUNES	Black Knot ( <i>Dibotryon</i> ) Leaf Spot ( <i>Coccomyces</i> ) Brown Rot Blossom Blight	0.8-1.2	0.4	Apply at pre-bloom, petal fall, and at first, second, and third cover spray at 10- to 14-day intervals and for Leaf Spot, make 1 spray 14 to 21 days after harvest. Do not apply more than 3.3 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 2 days.

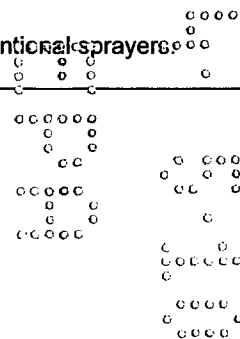
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CROP	DISEASES	LB/ACRE	LB/100 GAL	REMARKS
<b>STRAWBERRIES</b>	Fruit rot ( <i>Botrytis</i> ) Leaf blight ( <i>Dendrophoma</i> ) Leaf scorch ( <i>Diplocarpon</i> ) Powdery mildew ( <i>Sphaerotheca</i> )	0.6-0.8	-	Begin applications at early bloom and continue at 7- to 10-day intervals. Use higher rate East of the Rocky Mountains and under conditions of severe disease pressure. Do not apply more than 3.2 lb of product per acre per year. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 1 day. Restricted entry interval (REI) is 1 day.
<b>SUGARBEET</b>	Leaf spot ( <i>Cercospora</i> ) Powdery mildew ( <i>Erysiphe</i> )	0.4-0.8	-	Begin applications when disease first appears and repeat at 14-to 21-day intervals as needed. Do not apply more than 2.5 lb of product per acre per season. Refer to the <b>RESISTANCE MANAGEMENT</b> section for additional instructions. Preharvest interval is 21 days. Restricted entry interval (REI) is 1 day.
<b>TRITICALE and WHEAT, FALL SEEDED</b> Idaho, Oregon, and Washington only	Foot Rot, Strawbreaker, Eye Spot ( <i>Pseudocercospora</i> sp.)	0.8	-	Apply at the rate indicated in a single application by air or ground after wheat is tillered, but before stem elongation has begun. Use sufficient water to obtain thorough coverage. Do not make more than one application per season. Do not cut for hay within 90 days of application. Do not allow livestock to graze in treated areas before harvest. Restricted Entry Interval is 1 day.

CROP	DISEASES	LB/ACRE	RATE: MINIMUM GALLONAGE	REMARKS
<b>CONIFERS*</b> PINE Austrian Red Scots Christmas trees	Tip Blight ( <i>Diplodia</i> )	56 oz (3.5 lbs product)	13 oz product per acre applied in spray solution at a rate of 100 gallons per acre	Apply at bud break. Repeat 10-14 days later, just before needles emerge from sheath; repeat again 10-14 days after needle emergence. REI = 12 hours.
<b>FIR</b> Douglas	Swiss Needle Cast ( <i>Phaenocarpa</i> ) Rhabdocline Needle Cast	56 oz (3.5 lbs product)	13 oz product per acre applied in spray solution at a rate of 50 gallons per acre	Apply initially in early May. Repeat at 4-week intervals. REI = 12 hours.

\*Not for use in California.

- Add a spreader/sticker to improve coverage.
- Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers.
- Do not graze livestock in treated areas.



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CROP	DISEASES	LB/ACRE	RATE: MINIMUM GALLONAGE	REMARKS
CONIFERS* (seedling treatment) Longleaf	Brown Needle Blight ( <i>Scirrhia</i> )	-	0.8 oz/9.5 oz dry kaolinite clay for seedling roots	Wet seedling roots in clean water, then apply Thiophanate Methyl 85WDG/kaolinite mixture to wet roots.
Loblolly Longleaf Slash	Fusarium and Rhizoctonia Root Rot	-	1.6 oz/50 oz kaolinite clay, plus enough water to make a slurry.	Thoroughly cover seedling roots with Thiophanate Methyl 85WDG/kaolinite slurry.

\*Not for use in California.

- Do not apply mixture to seedling foliage.
- During treatment, avoid excessive drying of roots or exposure to temperatures greater than 90°F or less than 32°F.
- Thiophanate Methyl 85 WDG does not control Pythium or Phytophthora.

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

#### HORTICULTURAL APPLICATIONS GREENHOUSE, NURSERY, AND LANDSCAPE

Thiophanate Methyl 85WDG provides broad spectrum disease control on containerized woody, flowering, herbaceous, and tropical foliage ornamental plants, trees, and turf grasses. Not for homeowner use.

Make applications of Thiophanate Methyl 85WDG with ground equipment using sufficient spray volume to provide thorough coverage. Do not tank mix Thiophanate Methyl 85WDG with copper-containing materials or with highly alkaline pesticides such as Bordeaux mixture or lime sulfur. No claim of compatibility with other pesticides is implied. Under conditions of severe disease pressure or when application intervals are shorter than 14 days due to persistent rainfall, use the higher concentration or rates provided in this label. Consult your local State Extension Service specialist for application schedule recommendations.

**IMPORTANT:** If specified treatments of Thiophanate Methyl 85WDG are ineffective, a tolerant strain of fungus may be present. Consult your Maktheshim Agan of North America, Inc. representative or distributor, your local State Agricultural Experiment Station for advice on prompt use of some other labeled fungicide.

Thiophanate Methyl 85WDG provides broad spectrum control of many foliar, stem, and below ground diseases. Apply Thiophanate Methyl 85WDG 14 to 21 days prior to appearance of a particular disease and at the very latest, upon first sign of disease. Spray intervals usually range from 7 to 14 days with 14 days being for preventative treatments and the 7 day interval for times when disease development is likely. For hard-to-wet foliage, an acceptable wetting agent may be added to the spray tank to increase product efficacy. Use of a spreader-sticker is suggested when excessive and repeated foliar wetting occurs. Thiophanate Methyl 85WDG may be used to control listed diseases on noncommercial fruit and nut trees. Do not use fruit or nuts from trees treated with this product as food. Do not apply this product to home orchards or backyard fruit trees after fruit set.

**Note:** Thiophanate Methyl 85WDG has been determined to be safe for use on the plant types listed in these directions for use based on cumulative data derived from research trials and historical field use. As all species and cultivars have not been tested, it is recommended that trial applications be performed if a user wishes to make an application to a plant type not listed on the label but found on a similar use site and for disease that is listed on the label. To conduct a trial application, apply at least two applications to at least 25 trial plants at the highest concentration, 7 days apart. Evaluate 7 days after the last application before initiating full-scale application. Do not use this product on the following plants: Swedish Ivy (*Neprolepsis exaltata*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

Plant Type	Such as but not limited to:
Herbaceous Bedding	Ageratum, Begonia, Canna, Coleus, Dahlia, Dusty Miller, Foxglove, Fuchsia, Geranium, Impatiens, Lavender, Marigold, Pansy, Petunia, Pinks, Primrose, Salvia, Statice, Strawflower, Tickseed, Verbena
Flowering	Chrysanthemum, Hydrangea, Hollyhock, Iris, Lily, Poinsettia
Tropical Foliage	Dieffenbachia, Dracaena, English Ivy, Philodendron, Pothos
Woody Ornamentals	Azalea, Hibiscus, Holly, Ligustrum, Rhododendrum, Rose, Pyracantha
Evergreen Trees	Douglas Fir, Fir, Larch, Pine, Spruce
Deciduous Trees*	Ash, London Plane, Maple, Oak, Sycamore, Walnut
Flowering Trees*	Cherry, Crabapple, Hawthorn, Mountain Ash, Pecan

\*Do not use fruit or nuts from treated trees as food or feed.

#### FOLIAR SPRAY

## PLANT TYPES AND DISEASES CONTROLLED

DISEASE (S)	PLANT TYPES
Anthrachnose	Woody ornamentals, shade trees <sup>1</sup>
Ascochyta Blight	Herbaceous ornamentals
Black spot	Roses
Botrytris (Grey Bold)	Woody and herbaceous ornamentals
Brown Rot	Woody and herbaceous ornamentals
Colletotrichum	Woody and herbaceous ornamentals
Cercospora Leaf Spot	Woody and herbaceous ornamentals
Corynespora Leaf Spot	Ligustrum
Didymellina Leaf Spot	Iris
Diplodea Tip Blight (Diplodea piea)	Shade and ornamental trees
Ovulinia	Azalea, rhododendron <sup>2</sup>
Entomosporium Leaf Spot	Woody and herbaceous ornamentals
Fusicaladium Leaf Scab	Woody and herbaceous ornamentals
Phomopsis Blight	Woody and herbaceous ornamentals
Pin Tip Blights	Woodys
Powdery Mildew	Woody and herbaceous ornamentals
Rust Diseases	Ornamental nut and fruit trees
Ramularia Leaf Spot	Herbaceous ornamentals
Scab	Pyracantha, flowering crab, ornamental fruit and nut trees
Septoria Leaf Spot	Woody and herbaceous ornamentals
Venturia Leaf Scab	Woody and herbaceous ornamentals

<sup>1</sup>Begin at bud and make 2 or 3 additional applications at 10 to 14 day intervals.

<sup>2</sup> Begin treatment as flowers open. Addition of a spray surfactant to the spray mixture improves distribution of the spray on hard-to-wet plants such as roses.

## FOLIAR SPRAY APPLICATIONS

## APPLICATION RESTRICTIONS

**Maximum Single Application Rates:**

**Ornamentals:** Do not exceed the maximum single application rate of 3.5 lbs Thiophanate Methyl 85WDG per acre (3.0 lbs thiophanate-methyl active ingredient per acre).

**Cut Flowers:** Do not exceed the maximum single application rate of 0.59 lb Thiophanate Methyl 85WDG per acre (0.5 lb thiophanate-methyl active ingredient per acre).

**Seasonal Maximum Application:**

**All Ornamentals:** Do not apply more than 353 lbs Thiophanate Methyl 85WDG per acre per season (300 lbs thiophanate-methyl active ingredient per acre per season).

## Hydraulic Application Mixing Instructions

Add the required amount of Thiophanate Methyl 85WDG to a partially filled spray tank agitated by mechanical or hydraulic means and then add the remaining volume of water. Maintain continuous agitation to keep the material in suspension and apply with properly calibrate spray equipment.

**Application Concentrations (Mechanical or Hand Held):**

Use the labeled amount of Thiophanate Methyl 85WDG per 100 gallons of water for the prevention and control of the diseases shown below.

## FOLIAR DISEASES

Diseases/Pathogens Controlled	Concentration of Thiophanate Methyl 85WDG oz/100 gals.	Remarks
Anthracnose ( <i>Colletotrichum</i> )	7.2-9.6	Apply as buds break or at first sign of disease. Repeat application at 7 to 14 day intervals as needed during disease period. ○○○○
Black Spot of Rose ( <i>Diplocarpon rosae</i> )	7.2-9.6	Apply early summer or at first sign of disease. Repeat application every 7 to 14 days as needed during disease period. ○○○○○○

Diseases/Pathogens Controlled	Concentration of Thiophanate Methyl 85WDG oz/100 gals.	Remarks
Brown Rot and Blight ( <i>Monlinia</i> , <i>Sclerotina</i> , <i>Whetzellinia</i> )	7.2-9.6	Apply late spring or at first sign of disease. Repeat application every 7 to 14 days as needed during the disease period.
Fusicladium and Venturia Leaf Scabs on: Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	7.2-9.6	Apply as buds break. Repeat application every 7 to 14 days during disease period. Effective control requires coverage during expansion. Rotations with 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>Marssoninia</i> , <i>Mycosphaerella</i> , <i>Myrothecium</i> , <i>Phoma</i> , <i>Physalospora</i> , <i>Schizothyrium</i> , <i>Septoria</i> , <i>Sphaceloma</i>	7.2-9.6	Make applications when disease symptoms first appear. Repeat every 7 to 14 days during disease period. Rotations with chlorothalonil may be used.
Ovulinia Blight	4.8-9.6	Apply as flowers open. Repeat every 7 to 14 days during disease period.
Powdery Mildews <i>Erysiphe</i> , <i>Microsphaera</i> , <i>Phyllactinia</i> , <i>Podosphaera</i> , <i>Oidium</i> , <i>Sphaerotheca</i>	4.8-9.6	Apply when disease first appears and repeat application every 7 to 14 days. Rotations with other effective products may be used.
Rust Diseases caused by: <i>Puccinia</i> , <i>Gymnosporangium</i> , <i>Uromyces</i>	7.2-9.6	Apply late spring or when symptoms first appear. Repeat applications every 7 to 14 days during disease period. Rotations with other effective products is recommended.
Tip Blight of Pine <i>Sphaeropsis spainea</i> , <i>Diplodia pinea</i>	7.2-9.6	Begin applications in the spring when new growth starts. Make a second application just prior to needle emergence from the sheath and a third application 7 days later. Ensure thorough coverage.
Twig Blights, Cankers, and Diebacks <i>Diaporthe</i> , <i>Kabatine</i> , <i>Phoma</i> , <i>Phomopsis</i>	9.6-19.2	Apply when symptoms first appear. Repeat applications every 7 to 14 days during disease period.

**Adjuvants:** Where rainfall and/or overhead irrigation is the norm, use of a compatible spreader/sticker is suggested. Where wetting of foliage is difficult, use a compatible wetting agent. Follow the phytotoxicity precautions described in the HORTICULTURAL APPLICATIONS section of this label.

#### SOIL DRENCH APPLICATIONS

**Mixing Instructions:** Add required amount of Thiophanate Methyl 85WDG to a partially filled tank agitated by mechanical or hydraulic means. Add the remaining required amount of water. Maintain continuous agitation to keep the material in suspension.

**Application Rates and Timing for Disease Control:** Use 4.8-9.6 oz of Thiophanate Methyl 85WDG per 100 gallons of water. Apply as a drench or heavy spray at the rate of ½ to 2 pints per square foot (100 gallons per 400 to 1600 square feet). For small pots and shallow flats up to 4 inches in size, use 4.8 oz/100 gallons applied at 1 pint. For containers and pots 4 inches or larger, refer to the following table for the volume to apply. Repeat applications may be made at 4 to 8 week intervals depending on disease presence and conditions for disease development.

Container Type	Volume to Apply/Container	
	1 pt/ sq ft Rate	2 pt/sq ft Rate
4 inch	1.2 fl oz	2.4 fl oz
5 inch	1.5 fl oz	3.0 fl oz
6 inch		3.9 fl oz



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Container Type	Volume to Apply/Container	
	1 pt/ sq ft Rate	2 pt/sq ft Rate
7 inch		5.1 fl oz
8 inch		6.6 fl oz
9 inch		8.4 fl oz
10 inch		10.5 fl oz

For containers larger than 10 inches, a drench volume of 2 ½ to 3 pints per square foot of surface area may be required.

**Plant Types:** Containerized woody shrubs, trees, herbaceous/bedding, flowering, and tropical foliage plants and flowers and bedding plants in the landscape.

**Note:** Do not apply this product to plug trays or seedling flats at time of seeding.

**Soil Diseases Controlled:** Botrytis, Cythindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, and Thielaviopsis.

**Note:** Pythium, Phytophthora and Cythindrocladium spathiphyulli are not controlled by Thiophanate Methyl 85WDG.

#### PLANT DIP TREATMENT

**Mixing Instructions:** Mix as described in the **FOLIAR DISEASES** and **SOIL DRENCH APPLICATIONS** sections of this label. Maintain continuous agitation during application.

#### Application Concentration and Dipping Time

**Plants or Cuttings:** Use 7.2-9.6 oz of Thiophanate Methyl 85WDG per 100 gallons of water. Immerse plants or cuttings for 10 to 15 minutes, remove, and allow to drain and dry. Wear protective clothing as described under the **PERSONAL PROTECTIVE EQUIPMENT** section of this label.

**Bulbs, Corms, Tubers, and Rhizomes:** Use 9.6-19.2 oz of Thiophanate Methyl 85WDG per 100 gallons of water. Soak cleaned bulbs for 15 to 30 minutes in warm dip (80-85° F) within 48 hours of digging. Dry bulbs after treatment. If bulbs are for forcing, treat bulbs that have been heat cured.

**Plant Types:** Propagated units of woody, herbaceous, flowering and tropical foliage plants. Bulbs, corms, tubers, and rhizomes of plants such as but not limited to Caladium, Easter Lily, Tulip, Gladiolus, Daffodil, Iris.

**Diseases Controlled:** Botrytis, Cythindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis.

#### TURF APPLICATIONS

Thiophanate Methyl 85WDG may be used against certain foliar and soil diseases for use on all turf types such as golf course greens, tees and fairways, athletic fields, cemeteries, parks, and commercial and home lawns. Not for homeowner use. For use only by certified applicators, or those under their immediate supervision. Do not apply with fixed wing or rotary aircraft. Thiophanate Methyl 85WDG may be used both preventatively and curatively and is not phytotoxic. Do not use Thiophanate Methyl 85WDG on turf being grown for sale or other commercial uses as sod.

**Mixing Instructions:** Add the required amount of Thiophanate Methyl 85WDG to a partially filled tank agitated by mechanical or hydraulic means. Add the remaining required amount of water. Maintain continuous agitation to keep the material in suspension. For best results, use spray mixture the same day it is prepared.

**Turf Types:** All cool season and warm season grasses (such as but not limited to Bentgrasses, Bermudagrasses, Bluegrasses, Fescues, Ryegrasses, St. Augustine grasses and Zoysiagrasses) or their mixtures.

DISEASE(S) CONTROLLED	RATE OF THIOPHANATE METHYL 85 WDG OZ/1000 SQ. FT *	REMARKS
Anthrachnose ( <i>Colletrichum graminicola</i> )	1.2-2.4 (2.4-3.6)**	Apply when disease first appears. Make additional applications at 14-day intervals as needed. Allow spray to dry on leaves with no watering in.
Dollar Spot ( <i>Sclerotinia homoeocarpa</i> ) Copper Spot ( <i>Gloeocercospora sorghi</i> ) Brown Patch and Zoysia Patch ( <i>Rhizoctonia solani</i> ) Red Thread ( <i>Laetisaria fusiformis</i> )	1.2-2.4	Apply when disease first appears. Make additional applications at 14-day intervals as needed. Allow spray to dry on leaves with no watering in.
Pink Snow Mold ( <i>Microdochium nivale</i> ) (Only for those areas where snow cover is not present the entire winter)	1.2-2.4	Apply Thiophanate Methyl 85 WDG in middle to late November before turf has stopped all growth activity. Lightly water application into the root zone for best results. For best results, use a spreader-sticker. Second spray should dry on leaf surfaces with no watering in. Minimum spray interval is 14 days.

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DISEASE(S) CONTROLLED	RATE OF THIOPHANATE METHYL 85 WDG OZ/1000 SQ. FT *	REMARKS
Gray Leaf Spot: ( <i>Pyricularia grisea</i> )	2.4-3.6	Apply when conditions are favorable for disease development. Continue at 14 day intervals. Spray should be dry on leaves with no watering in.
Summer Patch ( <i>Magnaporthe poae</i> )	2.4-3.6	For preventative treatment, make 3 applications at 21-day intervals beginning in early May. Water product into the root zone thoroughly after application. For suppression, apply two applications at 14 day intervals, beginning applications when the disease first appears.
Fusarium Blight ( <i>Fusarium roseum</i> ) Necrotic Ring Spot and Spring Dead Spot ( <i>Leptosphaeria korrae</i> )	2.4-3.6	Make two applications at 14 day intervals beginning applications when the disease first appears.
Stripe Smut ( <i>Ustilago striiformis</i> )	2.4-3.6	Make two applications at 14 day intervals when disease first appears. Water into root zone after application. For prevention, apply in the spring (just before grass begins growth), and in the fall.

\*Refer to the Use Sites and Maximum Application Rates table to determine allowable rates for each application.

\*\*Use the 2.4-3.6 oz rate for curative response to Basal Stem Anthracnose.

#### Turf Application Directions

Apply Thiophanate Methyl 85WDG uniformly over the area to be treated with a properly calibrated power sprayer. Apply after mowing or avoid mowing for 12 hours after application. Apply sufficient water to obtain thorough coverage; usually 1 ½ to 2 ½ gallons per 1,000 sq ft of turf area. When treating golf greens, always treat aprons and approaches to golf greens.

Site	Maximum Single Application Rate per oz/1,000 sq ft	Maximum Seasonal Application Rate of Thiophanate Methyl 85WDG oz/1,000 sq ft
Golf course green/tees/aprons	3.5	9.2
Golf Course Fairways (Except Florida)	2.4	2.4
Golf Course Fairways (Florida only)	1.2	1.2
Residential and Public areas (home lawns, parks, athletic fields, schools, day care centers)	1.2	4.6

**Note to User:** Do not graze animals on treated turf. Do not feed clippings to livestock or poultry.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in 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, absorb with sand or other inert material and dispose of absorbent 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 used 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:

**Nonrefillable Container (flexible-bag-all weights):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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.

**Nonrefillable Container (rigid-fifty lbs. or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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**FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK, OR FIRE), CALL INFOTRAC AT 1-800-535-5053.**

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

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