



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 23, 2018

Arianna Shorey
Regulatory Consultant
Argite, LLC
c/o Pyxis regulatory Consulting Inc.
4110 136th St. Ct. NW
Gig Harbor, WA 98332

Subject: Label Amendment – Updating WSP mixing and loading language
Product Name: Thiophanate Methyl 50W
EPA Registration Number: 87373-5
Application Date: 9/29/2017
Decision Number: 536865

Dear Arianna Shorey:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at mellor.nathan@epa.gov.

A handwritten signature in black ink, reading "Shaja B. Joyner". The signature is written in a cursive style with a large, stylized "S" at the beginning.

Shaja B. Joyner, Product Manager 20
Fungicide-Herbicide Branch
Registration Division 7505P

Enclosure

ACCEPTED

01/23/2018

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 87373-5

THIOPHANATE METHYL**GROUP****1****FUNGICIDE**

THIOPHANATE METHYL 50W IN WATER SOLUBLE BAGS

For prevention and control of turf diseases and diseases of annual and perennial flowers, bedding plants, foliage plants, ground covers, plus deciduous and evergreen trees and shrubs.

Thiophanate Methyl 50W contains thiophanate-methyl, the active ingredient used in Cleary 3336™.

ACTIVE INGREDIENT:

Thiophanate Methyl: Dimethyl 4,4'-o-phenylenebis[3-thioallophanate]50.0%

OTHER INGREDIENTS: 50.0%

TOTAL:.....100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF IN EYES:

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

IF SWALLOWED:

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

IF ON SKIN OR CLOTHING:

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

IF INHALED:

- Move person to fresh air
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible
- Call a poison control center or doctor for further treatment advice

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.

For Chemical Emergency

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

See Additional Precautions and Use Directions Inside

EPA Reg. No. 87373-5

EPA Est. No.

Manufactured For:

Argite, LLC

5000 CentreGreen Way, Suite 100

Cary, NC 27513

NET WEIGHT:

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing dust. 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 are Barrier Laminate, Nitrile Rubber \geq 14 mils, or viton \geq 14 mils gloves.

Mixers, loaders, applicators and supporting dip treatment handlers who handle this pesticide for any use covered by the Worker Protection Standard, 40 CFR Part 170, must wear:

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

All other mixers, loaders, applicators and handlers 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

See engineering controls for additional requirements.

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 STATEMENT:

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard [40 CFR 170.607(d)]. Mixers and loaders handling this product while it is enclosed in intact water soluble packets may elect to wear reduced PPE of long-sleeved shirt, long pants, shoes, socks, a chemical-resistant apron, and chemical-resistant gloves. When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, including a spill or equipment break-down. 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 remove clothing/**PPE** immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

User should 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 washwater or rinsate.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific statements and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Personal Protective Equipment (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, including 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 exposures

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.

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 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.

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

RESTRICTIONS:

Do not graze animals on treated turf. Do not feed clippings to livestock or poultry.

PRODUCT INFORMATION

Apply THIOPHANATE METHYL 50W with ground equipment, using sufficient volume of spray to provide thorough coverage. Add required amount of THIOPHANATE METHYL 50W to a partially filled tank, agitate 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 copper containing materials or with highly alkaline pesticides including Bordeaux mixture of lime sulfur. No claim of compatibility with other pesticides is implied. Use the higher rates under conditions of severe disease pressure. Also see local State Extension Service directions for application schedules. IMPORTANT, if after using THIOPHANATE METHYL 50W as directed a treatment is not effective, a resistant strain of fungi may be present. Consult your local State Agricultural Extension Service for advice on the prompt use of some other suitable fungicide.

RESISTANCE MANAGEMENT

For resistance management, THIOPHANATE METHYL 50W contains a Group 1 fungicide. Any fungal population may contain individuals naturally resistant to THIOPHANATE METHYL 50W and other Group 1 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of THIOPHANATE METHYL 50W or other Group 1 fungicides within a growing season sequence with different groups that control the same pathogens. Argite, LLC does not recommend the use of products containing thiabendazole in combination or rotation with THIOPHANATE METHYL 50W. These utilize similar chemistry and mode of action and can contribute to development of disease tolerance.
- Use tank mixtures with fungicide from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.

- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Argite, LLC at 984-664-9804. You can also contact your pesticide distributor or university extension specialist to report resistance.

INSTRUCTIONS FOR APPLICATION

Instructions for Using Water Soluble Bags Directly into Spray Tanks:

Water Soluble Bags (WSBs) are designed to dissolve in water. Agitation may be used, if necessary, to help dissolve the WSB. Failure to follow handling and mixing instructions can increase your exposure to the pesticide products in WSBs. WSBs, when used properly, qualify as a closed mixing/loading system under the Agricultural Worker Protection Standard [40 CFR 170.607(d)].

Handling Instructions

Follow these steps when handling pesticide products in WSBs.

1. Mix in spray tank only.
2. Handle WSB(s) in a manner that protects package from breakage and/or unintended release of contents. If package is broken, put on PPE required for clean-up and then continue with mixing instructions.
3. Keep the WSB(s) in outer packaging until just before use.
4. Keep the WSB dry prior to adding to the spray tank.
5. Handle with dry gloves and according to the label instructions for PPE.
6. Keep WSB intact. Do not cut or puncture WSB.
7. Reseal the WSB outer packaging to protect any unused WSB(s).

Mixing Instructions

Follow the steps below when mixing this product, including if tank mixed with other pesticide products. If being tank mixed, the mixing directions 1 through 9 below take precedence over the mixing directions of the other tank mix products. WSBs may, in some cases, be mixed with other pesticide products so long as the directions for use of all mixed products do not conflict. Do not tank mix this product with products that prohibit tank mixing or have conflicting mixing directions.

1. If a basket or strainer is present in the tank hatch, remove prior to adding the WSB to the tank.
2. Fill tank with water to approximately one-third to one-half of the desired final volume of spray.
3. Stop adding water and stop any agitation.
4. Place intact/unopened WSB(s) into the tank.
5. Do not spray water from a hose or fill pipe to break or dissolve the WSB(s).
6. Start mechanical and recirculation agitation from the bottom of tank without using any overhead recirculation, if possible. If overhead recirculation cannot be turned off, close the hatch before starting agitation.
7. Dissolving the WSB(s) may take up to 5 minutes or longer, depending on water temperature, water hardness and intensity of agitation.
8. Stop agitation before tank lid is opened.

9. Open the lid to the tank, exercising caution to avoid contact with dusts or spray mix, to verify that the WSBs have fully dissolved and the contents have been thoroughly mixed into the solution.
10. Do not add other allowed products or complete filling the tank until the bags have fully dissolved and pesticide is thoroughly mixed.
11. Once the WSB have fully dissolved and any other products have been added to the tank, resume filling the tank with water to the desired level, close the tank lid, and resume agitation.
12. Use the spray solution when mixing is complete.
13. Maintain agitation of the diluted pesticide mix during transport and application.
14. It is unlawful to use any registered pesticide, including WSBs, in a manner inconsistent with its label.

TANK MIXING: To broaden the spectrum of fungicidal control this product can be mixed with other fungicides including iprodione 50% wettable powders, iprodione 2 lb/gallon liquids, chlorothalonil 6 lb/gallons liquids, vinclozolin 50% extruded granules, triadimefon 50% wettable powders, fenarimal 1 lb/gallon liquids, PCNB 75% wettable powders, thiram 75% wettable powders, mancozeb wettable powders or propiconazole 1.3 lb/gallon liquids for use on turf and ornamentals. Use only in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

NOTE: Residential use is prohibited for several of the other fungicides listed as possible tank mix components. Do not apply tank mixtures of these products to residential areas unless the label of the other fungicide specifically allows residential uses.

Tank mix products containing boron or releasable free chlorine will affect the solubility of water-soluble (PVA) film. Thoroughly rinse the spray tank of any boron containing spray solution prior to adding any water-soluble bags. Even minimal carryover concentrations of boron in the spray tank may cause the water soluble bag material dissolved in water to precipitate and form insoluble residue inside the spray tank.

TURF APPLICATIONS

For use on all fine turf applications including Bentgrasses, Bermuda grasses, Bluegrasses, Fescues, Ryegrasses, St. Augustine grasses, and Zoysia or their mixtures. THIOPHANATE METHYL 50W is not phytotoxic to any of the above mentioned grasses when used in accordance with the label. THIOPHANATE METHYL 50W is to be used for the prevention and control of the diseases listed below.

For best results use spray mixture the same day it is prepared. Spray uniformly over the area to be treated with a properly calibrated sprayer. Apply after mowing or avoid mowing twelve hours after application. Apply directed amounts in sufficient water to obtain thorough coverage, (2-4 gallons per 1,000 square feet suggested). When treating golf greens, always treat aprons and fairway adjoining aprons.

DISEASES CONTROLLED	RATE OUNCES PRODUCT/1000 Sq. Ft.*	APPLICATION INSTRUCTIONS
Anthracnose, basal <i>Colletotrichum graminicola</i> Anthracnose, foliar <i>Colletotrichum graminicola</i>	4-6 2-4	For prevention in historic areas of disease pressure, apply twice at 14 day intervals when soil temperature reaches 60°F. For curative control, apply when disease first appears and continue at 14 day intervals. Rotations and/or tank mix combinations with chlorothalonil or triadimefon can be utilized.
Bermudagrass Decline <i>Gaumannomyces graminis</i> var. <i>Graminis</i> Take-All-Patch <i>Gaumannomyces graminis</i> var. <i>avenae</i>	4-6	Apply in mid-July or when disease symptoms first appear and repeat at 14 day intervals for suppression. Use higher rates under most severe disease expression. Follow proper agronomic directions to maintain plant vigor.
Cool Season Brown Patch <i>Rhizoctonia cerealis</i> Necrotic Ring Spot <i>Leptosphaeria korrea</i> Spring Dead Spot <i>Leptosphaeria korrea</i>	4-6	For prevention, apply in Fall before turf has stopped all growth activity. Apply second application in early Spring when soil temperatures reach 55-60°F or when disease first appears. For curative action, apply when disease first appears in early Spring and continue at 14 day intervals.
Coprinus Snow Mold <i>Coprinus psychromorbidus</i>	4-6	Apply 2 treatments at 21 day intervals in late Fall to early Winter, with the last application made just prior to first permanent snow cover. Rotations and/or tank mix combinations with PCNB can be utilized.
Dollar spot <i>Moellerodiscus</i> , <i>Lanzia</i> , <i>Sclerotinia</i> Large Brown Patch <i>Rhizoctonia solani</i> Ascochyta Leaf Blight <i>Ascochyta</i> Copper Spot <i>Gloeocercospora sorghi</i> Fusarium Patch <i>Fusarium nivale</i> Red Thread <i>Laetisaria fuciformis</i> Zoysia Patch <i>Rhizoctonia solani</i>	2-4	Apply when disease first appears and continue at 14 day intervals. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb can be utilized.
Fusarium Blight <i>Fusarium roseum</i> , <i>F. triticum</i>	4-6	Apply when disease first appears at 14 day intervals.

DISEASES CONTROLLED	RATE OUNCES PRODUCT/1000 Sq. Ft.*	APPLICATION INSTRUCTIONS
Gray Leaf Spot (Blast) <i>Pyricularia grisea</i>	4-6	Apply preventative application before expected period of disease development. Continue applications at 14 day intervals.
Leaf Spot <i>Drechslera</i> Leaf, crown, and root diseases <i>Bipolaris</i> , <i>Curvularia</i> , <i>Exserohilum</i>	4-6	Apply when disease first appears and make applications at 14 day intervals. Rotate and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb.
Pink Snow Mold <i>Microdochium nivale</i>	2-4	Apply in late Fall to early Winter before turf has stopped all growth activity. A second application may be used in combination with chlorothalonil, PCNB, or thiram at directed rates before snow cover or during Spring thaw.
Rusts <i>Puccinia</i> , <i>Uromyces</i>	4-6	Make 2 applications at 14 day intervals when disease first appears. Rotate and/or tank mix combinations with chlorothalonil or mancozeb.
Stripe Smut <i>Ustilago striiformis</i>	4-6	Apply at 14 day intervals when disease first appears. For prevention, apply in spring and fall.
Summer Patch <i>Magnaporthe poae</i>	4-6	For prevention, apply 3 applications starting late April or early May using 21 day intervals. Rotations and/or tank mix combinations may be used as part of the three application program. For suppression, apply at 14 day intervals when disease first appears.
Bentgrass Dead Spot <i>Ophiosphaerella agrostis</i>	4-6	For prevention, apply in early June or based upon local Extension Service directions. Apply at 14 day intervals. Rotations and/or tank mix combinations may be used for season long disease prevention.

*For residential or public areas do not apply more than 2 oz. per 1,000 sq. ft. per application.

USE SITE	MAXIMUM SINGLE APPLICATION RATE		MAXIMUM ANNUAL APPLICATION RATE	
	Ounces Product/1000 sq ft	Pounds Product/Acre	Ounces Product/1000 sq ft	Pounds Product/Acre
Home lawns, parks, athletic fields, schools and day care centers	2	5.44 (2.72 lb ai)	8	21.76 (10.88 lb ai)
Golf Courses - Tees/greens/aprons	6	16.33 (8.165 lb ai)	16	43.6 (21.8 lb ai)
Golf Courses - Fairways (except Florida) only during overseeding	4	10.8 (5.4 lb ai)	4	10.88 (5.44 lb ai)
Golf Courses - Fairways (Florida only)	2	5.44 (2.72 lb ai)	2	5.44 (2.72 lb ai)

TURF RESTRICTIONS:

Not for homeowner use. For use only by certified applicators or those under their immediate supervision.

Not for use on turf being grown for sale or other commercial use as sod.

Do not graze animals on treated turf. Do not feed clippings to livestock or poultry.

Do not apply to home orchards/backyard fruit trees after fruit set.

Do not apply with fixed wing or rotary aircraft.

Minimum 14-day Retreatment Interval.

Do not exceed the maximum single application rate listed on the "Use Site" table even when the directed rate for a particular disease listed on the "Diseases Controlled" table exceeds the "Use Site" table maximum rate.

COMMERCIAL HORTICULTURAL APPLICATIONS

Nursery, Greenhouse, Shade or Lath House, Landscape & Interiorscape Annual and Perennial Flowers, Bedding Plants, Foliage Plants, Ground Covers, Vegetable Transplants, plus Deciduous and Evergreen Trees and Shrubs

THIOPHANATE METHYL 50W is a broad spectrum systemic fungicide which controls a variety of foliar, stem, and root diseases on a wide range of commercially important plants. THIOPHANATE METHYL 50W is also effective as a pre-plant dip on cuttings and bulbs. For soil drench applications, best crop protection is achieved with preventative treatments repeated every 21-28 days. For foliar applications, begin treatments when disease first appears, or during suspected periods of disease incidence. Apply additional applications every 7-14 days or as otherwise instructed for the prevention or control of the listed diseases. Use a wetting agent for plants that have leaves that are difficult to wet properly. Use a spreader-sticker to enhance product performance in wet weather conditions or during periods of overhead irrigation. THIOPHANATE METHYL 50W may be applied as a ground application using hand held, mechanical or motorized spray equipment, or as a chemigation spray or through an applicable sprinkler irrigation system; or as an overhead application where applicable. See specific instructions below.

Restrictions

Do not apply to home orchards/fruit trees after fruit set.

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

For foliar applications other than cut flowers do not exceed three (3) pounds active ingredient per acre per single application.

For cut flowers do not exceed one-half (0.5) pound active ingredient per single application.

Do not exceed thirty-six (36) pounds active ingredient per acre per crop year from all thiophanate-methyl containing products.

For soil drench applications, do not exceed 300 pounds active ingredient per acre per crop year from all thiophanate-methyl containing products.

Note: The "Direction For Use" of this product reflect the cumulative inputs from both historical field use and product testing programs. However, it is impossible to test this product on all species and cultivars. A preliminary trial is suggested on a small scale before full treatment is applied to any plant type not shown on this label but found in a similar use site with a listed disease problem. Wait 5-7 days after treatment to evaluate results.

This product is not recommended for use on Swedish Ivy (*Plectranthus australis*), Boston Fern (*Nephrolepis exhalta*), and Easter Cactus (*Hatiora gaertneri*).

Application Instructions: Apply material with properly calibrated, hand held, mechanical or motorized spray equipment or by chemigation through appropriate sprinkler irrigation, flood, or drip systems. Begin applications when disease first appears and repeat at 7-14 day intervals or as needed during the growing season. Use the shortest interval when conditions are unusually favorable for the development of disease. For hand held, mechanical, or motorized applications, mix 8-24 oz of THIOPHANATE METHYL 50W per 100 gal water and apply as a full coverage spray to drip for the prevention and control of the diseases listed below. Spray volume may range up to 400 gallons of finished spray per acre depending upon plant species and plant growth stage. For applications through irrigations systems, refer to use rates indicated in the foliar application chart.

Special Instructions For Proportional Injectors (e.g. Dosatron, Dosmatic, Anderson, and similar equipment)

Determine the treatment rate for crop and pathogen from the foliar application table below. Determine the injection ratio for the individual system to be used for application. For systems using a 1:100 ratio, measure and add the exact amount of specified material per 100 gallons to each gallon of water in a stock bucket or tank. For systems using a 1:200 ratio, multiply the specified amount per 100 gallons by 2. For systems using a 1:50 ratio, divide the specified amount per 100 gallons added by 2. For systems using 1:16 ratio, divide the specified amount per 100 gallons by 6. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. An injection ratio of 1:100 is specified for most greenhouse and nursery systems.

Restriction

Do not apply with fixed wing or rotary aircraft.

FOLIAR APPLICATION

Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
Anthracnose	12-16 oz/100 gallon	Apply as buds break or at first sign of disease. Repeat at 7-14 day intervals as needed during disease period.
Black Spot of Rose <i>Diplocarpon rosae</i>	12-16 oz/100 gallon	Apply late Spring or at first sign of disease. Repeat every 7-14 days as needed during disease period.
Fusicladium and Venturia Leaf Scabs on: Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	12-16 oz/100 gallon	Apply as buds break. Repeat every 7-14 days as needed during disease period. Effective control requires coverage during leaf expansion. Rotations and/or tank mix combinations with mancozeb, chlorothalonil or propiconazole can be utilized. Do not use fruit from treated crabapple or pear trees for food purposes.
Leaf Spots and Blights caused by: <i>Ascochyta</i> , <i>Blumeriella</i> , <i>Botrytis</i> , <i>Cercospora</i> , <i>Coccomyces</i> , <i>Corynespora</i> , <i>Curvularia</i> , <i>Didymellina</i> , <i>Entomosporium</i> , <i>Fabraea</i> , <i>Fusarium</i> , <i>Ramularia</i> , <i>Rhizoctonia</i> , <i>Marssonina</i> , <i>Mycosphaerella</i> , <i>Myrothecium</i> , <i>Phoma</i> , <i>Physalospora</i> , <i>Schizothyrium</i> , <i>Septoria</i> , <i>Sphaceloma</i>	12-16 oz/100 gallon	Apply when disease symptoms first appear. Repeat every 7-14 days as needed during disease period. Rotations and/or tank mix combinations with mancozeb or chlorothalonil can be utilized.
Ovulinia Blight	12-16 oz/100 gallon	Apply as flowers open. Repeat every 7-14 days as needed during disease period.

Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
Powdery Mildews <i>Erysiphe, Microsphaera,</i> <i>Phyllactinia, Podosphaera,</i> <i>Oidium, Sphaerotheca</i>	12-24 oz/100 gallon	Apply when disease first appears and repeat every 7-14 days during disease period. Rotations and/or tank mix combinations with mancozeb or triadimefon can be utilized.
Rust Diseases caused by: <i>Puccinia, Gymnosporangium,</i> <i>Uromyces</i>	12-16 oz/100 gallon	Apply late Spring or when symptoms first appear. Repeat every 7-14 days as needed during disease period. Rotations and/or tank mix combinations with mancozeb or chlorothalonil are recommended.
Tip Blight of Pine <i>Sphaeropsis sapinea, Diplodia</i> <i>pineae</i>	16-24 oz/100 gallon	Begin application in spring when new growth starts. Make a second application just before needles emerge from the sheath and a third application 14 days later. Thorough coverage is essential for optimal disease control.
Twig Blights, Cankers, and Diebacks <i>Diaporthe, Kabatina, Phoma,</i> <i>Phomopsis</i>	16-24 oz/100 gallon	Apply when symptoms first appear. Repeat every 7-14 days as needed during disease period.

VEGETABLE TRANSPLANTS:
Not intended for field vegetable production

Vegetable Transplants	Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
Beans, 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 lupine, White sweet lupine, Grain lupine, Chick pea, Garbanzo bean	Anthracnose <i>Colletotrichum</i> Gray Mold <i>Botrytis</i> White Mold <i>Sclerotinia</i>	2.1-2.8 lbs/Acre ¹ or 1.4-2.1 lbs/Acre ²	<p>For one application: Apply when 100% of plants have at least one open bloom or when conditions are favorable for disease development.</p> <p>or</p> <p>For multiple applications: Make the first application when 10% to 30% of plants have at least one open bloom and follow with sequential applications on a 4 to 7 day interval. Apply prior to the development of disease for best results.</p> <p>Do not apply more than 5.6 lbs. of product (2.8 lbs a.i.)/A/year.</p> <p>Pre-harvest interval: California only, 14 days for succulent beans, 28 days for dry beans and lima beans.</p> <p>Pre-harvest interval: all other states, 14 days for succulent beans and lima beans, 28 days for dry beans.</p>

Vegetable Transplants	Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
CUCURBITS (Cantaloupe, Casaba, Cucumbers, Melons, Pumpkins, Summer and Winter Squash, and Watermelons)			Do not apply more than 4.2 lbs of product (2.1 lbs a.i.)/A/year from any combination of application timings. Follow resistance management guidelines under Directions for Use.
	Anthracnose* <i>Colletotrichum</i> Gummy Stem Blight* <i>Didymella</i> Powdery Mildew* <i>Erysiphe</i> , <i>Sphaerotheca</i> , <i>Podosphaera</i> Target Spot* <i>Corynespora</i>	0.7 lbs/Acre ³	Begin applications when plants begin to run or when disease first appears, and repeat at 7 to 14 day intervals. For Target Spot use at 7 day intervals.
	Belly Rots* <i>Rhizoctonia</i> , <i>Fusarium</i>	0.7 lbs/Acre ³	Apply in sufficient volume to allow runoff to the soil. Will not control <i>Pythium</i> or <i>Phytophthora</i> .

***Not for this use in California**

1. Apply, for example in 50-200 gallons of water per acre. In volumes of water below 50 gallons, use a minimum of 2.1 pounds per acre. If more than 200 gallons of water per acre are required for good plant coverage, apply a maximum rate of 2.8 pounds per acre. For example, if 200 gallons of water are required, use 1.4 pounds per 100 gallons.
2. Apply, for example, in 50-200 gallons of water per acre. In volumes of water below 50 gallons, use a minimum of 1.4 pounds per acre. If more than 200 gallons of water per acre are required for good plant coverage, apply a maximum rate of 2.1 pounds per acre. For example, if 200 gallons of water are required, use 1.05 pounds per 100 gallons.
3. Apply, for example, in 50-200 gallons of water per acre. In volumes of water below 50 gallons, use a minimum of 0.7 pounds per acre. If more than 200 gallons of water per acre are required for good plant coverage, apply a maximum rate of 0.7 pounds per acre. For example, if 200 gallons of water are required, use 0.35 pounds per 100 gallons.

SOIL DRENCH APPLICATION

Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
<p>Stem, Crown, and Root Rots caused by: <i>Botrytis</i>, <i>Cylindrocladium</i>, <i>Fusarium</i>, <i>Gliocladium</i>, <i>Myrothecium</i>, <i>Penicillium</i>, <i>Ramularia</i>, <i>Rhizoctonia</i>, <i>Sclerotinia</i></p>	8-16 oz/100 gal	<p>Apply as a drench or directed spray using hand held, mechanical, or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems, after seeding or sticking of cuttings (8 oz) or after transplanting (12-16 oz) to propagation beds, containers, pots, trays, or nursery or landscape beds at a rate to thoroughly soak the growing media through the root zone. A guide is 0.25-3 pints of finished mixture per sq ft depending on the media type and depth (about 4 oz per 4 inch pot or 8 oz per 6 inch pot). Repeat every 21-28 days for adequate crop protection. Note: THIOPHANATE METHYL 50W does not control <i>Pythium</i> or <i>Phytophthora</i>. Tank mix combinations with metalaxyl, mefenoxam, etridiazole, fosetyl-AI, mono and dipotassium salts of phosphorous acid or propamocarb are required for the control of <i>Pythium</i> and <i>Phytophthora</i>.</p>

PLANT DIP APPLICATION

Diseases Controlled	Rate of THIOPHANATE METHYL 50W	Application Instructions
Plant or Cutting Diseases caused by: <i>Botrytis, Cythindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis</i>	16-24 oz/100 gal	Immerse plants or cuttings for 10-15 min. Remove and allow to drain. Note: Follow accepted hygiene practices to minimize the introduction and spread of water borne bacterial and water mold fungal diseases.
Bulb, Corm, and Rhizome Rots caused by: <i>Botrytis, Cythindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis</i>	16-24 oz/100 gal	Soak cleaned bulbs for 15-30 min in warm solution (80-85°F). For storage disease prevention, treat bulbs preferably within 48 hours after digging. After treatment, dry well before storing. If bulbs are for forcing, treat bulbs that have been heat-cured. Note: Follow accepted hygiene practices to minimize the introduction and spread of water born bacterial and water mold fungal diseases.

APPLICATION THROUGH IRRIGATION SYSTEMS

Apply this product only through the following types of sprinkler systems center pivot, lateral move, end tow, side wheel roll, traveler, solid set, hand move (or similar); or flood (basin), or drip 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, contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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.

SPECIFIC INFORMATION FOR IRRIGATION SYSTEMS CONNECTED TO A PUBLIC WATER SUPPLY

Public water system means a system for the provision to the public 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.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), backflow preventer, or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back towards the injection pump.

The pesticide injection pipeline must 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 drawn 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, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, including a positive displacement injection pump or equivalent, effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

CHEMIGATION APPLICATION INSTRUCTIONS

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

Determine the treatment rate as indicated in the directions for use for crop and pathogen and measure the intended areas of application.

Prepare a suspension of product in the mix tank or stock bucket. Fill the tank with 1/2 or 3/4 of the desired amount of water. Start agitation and add the required amount of product to the solution along with the remaining volume of water.

Maintain a gentle agitation in the mix tank during application to assure a uniform suspension.

Start system and then uniformly inject the suspension of THIOPHANATE METHYL 50W into the irrigation line so as to deliver the desired rate per acre. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation system.

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

Inject the suspension of THIOPHANATE METHYL 50W with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing.

PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER AND DRIP (TRICKLE) IRRIGATION SYSTEMS

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 shutdown.

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, including 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.

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

PRECAUTIONS FOR FLOOD (BASIN), FURROW AND BORDER CHEMIGATION

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity including a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

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, quickclosing 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 function 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, including 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.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry area in original unopened container. Store in a secured area unavailable to unauthorized persons.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of 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. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If bag is disposed of by burning, stay out of smoke.

Warranty and Disclaimer Statement

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. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Argite, LLC ("Argite"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

Argite warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Argite, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARGITE DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARGITE, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARGITE IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARGITE, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARGITE'S ELECTION, THE REPLACEMENT OF THE PRODUCT.

Thiophanate Methyl 50W is not manufactured or distributed by Cleary Chemicals, LLC, seller of Cleary 3336™.

Cleary 3336™ is a trademark of Nufarm Americas Inc.

EPA APPROVAL DATE

THIOPHANATE METHYL 50W
IN WATER SOLUBLE BAGS

For prevention and control of fine turf diseases and diseases of annual and perennial flowers, ground covers, plus deciduous and evergreen trees and shrubs.

ACTIVE INGREDIENT:

Thiophanate Methyl: Dimethyl 4,4'-o-phenylenebis[3-thioallophanate]..... 50.0%

OTHER INGREDIENTS: 50.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none">Hold eye open and rinse slowly and gently with water for 15-20 minutesRemove contact lenses, if present, after the first 5 minutes, then continue rinsing eyeCall a poison control center or doctor for treatment advice
IF SWALLOWED:	<ul style="list-style-type: none">Call a poison control center or doctor immediately for treatment adviceHave person sip a glass of water if able to swallowDo not induce vomiting unless told to do so by the poison control center or doctorDo not give anything by mouth to an unconscious person
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">Take off contaminated clothingRinse skin immediately with plenty of water for 15-20 minutesCall a poison control center or doctor for treatment advice
IF INHALED:	<ul style="list-style-type: none">Move person to fresh airIf person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possibleCall a poison control center or doctor for further treatment advice
Hot Line Number	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.	

For Chemical Emergency

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

See Additional Precautions and Use Directions Inside Attached Booklet

EPA Reg. No. 87373-5

EPA Est. No.

Manufactured For:

Argite, LLC
5000 CentreGreen Way, Suite 100
Cary, NC 27513

NET WEIGHT: _____

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing dust. 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..

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 washwater or rinsate.

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.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry area in original unopened container. Store in a secured area unavailable to unauthorized persons.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of 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. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If bag is disposed of by burning, stay out of smoke.

BASE LABEL