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TOPSIN® M 70W

THIOPHANATE-METHYL FUNGICIDE

70% Wettable Powder

ACTIVE INGREDIENT:

Thiophanate-methyl (dimethyl[1,2-phenylene]-
bis(iminocarbonothioyl))bis(carbamate)*..... 70%

INERT INGREDIENTS: 30%

TOTAL 100%

*Also known as dimethyl 4,4'-g-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.

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. Get medical attention if irritation persists.

See back panel for Precautionary Statements.

EPA Reg. No. 4581-322

EPA Est. No. 5905-AR-1

Net Weight: _____ Pounds (_____ Kgs)

Sold by:

ELF ATOCHEM NORTH AMERICA, INC. - AGCHEM DIVISION

2000 Market Street, Philadelphia, PA 19103

ACCEPTED

OCT 04 1996

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, the pesticide
registered under 4581-322

GENERAL INFORMATION AND 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, waterproof gloves, shoes plus socks.

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. Elf Atochem does not recommend tank mixes with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur. No claim of compatibility with other pesticides is implied. Use the higher rate under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules.

Use the LBS/ACRE rate for concentrate sprays (less than 400 gallons on apples, less than 300 gallons on stonefruit). Use the LBS/100 GAL rate for dilute ground applications. For aerial applications, use a minimum of 3 gallons/A for row crops, and a minimum of 10 gallons/A for tree crops. Higher spray volume will generally result in better coverage and better disease control.

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

RESISTANCE MANAGEMENT: To avoid the development of tolerant or resistant strains of fungi, TOPSIN M should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with TOPSIN M at each application. ELF ATOCHEM DOES NOT RECOMMEND THE USE OF PRODUCTS CONTAINING BENOMYL OR THIABENDAZOLE IN COMBINATION OR IN ROTATION WITH TOPSIN M. If after using TOPSIN M as recommended, the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of TOPSIN M for at least one season. Do not use products containing benomyl or thiabendazole as substitutes for TOPSIN M, as they are of similar chemistry and will contribute to the development of resistance. As long as these precautions are followed, TOPSIN M can be useful for disease control, even if resistant strains are present.

TOPSIN M 70W

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CROP	DISEASES	LBS/ACRE	LBS/100 GAL	REMARKS
Almonds	Brown Rot Blossom Blight (<i>Monilinia</i> sp.)	1-2		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 (<i>Venturia</i> sp.) Flyspeck (<i>Zygophiala</i> sp.) Powdery Mildew (<i>Podosphaera</i> sp.) Sooty Blotch (<i>Gloeodes</i> sp.) Black Rot (<i>Botryosphaeria</i> sp.) Brooks Fruit Rot (<i>Mycosphaerella</i> sp.)	1-1 1/2	1/4-1/2	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 (<i>Botrytis</i> sp.) White Mold (<i>Sclerotinia</i> sp.)	1 1/2-2 OR 1-1 1/2		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 (<i>Cercospora</i> sp.) Late Blight (<i>Septoria</i> sp.)	1/2		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. Pre-harvest interval: 7 days. Do not make more than 4 applications per season.
Cucurbits (Cucumbers, melons, pumpkins, summer and winter squash)	Anthraxnose (<i>Colletotrichum</i> sp.) Gummy Stem Blight (<i>Didymella</i> sp.) Powdery Mildew (<i>Erysiphe</i> sp.) Target Spot (<i>Corynespora</i> sp.)	1/4-1/2 for ground applications OR 1/2 for aerial applications		Begin applications when plants begin to run or when disease first appears, and repeat at 7- to 14-day intervals or as needed. For Target Spot, use at 7-day intervals as needed.
California: use only for Powdery Mildew control.	Belly Rots (<i>Rhizoctonia</i> / <i>Fusarium</i> sp.)	1/2		For Belly Rots, apply in sufficient volume to allow runoff to the soil. Will not control Pythium sp.
Onions (in furrow)	White Rot (<i>Sclerotium</i> sp.)	1/2-1 lb./1000 ft. of row (12 inch row spacing) OR 12-16 lbs. broadcast		Apply TOPSIN M by spraying directly into the open furrow at the time of planting seed, sets or bulbs. Not for this use through any type of irrigation system.
Peanuts	Leaf Spot (<i>Cercospora</i> spp.) Rust (<i>Puccinia</i>) Limb Rot (<i>Rhizoctonia</i>) Ascochyta Web Blotch	1/2		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. Pre-harvest interval: 14 days. 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 (<i>Cercospora</i> sp.) Downy Spot (<i>Mycosphaerella</i> sp.) Liver Spot (<i>Gnomonia</i> sp.) Powdery Mildew (<i>Microsphaera</i> sp.) Scab (<i>Fusicladium</i> sp.) Stem End Blight (<i>Botryosphaeria</i> sp.) Zonal Leaf Spot (<i>Cristellaria</i> sp.)	1/2-1		Use the higher rate 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	Anthraxnose (<i>Colletotrichum</i> sp.) Brown Spot (<i>Septoria</i> sp.) Frogeye Leaf Spot (<i>Cercospora</i> sp.) Pod and Stem Blight (<i>Diaporthe</i> sp. and the imperfect stage, <i>Phomopsis</i> sp.) Purple Seed Stain (<i>Cercospora</i> sp.)	1/2-1		Apply from full bloom to when pods are 1 1/2 to 1/4 in length. Make a second application 14- to 21-days later. Do not make the second application if 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 normal 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.

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

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CROP	DISEASES	LBS/ ACRE	LBS/ 100 GAL	REMARKS
Soybeans (continued)	Sclerotinia	1/2-1		Make one application at early bloom (R-1 to R-2 stage) followed by a second application 7-14 days later if conditions are favorable for continued disease pressure. Use a minimum of 5 gallons by air. Do not make more than 2 applications per year. Do not graze or feed treated vines to livestock.
	Aerial Blight (suppression)	1		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.
Stone Fruits —Apricots	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	1 1/2	1/2	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. Pre-harvest interval: 1 day. 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.)	1 1/2	1/2	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. Pre-harvest interval: 1 day. 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.)	1 1/4-1 1/2	3/4-1/2	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. Pre-harvest interval: 1 day. See above for Resistance Management guidance.
	Powdery Mildew (Podosphaera sp.) and (Sphaerotheca sp.)	1 1/2 PLUS 1 1/4-1 1/2	1/2 PLUS 1/4-1/2	Apply at early bloom (early popcorn). Make a second application at full bloom. PLUS Apply at shuck fall and first cover. Pre-harvest interval: 1 day. See above for Resistance Management guidance.
—Nectarines	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	1 1/2	1/2	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. Pre-harvest interval: 1 day. 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.)	1 1/2-2 1/4	1/2-3/4	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. Pre-harvest interval: 1 day. 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.)	1 1/4-2 1/4 PLUS 1 1/4-1 1/2	1/2-3/4 PLUS 1/4-1/2	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. Pre-harvest interval: 1 day. See above for Resistance Management guidance.

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

CROP	DISEASES	LBS/ ACRE	LBS/ 100 GAL	REMARKS
—Plums and Prunes	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	1 1/2	1/2	Apply at early bloom (green 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. Pre-harvest interval: 1 day. 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.)	1 1/2	1/2	Apply at pre-bloom, petal fall, and at first, second, and third cover sprays at 10- to 14-day intervals. Pre-harvest interval: 1 day. See above for Resistance Management guidance.
	Leaf Spot (Coccomyces sp.)	1 1/2	1/2	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. Pre-harvest interval: 1 day. See above for Resistance Management guidance.
Strawberries	Fruit Rot (Botrytis sp.) Leaf Blight (Dendrophoma sp.) Leaf Scorch (Diplaconon sp.)	1/2-1		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. Pre-harvest interval: 1 day. 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.)	3/4-1/2		Begin applications when disease first appears and repeat at 14- to 21-day intervals as needed. Pre-harvest interval: 21 days. Resistance Management: TOPSIN M should not be used alone. Another non-benzimidazole fungicide should be used with TOPSIN M for disease resistance management.

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

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

CROP	DISEASES	LBS/ ACRE	LBS/ 100 GAL	REMARKS
Fall-Seeded Wheat	Pseudocercospora sp. (Foot Rot, Strawbreaker, Eye Spot)	1 lb. (0.7 lb. ai/A)		Apply TOPSIN M at the rate indicated in a single application by air or ground after wheat is tillered but before stem elongation has begun. Use sufficient water to obtain thorough coverage. Do not make more than one application per season. Do not cut for hay within 90 days of application. Do not allow livestock to graze in treated areas before harvest.

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

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TOPSIN M 70W

DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS
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 drip (mini-micro sprinklers, strip tubing, trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

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

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

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

Do not connect chemigation system to any public water system. Public water system means a system for the provision of piped water for human consumption if such 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.

APPLICATION INSTRUCTIONS

Observe the requirements in the System Requirements section above.

Apply TOPSIN M 70W 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.

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

TOPSIN M 70W may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

SPRAY PREPARATION

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

Prepare a suspension of TOPSIN M 70W in a mix tank. Fill the tank with 1/4 or 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of TOPSIN M 70W and then the remaining volume of water.

Sprinkler Irrigation—Notes

Observe all System Requirements and Application Instructions above.

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of TOPSIN M 70W into the irrigation water line so as to deliver the desired rate per acre. The suspension of TOPSIN M 70W should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. When treatment with TOPSIN M 70W has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

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

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

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

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

Observe all System Requirements and Application Instructions above.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN, OR INHALED. CAUSES MODERATE EYE IRRITATION. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist.

PERSONAL PROTECTIVE EQUIPMENT:

Applicators and other handlers must wear: long-sleeved shirt and long pants, 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 in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, sweep up spillage and dispose of in accordance with the Pesticide Disposal Instructions listed below.

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

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. *

Elf Atochem and seller offer this product and the buyer and user accept it subject to the foregoing conditions of sale and warranty which may be varied only by agreement in writing signed by a duly authorized representative of Elf Atochem.

Made in Japan

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