

PM 21

4581-352

Page 194

elf atochem**ATO**

SHAKE WELL BEFORE USING

WPS**TOPSIN® M 4.5F****THIOPHANATE-METHYL FUNGICIDE**

4.5 Pounds per Gallon Flowable

ACTIVE INGREDIENT:

Thiophanate-methyl (dimethyl[1,2-phenylene]-
bis(iminocarbonothioyl)]bis(carbamate))* 46.2%

INERT INGREDIENTS: 53.8%

TOTAL 100.0%

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

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

ACCEPTED

OCT 04 1996

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 4581-352

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. Never give anything by mouth to an unconscious person.

IF IN EYES, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

IF ON SKIN, immediately flush skin with plenty of water.

See back panel for Precautionary Statements.

EPA Reg. No. 4581-352

EPA Est. No. 4581-TX-1

Net Contents: _____

Sold by:

ELF ATOCHEM NORTH AMERICA, INC.
AGCHEM DIVISION

2000 Market Street, Philadelphia, PA 19103

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**CHEMIGATION
NOT FOR THIS USE IN CALIFORNIA
GENERAL INSTRUCTIONS**

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.

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

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

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

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

SYSTEM REQUIREMENTS

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

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

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

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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

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

INSTRUCTIONS FOR DRIP (TRICKLE) IRRIGATION:

Refer to supplemental labeling for use directions for drip (trickle) irrigation. Do not apply this product through this type of irrigation system unless these directions are followed.

INSTRUCTIONS FOR SPRINKLER (OVERHEAD) IRRIGATION:

Observe the requirements in the System Requirements section above.

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

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

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

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

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

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

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

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

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

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

SPRAY PREPARATION:

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

Prepare a suspension of TOPSIN M in a mix tank. Fill the tank with 1/4 or 1/2 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of TOPSIN M and then the remaining volume of water. Refer to Mixing Instructions in previous section.

APPLICATION INSTRUCTIONS:

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of TOPSIN M into the irrigation water line so as to deliver the desired rate per acre. The suspension of TOPSIN M should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

NOTE: When treatment with TOPSIN M has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

TOPSIN M 4.5F

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

CAUTION

HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN, OR INHALED.
CAUSES MODERATE EYE IRRITATION.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on EPA chemical resistance selection chart.

Applicators and other handlers must wear:

- long-sleeved shirt and long pants;
- chemical-resistant gloves, such as barrier laminate, butyl rubber \geq 14 mils, nitrile rubber \geq 14 mils, neoprene rubber \geq 14 mils, polyvinyl chloride (PVC) \geq 14 mils, Viton \geq 14 mils; and
- shoes plus socks.

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

USER SAFETY RECOMMENDATIONS:

Users should:

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

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

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

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

STORAGE INSTRUCTIONS: Store in the original container. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal Instructions listed below.

PESTICIDE DISPOSAL INSTRUCTIONS: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL INSTRUCTIONS: 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.

WARRANTY AND DISCLAIMER

Elf Atochem North America warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the risks referred to therein. ELF ATOCHEM MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL ELF ATOCHEM OR SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS REPUTATION, OR CUSTOMERS; LABOR COST; OR OTHER EXPENSES INCURRED IN PLANTING OR HARVESTING.

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S-2304S-05 G5 (3/96) WPS

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Made in Japan

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DIRECTIONS FOR USE

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

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

AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls;
- chemical-resistant gloves, such as barrier laminate, butyl rubber \geq 14 mils, nitrile rubber \geq 14 mils, neoprene rubber \geq 14 mils, polyvinyl chloride (PVC) \geq 14 mils, Viton \geq 14 mils; and
- shoes plus socks.

GENERAL INFORMATION

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

Use the FL OZ/A rate for concentrate sprayers (less than 400 gallons) and aerial application. Use the FL OZ/100 GAL rate for dilute ground application.

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

IMPORTANT: If, after using TOPSIN M as recommended, treatment is not effective, a tolerant strain of fungi may be present. Consult your State Agricultural Experiment Station or your State Agricultural Extension Service for advice on the prompt use of some other suitable fungicide.

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TOPSIN M 4.5F

| CROP | DISEASES | FL OZ/A | FL OZ/100 GAL | REMARKS |
|----------------------|--|----------------------|----------------------|--|
| Almonds | Brown Rot Blossom Blight (Monilinia sp.) | 30-40 | | Apply at early pink bud and early petal fall. Resistance Management: TOPSIN M should not be used alone. Another non benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| Apples (pre-harvest) | Apple Scab (Venturia sp.) Bitter Rot (Glomerella sp.) Physcok (Schizothrium sp.) Powdery Mildew (Podosphaera sp.) Sooty Blotch (Gloeodes sp.) Black Rot (Phytophthora sp.) | 20-30 | 5-7 1/2 | Apply at 5- to 10-day intervals from green tip through petal fall; continue at 7- to 14-day intervals in cover sprays. Resistance Management: TOPSIN M should not be used alone. Another non benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| Beans | Gray Mold (Botrytis sp.) White Mold (Sclerotinia sp.) | 30-40 OR 20-30 | 20-27 OR 13-20 | Apply once at 50% to 70% of full bloom. OR Apply twice with the first application at 10% to 30% of full bloom and a second application at 4 to 7 days later or at peak bloom. Do not apply to snap or dry beans within 14 days of harvest or to lima beans within 28 days of harvest. |
| Celery | Early Blight (Cercospora sp.) Late Blight (Septoria sp.) | 10 | | Apply to the base of the plants on a 14- to 21-day schedule beginning about 2 weeks after transplanting. OR Apply as a foliar spray every 7 to 14 days beginning about 2 weeks after transplanting. Do not apply within 7 days of harvest. Do not make more than 4 applications per season. |
| Peanuts | Leaf Spot (Cercospora sp.) Ascochyta Web Blotch | 10 10 | | Begin applications 35 days after planting or when disease first appears and repeat at 14- to 21-day intervals as needed. Use the 14-day interval under severe disease pressure. Do not apply within 14 days of harvest. TOPSIN M should not be used alone. Use only in combination with another non-benzimidazole fungicide such as PENNCOZEB® 75DF (mancozeb) at 1 1/2 lb. per acre. |
| Pecans | Brown Spot (Cercospora sp.) Downy Spot (Mycosphaerella sp.) Powdery Mildew (Microsphaera sp.) Scab (Fusicladium sp.) Zonate Leaf Spot (Cristulariella sp.) | 10-20 | | Use the higher rates for trees over 30 feet tall and for aerial applications in Arkansas, Georgia, Louisiana, Mississippi, Oklahoma, and Texas. Begin applications when first leaves are showing and repeat at 3- to 4-week intervals until shuck split. Do not apply after shuck split. |
| Soybeans | Anthrachnose (Collatotrichum sp.) Brown Spot (Septoria sp.) Frogeye Leaf Spot (Cercospora sp.) Pod and Stem Blight (Diaporthe sp. and the imperfect stage, Phomopsis sp.) Purple Seed Stain (Cercospora sp.) | 10-20 | | Apply from full bloom to when pods are 1/4" to 1/2" in length. Make a second application 14- to 21-days later. Do not make the second application later than 14 days after pods average 1/4" in length or when beans form in the pod. Use the high rate under severe disease pressure. FOR SEED BEANS ONLY—For seed quality make a single application at the high rate when beans form in the pod. Do not make more than 2 applications per year. Do not graze or feed treated vines or hay to livestock. |
| | Sclerotinia | 15-20 | | Make one application at early bloom (R-1 to R-2 stage) followed by a second application 14-15 days later if conditions are favorable for continued disease pressure. Use a minimum of 5 gal/acre by air. Do not make more than 2 applications per year. Do not graze or feed treated vines to livestock. |
| | Aerial Blight (suppression) | 20 | | Make initial application when disease threatens and repeat 14-21 days later if needed. Do not make more than 2 applications per year. Do not graze or feed treated vines to livestock. |

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| CROP | DISEASES | FL OZ/A | FL OZ/100 GAL | REMARKS |
|--|---|------------------|-----------------|--|
| Stone Fruit (pre-harvest) —Apricots | Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.) | 30 | 10 | Apply at early bloom (red bud). Make a second application at full bloom. In addition, for Fruit Brown Rot, apply 1 or 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10- to 14-day intervals between full bloom and final pre-harvest sprays. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| —Cherries | Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.) | 30 | 10 | Apply at early bloom (early popcorn). Make a second application at full bloom. In addition, for Fruit Brown Rot, apply 1 or 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10- to 14-day intervals between full bloom and final pre-harvest sprays. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| | Cherry Leaf Spot (Coccomyces sp.) | 24-30 | 8-10 | Apply at petal fall or before, when leaves first unfold, and at first, second and third cover at 10- to 14-day intervals and one spray 14 to 21 days after harvest. Do not apply within 1 day of harvest. See above for Resistance Management guidance. |
| | Powdery Mildew (Podosphaera sp.) and (Sphaerotheca sp.) | 30 PLUS 24-30 | 10 PLUS 8-10 | Apply at early bloom (early popcorn). Make a second application at full bloom. PLUS Apply at shuck fall and first cover. Do not apply within 1 day of harvest. See above for Resistance Management guidance. |
| —Nectarines | Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.) | 30 | 10 | Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. In addition, for Fruit Brown Rot, apply 1 or 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10- to 14-day intervals between full bloom and final pre-harvest sprays. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| —Peaches | Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.) | 30-45 | 10-15 | Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. In addition, for Fruit Brown Rot, apply 1 or 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10- to 14-day intervals between full bloom and final pre-harvest sprays. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| | Peach Scab (Cladosporium sp.) | 30-45 PLUS 24-30 | 10-15 PLUS 8-10 | Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. PLUS Apply at shuck split and at first cover sprays. Do not apply within 1 day of harvest. See above for Resistance Management guidance. |

| CROP | DISEASES | FL OZ/A | FL OZ/100 GAL | REMARKS |
|-------------------|--|---------|---------------|---|
| —Plums and Prunes | Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.) | 30 | 10 | Apply at early bloom (green hg). Make second application at full bloom. In addition, for Fruit Brown Rot, apply 2 sprays starting 3 weeks before harvest. If needed under severe disease pressure, apply additional sprays at 10- to 14-day intervals between full bloom and final pre-harvest sprays. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| | Black Knot (Dibotryon sp.) | 30 | 10 | Apply at pre-bloom, petal fall, and at second, and third cover sprays at 10- to 14-day intervals. Do not apply within 1 day of harvest. See above for Resistance Management guidance. |
| | Leaf Spot (Coccomyces sp.) | 30 | 10 | Apply at petal fall, shuck, and at first second, and third cover sprays at 10- to 14-day intervals and 1 spray 14 to 21 days after harvest. Do not apply within 1 day of harvest. See above for Resistance Management guidance. |
| Strawberries | Fruit Rot (Botrytis sp.) Leaf Blight (Dendrothema sp.) Leaf Scorch (Diplocarpus sp.) | 15-20 | | Begin applications at early bloom and continue at 7- to 10-day intervals. Use the higher rate East of the Rocky Mountains and under conditions of severe disease pressure. Do not apply within 1 day of harvest. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management. |
| Sugar Beets | Leaf Spot (Cercospora sp.) | 8-10 | | Begin applications when disease first appears and repeat at 14- to 21-day intervals as needed. Do not apply within 21 days of harvest. |

FOR USE ON FALL-SEEDED WHEAT IN IDAHO, OREGON AND WASHINGTON ONLY
(Not for use in California)

| DISEASES | FL OZ/A | FL OZ/100 GAL | REMARKS |
|---|---------|---------------|---|
| Pseudocercospora sp. (Foot Rot, Strawbreaker) Eye Spot | 20 | | Apply TOPSIN M at the rate indicated in single application by air or ground after wheat is tillered but before stem elongation has begun. Use sufficient water to obtain thorough coverage. Do not make more than one application per season. Do not cut for hay within 90 days of application. Do not allow livestock to graze in treated areas before harvest. |

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