

84229-3

3/6/2009

1 of 24



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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Mr. Michael Kellogg  
Agent  
Tide Internation USA, Inc.  
c/o Pyxis Regulatory Consulting, Inc.  
4110 136<sup>th</sup> Street NW  
Gig Harbor, WA 98332

MAR 6 2009

RE: Notification to Facilitate Registration in the State of California  
EPA Registration Number: 84229-3  
Date of Submission: December 19, 2008

Dear Mr. Kellogg:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated, December 19, 2008, for the product Thiophanate-methyl 85% WDG. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions 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 Joyce Edwards of my staff at 703-308-5479.

Sincerely,

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

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

20f24



United States  
Environmental Protection Agency  
Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 84229-3	2. EPA Product Manager M. Waller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Tide International USA, Inc. / Thiophanate-methyl 85% WDG	PM# 21	
5. Name and Address of Applicant (Include ZIP Code) Tide International USA, Inc. c/o Pyxis Regulatory Consulting, Inc. 4110 136th St. NW Gig Harbor, WA 98332 <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 to: EPA Reg. No. _____ Product Name _____	

NOTIFICATION

MAR 6 2009

600Z 9 AM

Section - II

NOTIFICATION

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

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

Notification of minor label revisions per PR Notice 98-10 to facilitate registration in the State of California. 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 of this product. I understand that it is a violation of 18 U.S.C. 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:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
				<input type="checkbox"/> Glass	<input checked="" type="checkbox"/> Other (Specify) Aluminum film bag
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 lb., 5 lb.		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" 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 Michael Kellogg	Title Agent	Telephone No. (include Area Code) (253) 853-7369
2. Signature 		6. Date Application Received (Stamped)
3. Title Agent		
4. Typed Name Michael Kellogg		
5. Date 12/19/08		





**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are nitrile and butyl rubber. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

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

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves made of any waterproof material,
- Chemical-resistant footwear plus socks,
- A chemical-resistant apron

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

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

**USER SAFETY REQUIREMENTS**

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

**ENGINEERING CONTROLS**

When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

**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**

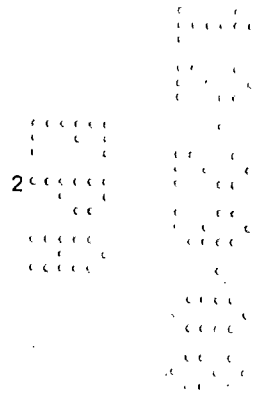
Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

**DIRECTIONS FOR USE**

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

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. Not for use on turf being grown for sale or other commercial use as sod. Do not apply to home orchards/backyard fruit trees after fruit set.

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.





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

If you have any questions about calibrations, 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 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 back flow. 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 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.

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.

When 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 85% WDG 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.

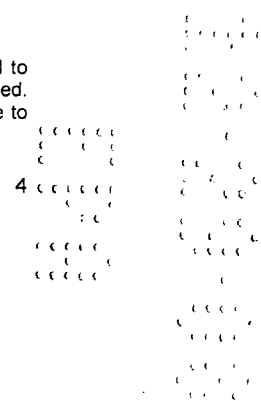
Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state.

**PREPARATION OF SPRAY SUSPENSION**

Clean and remove scale, pesticide residues, and other foreign matter from the chemical tank and the entire injector system. Use clean water to flush the system. Add 1/2 or 3/4 the required amount of water to a mixing tank. Begin agitation (mechanical or hydraulic). Slowly add the required amount of Thiophanate-Methyl 85% WDG to the tank. Then fill the tank with the remaining amount of water. Continue agitation to maintain a uniform suspension.

**SPRINKLER IRRIGATION APPLICATION INSTRUCTIONS**

Follow all directions under the section above under System Requirements. Set the sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Reduced efficacy could occur if volumes of water higher than this amount are used. Start the sprinkler and then inject the suspension of Thiophanate-Methyl 85% WDG into the irrigation water line to



deliver the desired rate per acre. The suspension of Thiophanate-Methyl 85% WDG should be injected with a positive displacement pump into the main line ahead of a right angle to insure adequate mixing.

**NOTE:** After completing the Thiophanate-methyl 85% WDG treatment, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

**TURF**

Thiophanate-methyl 85% WDG may be used on all fine turf areas such as athletic fields, cemeteries, golf course greens, tees, and fairways, home lawns (by professional applicators), and industrial lawns. Used according to label directions, Thiophanate-methyl 85% WDG is not phytotoxic to Bentgrasses, Blue Grasses, Bermudagrasses, Fescues, Ryegrasses, St. Augustine grasses or their mixtures. Thiophanate-methyl 85% WDG provides both curative (control) and protection (prevention) of the listed diseases in turf.

Make applications after turf has been mowed (or wait 12 hours after mowing before making an application). Use a sufficient amount of water (3 to 5 gallons per 1,000 sq. ft.) to provide a thorough, uniform coverage to the turf. The highest rate is recommended for conditions of severe disease pressure. Aprons and approaches of golf greens must also be treated. Refer to the "Table of Maximum Thiophanate-methyl 85% WDG Application Rates" for application restrictions and maximum rates allowed at different sites.

**Mixing Instructions:** Fill the spray tank 1/3 to 1/2 full with water and begin agitation. Then add the required amount of Thiophanate-methyl 85% WDG. Fill the spray tank with the remaining amount of water. Continue agitation to maintain a uniform suspension during application. Use properly calibrated equipment. Prepare spray mixtures of Thiophanate-methyl 85% WDG and use the same day.

**Table of Maximum Thiophanate-methyl 85% WDG Application Rates**

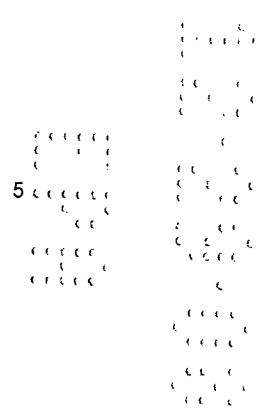
Site	Maximum Individual Application Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (oz. per 1,000 Sq. Ft.)	Minimum Retreat Interval - Days	Maximum Seasonal Total of Thiophanate-methyl 85% WDG, Lbs. per Acre (oz. per 1,000 Sq. Ft.)
FL Golf Course Fairways (Overseeded)	3.3 lb. (1.2 oz.)	--	3.3 lb.* (1.2 oz.)
Golf Course Fairways	6.42 lb. (2.36 oz.)	--	6.42 lb.** (2.36 oz.)
Residential/Public Areas	3.3 lb. (1.2 oz.)	14 Days	12.8 lb.*** (4.7 oz.)
Golf Course Greens/Tees/Aprons	9.6 lb. (3.53 oz.)	14 Days	25.65 lb.**** (9.42 oz.)

\* Equivalent to 2.72 lbs. AI per acre per season  
 \*\* Equivalent to 5.45 lbs. AI per acre per season  
 \*\*\* Equivalent to 10.88 lbs. AI per acre per season  
 \*\*\*\* Equivalent to 21.8 lbs. AI per acre per season

**Turf Diseases:**

- |   |   |
|---|---|
| <i>Anthracnose (Collettricum graminicola)</i> | <i>Fusarium Patch (Fusarium nivale)</i>       |
| <i>Copper Spot (Gloeocercospora sorghi)</i>   | <i>Large Brown Patch (Rhizoctonia solani)</i> |
| <i>Dollar Spot (Sclerotinia homeocarpa)</i>   | <i>Red Thread (Corticium fuciforme)</i>       |

**Application Instructions:** Apply 2/3 to 1 1/3 ounces of Thiophanate-methyl 85% WDG per 1,000 square feet. Begin applications when the disease first appears and continue application at 14-day intervals throughout the season or as needed. Allow the sprays to dry on the leaf surfaces with no "watering in". Refer to the "Table of Maximum Thiophanate-methyl 85% WDG Application Rates" for application restrictions and maximum rates allowed at different sites.





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**Turf Diseases - Not approved for use in California:**

- Gray Leaf Spot (Pyricularia grisea)*
- Rust (Puccinia, Uromyces)*

**Application Instructions:** Apply 2.35 to 3.53 ounces Thiophanate-methyl 85% WDG per 1,000 square feet when conditions favor disease development or when disease first appears. Continue applications at 14-day intervals. For Dollar Spot, allow the sprays to dry on the leaf surfaces with no "watering in". For Rust, tank mix or rotate with chlorothalonil liquid or dry flowable products. Refer to the "Table of Maximum Thiophanate-methyl 85% WDG Application Rates" for application restrictions and maximum rates allowed at different sites.

**Turf Diseases:**

- Stripe Smut (Ustilago striiformis)*
- Fusarium Blight (Fusarium roseum)*
- Summer Patch (Magnaporthe poae)*
- Necrotic Ring Spot (Leptosphaeria korrae)*

**Application Instructions:** Apply 3-3.53 ounces (Stripe Smut) or 3.5 ounces (other diseases) of Thiophanate-methyl 85% WDG per 1,000 square feet in the spring or fall when disease first appears. Immediately after application irrigate the root zone with one inch of water. Do not apply more than two applications at 14-21 day intervals. Refer to the "Table of Maximum Thiophanate-methyl 85% WDG Application Rates" for application restrictions and maximum rates allowed at different sites.

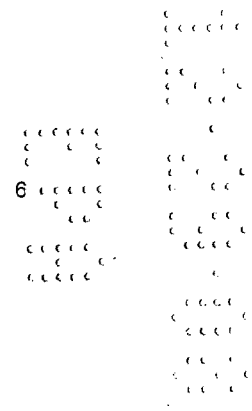
**ORNAMENTALS (FIELD and GREENHOUSE)**

Thiophanate-methyl 85% WDG is a broad-spectrum systemic fungicide which is effective in controlling a variety of diseases on woody herbaceous ornamental crops, ornamental fruit and nut trees, and on cutting and bulbs (preplant dip treatments). Refer to the sections below for direction on application of Thiophanate-methyl 85% WDG as a foliar spray, a drench or heavy spray, or as a preplant dip treatment.

**Do not use fruit, nuts or sap from treated trees for food or feed.**

**FOLIAR SPRAY (HYDRAULIC) APPLICATIONS**

**Mixing Instructions:** Fill the spray tank 1/3 to 1/2 full with water and begin agitation. Then add the required amount of Thiophanate-methyl 85% WDG. Fill the spray tank with the remaining amount of water. Continue agitation to maintain a uniform suspension during application. Use properly calibrated equipment to apply the spray to cover the foliage. Do not spray to run-off.



PLANT TYPES AND DISEASES CONTROLLED FROM FOLIAR APPLICATIONS

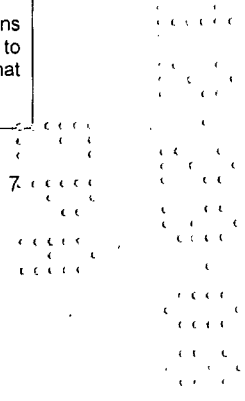
<b>Woody Ornamentals and Shade Trees†</b>	
<b>Disease:</b>	<i>Anthracnose</i>
<b>Woody and Herbaceous Ornamentals</b>	
<b>Diseases:</b>	<i>Botrytis (Gray Mold)</i> <i>Phomopsis Blight</i> <i>Cercospora Leaf Spot</i> <i>Powdery Mildew</i> <i>Entomosporium Leaf Spot</i> <i>Septoria Leaf Spot</i>
<b>Herbaceous Ornamentals</b>	
<b>Diseases:</b>	<i>Ascochyta Blight</i> <i>Ramularia Leaf Spot</i>
<b>Shade and Ornamental Trees</b>	
<b>Disease:</b>	<i>Diplodea Tip Blight (Diplodea piea)</i>
<b>Ornamental Fruit and Nut Trees</b>	
<b>Disease:</b>	<i>Powdery Mildew</i> <i>Scab</i>
<b>Azalea and Rhododendron††</b>	
<b>Disease:</b>	<i>Ovulinia</i>
<b>Iris</b>	
<b>Disease:</b>	<i>Didymellina Leaf Spot</i>
<b>Ligustrum</b>	
<b>Disease:</b>	<i>Corynespora Leaf Spot</i>
<b>Pyracantha, Flowering Crab</b>	
<b>Disease:</b>	<i>Scab</i>
<b>Roses</b>	
<b>Disease:</b>	<i>Black Spot</i>
<b>Application Instructions:</b> Apply by ground at the rate of 0.3 to 0.8 pounds of Thiophanate-methyl 85% WDG per 100 gallons of water. When treating for Powdery Mildew and Botrytis (Gray Mold), use 0.4 pounds per 100 gallons of water. Begin applications when the disease first appears and continue application at 10-14-day intervals throughout the growing season. When humid and rainy, shorten the spray intervals.	
† - Make first application at bud break and make 2-3 repeat applications at 10-14 day intervals.	
†† Make first application when flowers open. Improved deposition of the spray for this hard-to-wet plant is obtained by addition of a surfactant to the spray mix.	
<b>NOTE:</b> The Reentry Interval for ornamentals is 12 hours.	

DRENCH APPLICATIONS

Mixing Instructions: Fill the spray tank 1/3 to 1/2 full with water and begin agitation. Then add the required amount of Thiophanate-methyl 85% WDG. Fill the spray tank with the remaining amount of water. Continue agitation to maintain a uniform suspension during application.

PLANT TYPES AND DISEASES CONTROLLED FROM DRENCH APPLICATIONS

<b>Herbaceous Annuals, Perennials, Bedding Plants</b>	
<b>Disease:</b>	<i>Botrytis</i> <i>Fusarium</i> <i>Sclerotinia stem, crown &amp; roots</i>
<b>Woody Ornamentals Such as Azaleas, Rhododendrons, Conifers, Poinsettias</b>	
<b>Diseases:</b>	<i>Cylindrocladium rot</i> <i>Thielaviopsis rot</i>
<b>Application Instructions:</b> Apply at the rate of 0.4 to 0.8 pounds of Thiophanate-methyl 85% WDG per 100 gallons of water. Treat an 800 sq. ft. of bench area (1 to 2 pints per sq. ft.) using a drenching or heavy spray. Apply to propagation beds or containers just after transplanting and repeat treatment at 14 to 30 day intervals if conditions that favor disease development exist.	
<b>NOTE:</b> Thiophanate-methyl 85% WDG does not control Pythium spp. or Phytophthora spp.	







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 85% WDG 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.

**PREPARATION OF SPRAY SUSPENSION**

Clean and remove scale, pesticide residues, and other foreign matter from the chemical tank and the entire injector system. Use clean water to flush the system. Add 1/2 or 3/4 the required amount of water to a mixing tank. Begin agitation (mechanical or hydraulic). Slowly add the required amount of Thiophanate-Methyl 85% WDG to the tank. Then fill the tank with the remaining amount of water. Continue agitation to maintain a uniform suspension.

**APPLICATION INSTRUCTIONS**

**Sprinkler Irrigation:** Follow all directions under the section above under System Requirements. Set the sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Reduced efficacy could occur if volumes of water higher than this amount are used. Start the sprinkler and then inject the suspension of Thiophanate-Methyl 85% WDG into the irrigation water line to deliver the desired rate per acre. The suspension of Thiophanate-Methyl 85% WDG should be injected with a positive displacement pump into the main line ahead of a right angle to insure adequate mixing.

**NOTE:** After completing the Thiophanate-methyl 85% WDG treatment, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

**Drip (Mini-Micro Sprinklers, Strip Tubing, Trickle) Irrigation:** Observe all System Requirements and Application Instructions as described above.

**CROP USE DIRECTIONS**

**ALMONDS**

**Diseases:**

*Brown Rot Blossom*

*Blight (Monilinia)*

*Scab (Cladosporium)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.8-1.2	Begin applications at early pink bud and early petal fall stages. Additional instructions can be found in the Resistance Management section of the label.	REI = 3 days Do not apply more than 2.5 lbs. of Thiophanate-methyl 85% WDG per season.

**PECANS**

**Diseases:**

Brown Spot (*Cercospora*)  
 Downy Spot (*Mycosphaerella*)  
 Powdery Mildew (*Microsphaera*)  
 Scab (*Fusicladium*)

Stem End Blight (*Botryosphaeria*)  
 Zonate Leaf Spot (*Chistulariella*)  
 Liver Spot (*Gnomonia*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.4 – 0.8	The higher rate is for use on trees taller than 30 feet and for aerial applications in AR, GA, LA, MS, OK, and TX. Time applications to begin when first leaves are showing. Repeat applications at 3 to 4 week intervals until shuck split.	REI = 3 days Do not spray after shuck split. Do not apply more than 2.5 lbs. of Thiophanate-methyl 85% WDG per season.

**PISTACHIOS -- EXCLUDING CALIFORNIA**

**Diseases:**

Shoot Blight (*Botrytis, Botryosphaeria*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
1.2 – 1.6	Make application at bloom in a minimum of 100 gallons per acre for ground application or 20 gallons per acre for aerial application. If applied by air, fly over every row or center.	Do not apply more than 1.6 lbs of Thiophanate-methyl 85% WDG per acre per season.

**APPLES – PRE-HARVEST**

**Diseases:**

Apple Scab (*Venturia*)  
 Bitter Rot (*Glomerella*)  
 Flyspeck (*Zygophiala*)  
 Powdery Mildew (*Podosphaera*)

Sooty Blotch (*Gloeodes*)  
 Black Rot (*Physalospora*)  
 Brooks Fruit Spot (*Mycosphaerella*)  
 White Rot (*Sclerotium*)\*\*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs. per 100 gal.)	Directions for Application	Restrictions
0.6 – 0.8 (0.2 – 0.3)	Apply from green tip through petal fall at 5 to 10 day intervals. Additional cover spray applications may be made at 7-14 day intervals. Additional instructions can be found in the Resistance Management section of the label. Apply 200-400 gallons per acre (i.e. 200 gallons of spray with 0.3 lb. product per 100 gallons spray volume per acre or 400 gallons of 0.2 lb. product per 100 gallons spray volume per acre.)	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season. ** Thiophanate-methyl 85% WDG is not registered for use on this disease in California.

**PEARS -- EXCLUDING CALIFORNIA**

**Diseases:**

*Pear Scab (Venturia pirina)*  
*Sooty Blotch (Gloeodes pomigena)*  
*Flyspeck (Microthyriella rubi)*

*Fabraea leaf spot (Fabraea maculata)*  
*Powdery Mildew (Oidium spp.)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 (0.2)	Time applications to occur every 5 to 10 days from green tip through petal fall. Repeat applications at 7-14 day intervals in cover sprays. Additional instructions can be found in the Resistance Management section of the label. Apply up to 400 gallons per acre.	PHI = 1 day Do not exceed 3.2 lbs. Thiophanate-methyl 85% WDG per acre per season.

**BEANS**

**Diseases:**

*Gray Mold (Botrytis)*  
*White Mold (Sclerotinia)*  
*Anthracnose*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
<b>OUTSIDE OF CALIFORNIA:</b> 0.8 - 1.6	Begin applications when 10-30% of plants have at least one open bloom and/or when conditions that favor disease development exist. Make repeat applications at 7 day intervals.	REI = 24 hours (green beans) PHI = 14 days (snap, lima beans) PHI = 28 days (dry beans)  Do not apply more than 3.2 lbs. of Thiophanate-methyl 85% WDG per acre per crop cycle.
<b>CALIFORNIA ONLY:</b> 0.8 - 1.6	<b>One application per season:</b> apply at 50-70% of full bloom.  <b>Two applications per season:</b> Apply the first spray at 10-30% of full bloom and the second spray 4 to 7 days later or at peak bloom.	REI = 24 hours (green beans) PHI = 14 days (snap) PHI = 28 days (lima, dry beans)

**CANOLA -- Use only in North Dakota, Minnesota & Montana (east of Interstate 15 Only)**

**Diseases:**

*White Mold*  
*Sclerotinia Stem Rot (Sclerotinia sclerotiorum)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
<b>One application:</b> 0.8 - 1.6 OR <b>Two applications:</b> 0.8 per application	<b>One application:</b> Apply at 20% -50% flowering stage. OR <b>Two Applications:</b> Make first application at 20% - 30% flowering stage and a second application at 40% - 50% flowering stage.  To control White mold, ensure flowers receive a thorough coverage of spray solution.	Do not apply more than 1.6 lbs of Thiophanate-methyl 85% WDG per acre per season.

**CUCURBITS – Cucumbers, Melons, Pumpkins, Summer and Winter Squash**

**Diseases:**

*Anthracnose (Colletotrichum)*  
*Belly Rots (Rhizoctonia/Fusarium sp.)*  
*Gummy Stem Blight (Didymella)*

*Powdery Mildew (Erysiphe)\*\**  
*Target Spot (Corynespora)*  
*Vine decay caused by Monosporascus cannonballus (Suppression only)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
<b>Ground application:</b> 0.2 – 0.4  <b>Aerial application:</b> 0.4  <b>Belly Rot, suppression of decay caused by <i>M. cannonballus</i>:</b> 0.4  <b>Powdery mildew in California:</b> 0.4	Apply when plants begin to put out runners or when disease first appears. Make repeat applications at 7 to 14 day intervals as needed. For best control of Target Spot, apply at 7-day intervals as needed.  <b>Belly Rots:</b> Prepare spray solution with a sufficient volume of water to allow runoff to the soil. <i>Pythium sp.</i> will not be controlled.  <b>For suppression of vine decay caused by <i>Monosporascus cannonballus</i>:</b> Apply at 14 day intervals when plants first emerge. Continue applications through harvest. If applications are made weekly or bi-weekly starting 4-6 weeks before harvest, suppression of decay will occur but may not be as effective as a season long program.	REI = 24 hours PHI = 1 day  Do not apply more than 2.5 lbs. of Thiophanate-methyl 85% WDG per season.  ** Thiophanate-methyl 85% WDG is registered only for use on Powdery mildew in California.

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**GARLIC**

**Diseases:**

*Penicillium Clove Rot*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs. per 100 Gal.)	Directions for Application	Restrictions
-- (0.8)	Prepare solution and agitate using mechanical or hydraulic means. Dip garlic cloves completely in the stirring solution for a minimum of 5 minutes. Remove the cloves from the solution and allow them to drain over sand. Allow cloves to dry before planting.	

**ONIONS – IN FURROW**

**Diseases:**

*White Rot (Sclerotium sp.)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.25 – 0.4 lb per 1,000 ft. of row (12 inch row spacing) OR 1.6 lb. (broadcast)	Make applications directly into the open furrow at the time of planting seed, sets or bulbs.	Do not apply Thiophanate-methyl 85% WDG through any type of irrigation system.



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**GRAPES – WEST OF THE ROCKY MOUNTAINS**

**Diseases:**

*Botrytis Bunch Rot (Botrytis cinerea)*  
*Powdery Mildew (Uncinula necator)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.8 – 1.2	Begin applications at first bloom. Make a repeat application 14 days later or if severe disease conditions exist. The second application should occur 3-4 weeks before harvest or when sugar begins to build. A third application may be made 14 days after the second application if conditions continue to favor persistence of disease. Best control of Powdery Mildew will be achieved by making applications throughout the season. Thiophanate-methyl 85% WDG applications may be combined with sulfur or in rotation with sulfur and/or DMI fungicides. Additional instructions can be found in the Resistance Management section of the label.	PHI = 14 days Do not apply more than 3.2 lbs. Thiophanate-methyl 85% WDG per acre per season.

**GRAPES – EAST OF THE ROCKY MOUNTAINS**

**Diseases:**

*Bitter Rot (Melanconium)*  
*Black Rot (Guignardia)*  
*Powdery Mildew (Uncinula)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.6 – 1.2	Begin application when foliage first develops. Make repeat applications at 14 to 21 day intervals or as needed. Additional instructions can be found in the Resistance Management section of the label.	PHI = 14 days Do not apply more than 3.2 lbs. Thiophanate-methyl 85% WDG per acre per season.

**PEANUTS**

**Diseases:**

*Leaf Spot (Carcospora)*  
*Rust (Puccinia)*  
*Limb Rot (Rhizoctonia)*  
*Ascochyta Web Blotch*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.4	Apply 35 days after planting or when disease first appears. Make repeat applications at 7 to 14 day intervals or as needed. For severe disease pressure, apply every 7 days. Additional instructions can be found in the Resistance Management section of the label.	PHI = 14 days Do not apply more than 1.65 lbs of Thiophanate-methyl 85% WDG per season. Use Thiophanate-methyl 85% WDG only in combination with another non-benzimidazole fungicides such as mancozeb at label recommended rates.

POTATOES – EXCLUDING CALIFORNIA

**Diseases:**

*White Mold (Sclerotinia sp.)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.8 – 1.2	<p>Make the first application just before row closure and make a repeat application 7-14 days later. If conditions for disease development continue, make additional applications at 7-14 day intervals. Optimum control is obtained from a thorough coverage of lower stems and branches with spray solution. Thiophanate-methyl 85% WDG may be tank-mixed with other fungicides labeled for blight control.</p> <p><b>WHITE MOLD:</b> Aerial applications are not recommended.</p>	<p>PHI = 21 days Do not apply more than 3.2 lbs. Thiophanate-methyl 85% WDG per acre per season.</p>

SOYBEANS

**Diseases:**

*Anthracnose (Colletotrichum)*

*Brown Spot (Septoria)*

*Frog-eye leaf spot (Cercospora)*

*Stem and Pod Blight (Diaporthe, and the imperfect stage Phomopsis)*

*Purple Seed Stain (Cercospora)*

*Sclerotinia*

*Aerial Blight (suppression only)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
<p>0.4 – 0.8</p> <p><b>Sclerotinia:</b> 0.6 – 0.8</p> <p><b>Suppression of Aerial blight:</b> 0.8</p>	<p>Time applications to begin at full bloom (pods are 1/8 to 1/4 inch in length). A second application may be made 14 to 21 days after the first application. Do not wait longer to make the second application than 14 days after the pods average 1/4 inch in length or when beans form in the pod. For severe disease pressure, use the high rate.</p> <p><b>FOR SEED BEANS ONLY:</b> Apply one spray at the high rate when beans form in the pod.</p> <p><b>Sclerotinia:</b> Apply a single spray at early bloom (R-1 to R-2 stage). A second application may be made at 7-14 day intervals if conditions favor continued disease pressure. Apply in a minimum of 5 gallons per acre by air.</p> <p><b>Aerial Blight (suppression):</b> Apply when conditions favor disease development. Only make one additional application at 14-21 day intervals if needed.</p>	<p>REI = 24 hours PHI = 21 days Do not make more than 2 applications per year. Do not graze or feed treated vines or hay to livestock.</p>

**APRICOTS**

**Diseases:**

Brown rot blossom blight (*Monilinia*)  
 Brown rot of fruit (*Monilinia*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 – 1.2 (0.4)	Time applications to begin at early bloom (red bud stage). A second application may be made at full bloom. If fruit are infected with brown rot, apply 1 or 2 applications starting 3 weeks before harvest. If crop is under severe disease pressure, make additional applications at 10 to 14 day intervals between full bloom and final pre-harvest sprays. Additional instructions can be found in the Resistance Management section of the label. Apply 200-300 gallons per acre.	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season.

**CHERRIES**

**Diseases:**

Brown rot blossom blight (*Monilinia*)      *Cherry leaf spot (Cocomyces)*  
 Brown Rot of Fruit (*Monilinia*)      *Powdery Mildew (Podosphaera sp. and Sphaerotheca sp.)*

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 – 1.2 (0.4)  <b>Cherry leaf spot:</b> 0.8 – 1.2 (0.3 – 0.4)  <b>Powdery Mildew:</b> 0.8 – 1.2 (0.4) <b>PLUS</b> 0.8 – 1.2 (0.3 – 0.4)	Make the first application at early bloom (early popcorn) followed by a second application at full bloom. If fruit are infected with brown rot, make 1 or 2 applications starting 3 weeks before harvest. If crop is under severe disease pressure, make additional applications at 10 to 14 day intervals between full bloom and final pre-harvest spray. Apply 200-300 gallons per acre (i.e. 200 gallons of spray with 0.4 lb. product per 100 gallons spray volume per acre or 300 gallons of 0.3 lb. product per 100 gallons spray volume per acre.) <b>Cherry leaf spot:</b> Apply at or prior to (when leaves first unfold) petal fall. Apply at first, second and third cover sprays 10 to 14 day apart. Make one final application 14 to 21 days after harvest. <b>Powdery mildew:</b> Make the first application at early bloom (early popcorn) followed by a second application at full bloom. <b>PLUS</b> Apply at shuck fall and first cover. Additional instructions can be found in the Resistance Management section of the label.	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season.

**NECTARINES**

**Diseases:**

Brown rot blossom blight (*Monilinia*)

Brown rot of fruit (*Monilinia*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 – 1.2 (0.4)	Make the first application at early bloom (early pink bud) followed by a second application at full bloom if needed. If fruit are infected with brown rot, make 1 or 2 applications starting 3 weeks before harvest. If crop is under severe disease pressure, make additional applications at 10 to 14 day intervals between full bloom and final pre-harvest spray. Additional instructions can be found in the Resistance Management section of the label. Apply 200-300 gallons per acre.	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season.

**PEACHES**

**Diseases:**

Brown rot blossom blight (*Monilinia*)

Brown rot of fruit (*Monilinia*)

Peach Scab (*Cladosporium*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 – 1.2 (0.4 – 0.6)  <b>Peach Scab:</b> 0.8 – 1.2 (0.4 – 0.6) <b>PLUS</b> 0.8 – 1.2 (0.3 – 0.4)	Make the first application at early bloom (early pink bud) followed by a second application at full bloom if needed. If fruit are infected with brown rot, make 1 or 2 applications starting 3 weeks before harvest. If crop is under severe disease pressure, make additional applications at 10 to 14 day intervals between full bloom and final pre-harvest spray. Apply 200-300 gallons per acre. (i.e. 200 gallons of spray with 0.6 lb. product per 100 gallons spray volume per acre or 300 gallons of 0.4 lb. product per 100 gallons spray volume per acre.) <b>Peach Scab:</b> Make the first application at early bloom (early pink bud) followed by a second application at full bloom if needed. <b>PLUS</b> Apply at shuck split and at first cover spray. Additional instructions can be found in the Resistance Management section of the label.	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season.

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**PLUMS/PRUNES**

**Diseases:**

- Brown rot of fruit (*Monilinia*)
- Brown rot blossom blight (*Monilinia*)
- Black knot (*Dibotryon*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre (Lbs/100 Gal.)	Directions for Application	Restrictions
0.8 – 1.2 (0.4)	Make the first application at early bloom (green tip) followed by a second application at full bloom. If fruit are infected with brown rot, make 1 or 2 applications starting 3 weeks before harvest. If crop is under severe disease pressure, make additional applications at 10 to 14 day intervals between full bloom and final pre-harvest spray. Apply 200-300 gallons per acre. <b>Black knot (<i>Dibotryon</i>):</b> Make applications 10 to 14 days apart from pre-bloom to petal fall, and at first, second and third cover sprays Additional instructions can be found in the Resistance Management section of the label.	REI = 2 days PHI = 1 day Do not apply more than 3.3 lbs. of Thiophanate-methyl 85% WDG per season.

**STRAWBERRIES**

**Diseases:**

- Fruit Rot (*Botrytis*)
- Leaf Blight (*Dendrophoma*)
- Leaf scorch (*Diplocarpon*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.6 – 0.8	Apply at early bloom and continue sprays at 7 to 10 day intervals. Use the high rate East of the Rocky Mountains and when disease pressure is severe. Additional instructions can be found in the Resistance Management section of the label.	REI = 24 hours PHI = 1 day Do not apply more than 3.2 lbs. of this Thiophanate-methyl 85% WDG per acre per year.

**SUGARBEET**

**Diseases:**

- Leaf spot (*Cercospora*)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.4 – 0.8	Apply when disease first appears. Make repeat applications at 14 to 21 day intervals if needed. Additional instructions can be found in the Resistance Management section of the label.	PHI = 21 days Do not apply more than 2.5 lbs. of Thiophanate-methyl 85% WDG per season.

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FALL SEEDED WHEAT

**Diseases:**

*Pseudocercospora* sp. (Foot Rot, Strawbreaker, Eye Spot)

Rate of Thiophanate-methyl 85% WDG Lbs. per Acre	Directions for Application	Restrictions
0.8	Make a single application by air or ground after wheat is tillered but before initiation of stem elongation. Apply in a sufficient amount of water to ensure a thorough coverage of crop.	For use only in the states of Idaho, Oregon and Washington only. Do not use in California. REI = 24 hours Make one application per season. Do not cut hay until 90 days after application. Do not allow livestock to graze in treated areas before harvest.

CONIFERS - EXCLUDING CALIFORNIA

Diseases in (Pine) Austrian, Red Scots, Christmas trees:

Tip Blight (*Diplodia*)

Diseases in Douglas Firs:

Swiss Needle Cast (*Phaeocryptopus*)

Rhabdocline Needle Cast

Rate of Thiophanate-methyl 85% WDG Oz. (Lbs.) per Acre (Lbs. per 100 Gal.)	Directions for Application	Restrictions
40 oz. or 2.5 lb. (13 oz/A; 100 gal./A)	Make first application at bud break and a second application 10 to 14 days later before needles emerge from sheath. A final application may be made 10 to 14 days after needle emergence. Improved coverage of needles is obtained by addition of a spreader/sticker to the spray solution. Apply in a minimum volume using a mist-blower sprayer or in higher volumes using conventional sprayers.	Not registered for this use in CA.  Do not graze livestock in treated areas.
64 oz. or 4 lb. (13 oz/A; 100 gal./A)	Begin applications in early May and make repeat applications every 4 weeks. Improved coverage of needles is obtained by addition of a spreader/sticker to the spray solution. Apply in a minimum volume using a mist-blower sprayer or in higher volumes using conventional sprayers.	

CONIFERS - Seedling Treatment - EXCLUDING CALIFORNIA

Diseases in Longleaf:

Brown Needle Blight (*Scirrhia*)

*Fusarium* and *Rhizoctonia* Root Rot

Diseases in Loblolly and Slash:

*Fusarium* and *Rhizoctonia* Root Rot

Rate of Thiophanate-methyl 85% WDG Oz. (Lbs.) per Acre	Directions for Application	Restrictions
<b>Brown Needle Blight in Longleaf:</b> 0.8 oz. mixed with 9.5 oz. dry Kaolinite clay in 100 gal. of water	Mix the Thiophanate Methyl 85% WDG, dry Kaolinite clay and clean water, and then apply to wet seedling roots. Cover the roots thoroughly with the mixture.	Not registered for this use in CA.  Do not apply mixture to seedling foliage.
<b><i>Fusarium</i> and <i>Rhizoctonia</i> Root Rot in Longleaf, Loblolly and Slash:</b> 1.6 oz. mixed with 50 oz. dry Kaolinite clay in 100 gal. of water	Roots should not be allowed to become dry during treatment. Keep temperatures below 90°F and above 32°F.  Thiophanate Methyl 85% WDG does not control <i>Pythium</i> or <i>Phytophthora</i> .	

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**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 the 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 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:**

[Plastic Bottle]: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[Aluminum Film Bag]: Completely empty bag into application equipment. Then 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.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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