



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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

JUL 17 2003

Timothy M. Formella
Cerexagri, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Topsin® 4.5L Fungicide
 EPA Reg. No. 4581-405
 Your amendment dated May 7, 2003

Dear Mr. Formella:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

USE RATE TABLE (pages 4 to 12): In the following table entries under remarks the maximum use rate of "(xx lbs. ai)" should be (xx lbs ai)/Acre:

- Almonds
- Apples
- Peanuts
- Pecans
- Stone Fruit
 - apricots
 - cherries, cherry [leaf spot, powdery mildew]
 - nectarines
 - peaches [brown rot, peach scab]
 - plums and prunes [brown rot, black knot, leaf spot].

One copy of the label stamped "Accepted with comments" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment.

Topsin® 4.5L Fungicide
Page 2 of 2

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Mary S. Waller".

Mary Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

3/28

TOPSIN[®] 4.5FL

Fungicide

ACTIVE INGREDIENT:

Thiophanate-methyl (dimethyl[1,2-phenylene]-
bis(iminocarbonothioyl))bis(carbamate))* 45.0%

OTHER INGREDIENTS: 55.0%

TOTAL: 100.0%

Contains 4.5 pounds thiophanate-methyl per gallon.

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

TOPSIN[®] is a registered trademark of Nippon Soda Company, Ltd., and is licensed to NISSO TM LLC, and is covered by one or more of the following U.S. Patents:

3,769,308; 3,856,308; 4,020,095; and 4,029,813.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID**If inhaled:**

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

If on skin:

- 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

EPA Reg. No.4581-405

EPA Est. No. _____

NET CONTENTS: _____ Gallons

Sold by: Cerexagri, Inc.

A Wholly-owned Subsidiary of ATOFINA Chemicals, Inc.

630 Freedom Business Center, Suite 402

King of Prussia, PA 19406

ACCEPTED
with COMMENTS
In EPA Letter Dated:

JUL 17 2003

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

4581-405¹

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

Harmful if absorbed through the skin or inhaled. Avoid breathing dust, or spray mist. Remove contaminated clothing and wash clothing before reuse. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: chemical-resistant gloves made out of any waterproof material, 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.

DIRECTIONS FOR USE

SHAKE WELL BEFORE USING

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.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical resistant gloves made from any waterproof material, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils, Viton ≥ 14 mils, and shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40CFR 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 areas until sprays have dried.

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.

GENERAL INFORMATION for Agricultural Uses

Apply TOPSIN 4.5FL with ground or aerial equipment, using sufficient volume of spray to provide thorough coverage. Continuous agitation is required to keep the material in suspension. Cerexagri 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 fl. oz./Acre rate for concentrate sprays (less than 400 gallons on apples, less than 300 gallons on stone fruit). Use the fl. oz./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.

Use on non-bearing almonds, apples, pecans, pistachios, apricots, cherries, nectarines, plums, prunes, and peaches: TOPSIN 4.5FL may be used for control of the leaf diseases listed on the label for these crops during the non-bearing years of new plantings, and on nursery stock. All use directions and limitations must be followed, except for the PHI, which is not applicable. Begin applications as disease is first observed. Tank mixing with a protectant fungicide is strongly recommended for resistance management.

For crops without labeled uses of thiophanate-methyl, observe a 30-day plantback restriction.

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 4.5FL should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with TOPSIN 4.5FL at each application. CEREXAGRI DOES NOT RECOMMEND THE USE OF PRODUCTS CONTAINING THIABENDAZOLE, BENOMYL, OR OTHER PRODUCTS CONTAINING THIOPHANATE-METHYL IN COMBINATION OR IN ROTATION WITH TOPSIN 4.5FL. If after using TOPSIN 4.5FL as recommended, the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of TOPSIN 4.5FL for at least one season. Do not use products containing benomyl, thiabendazole, or other products containing thiophanate-methyl as substitutes for TOPSIN 4.5FL, as they are of similar chemistry and will contribute to the development of resistance. As long as these precautions are followed, TOPSIN 4.5FL can be useful for disease control, even if resistant strains are present.

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
Almonds	Brown Rot Blossom Blight (<i>Monilinia</i> sp.) Scab (<i>Cladosporium</i> sp.) Leaf Blight (<i>Seimatosporium</i> sp.) Jacket Rot (<i>Monilinia</i> sp., <i>Sclerotinia</i> sp., <i>Botrytis</i> sp.)	20 - 30		Apply as needed between pink bud and petal fall. The maximum seasonal application rate is 60 fl oz/acre (2.1 lbs. a.i.). Resistance Management: TOPSIN 4.5FL may be applied alone at pink bud. For all other applications TOPSIN 4.5FL should be applied with a contact fungicide such as Ziram 76DF or Maneb 75DF. Other non-benzimidazole fungicides should be used between TOPSIN 4.5FL applications.
Apples	Apple Scab (<i>Venturia</i> sp.) Flyspeck (<i>Zygophiala</i> sp.) Powdery Mildew (<i>Podosphaera</i> sp.) Sooty Blotch	15-20	3¾ - 5	Apply at 5- to 10-day intervals from green tip through petal fall; continue at 7- to 14-day intervals in cover sprays. Follow Resistance Management guidance under Directions for Use, above.

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
	(<i>Gloeodes</i> sp.) Black Rot (<i>Botryosphaeria</i> sp.) Brooks Fruit Rot (<i>Mycosphaerella</i> sp.) White Rot (<i>Botryosphaeria</i> sp.)			The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day
Beans	Gray Mold (<i>Botrytis</i> sp.) White Mold (<i>Sclerotinia</i> sp.) Anthracnose	30-40 OR 20-30		Apply once at 50 to 70% of full bloom. OR Apply twice with the first application when 10% - 30% of plants have at least one open bloom and/or conditions are favorable for disease development. Make a second application 4 to 7 days later or at peak bloom. A maximum of 80 fl oz of product (2.8 lbs. a.i.) per acre per crop cycle may be used Pre-harvest Interval: California only , 14 days for snap beans, 28 days for lima beans and dry beans. Pre-harvest Interval: all other States , 14 days for snap beans and lima beans, 28 days for dry beans.
Cucurbits (Cucumbers, melons, watermelon, pumpkins, summer and winter squash)	General Instructions			Do not apply more than 60 fl. oz. product (2.1 lbs ai)/A/ season from any combination of application timings. Follow Resistance Management guidance under Directions for Use, above. Pre-harvest interval: 1 day
	Anthracnose* (<i>Colletotrichum</i>)	10		Begin applications when plants begin to run or when disease first appears,

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
	sp.) Gummy Stem Blight* (<i>Didymella</i> sp.) Powdery Mildew (<i>Erysiphe</i> sp.) Target Spot* (<i>Corynespora</i> sp.)			and repeat at 7-14 day intervals or as needed. For Target Spot, use at 7-day intervals as needed.
	Acremonium/ Cephalosporium Hypocotyl Rot	10		Apply in-furrow, on top of the seeds at planting. Do not use less than 10 gallons of water per acre.
	Belly Rots* (<i>Rhizoctonia/ Fusarium</i> sp.)	10		Apply in sufficient volume to allow runoff to the soil. Will not control Pythium sp.
	Suppression of Vine Decline (<i>Monosporascus cannonballus</i>) Charcoal Rot (<i>Macrophomina sp.</i>)	10		Apply through buried drip irrigation (chemigation) to the root zone. For disease suppression, apply at 14-day intervals, beginning at emergence and continuing to harvest. Applications weekly or biweekly, beginning 4-6 weeks prior to harvest will also offer suppression, but may not be as effective as a season-long program.
Garlic	Penicillium Clove Rot		20	Completely immerse garlic cloves in suspension for at least 5 minutes. Continuously agitate the solution tank by hydraulic or mechanical means. After treatment, remove cloves from solution and drain over sand. Dry cloves after treatment and prior to planting.
Onions* (In furrow)	White Rot (<i>Sclerotium</i> sp.)	40 broadcast		Spray 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	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. Pre-harvest interval: 14 days.

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Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
	Blotch			Follow Resistance Management guidance under Directions for Use, above. The maximum seasonal application rate is 40 fl oz/acre (1.4 lbs. a.i.).
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.) Zonate Leaf Spot (<i>Cristulariella</i> sp.)	10-20		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. Follow Resistance Management guidance under Directions for Use, above. The maximum seasonal application rate is 60 fl oz/acre (2.1 lbs. a.i.).
Pistachios	Shoot Blight (<i>Botrytis</i> , <i>Botryosphaeria</i>)	30 - 40		Apply at bloom. Apply in a minimum of 100 gallons per acre by ground or 20 gallons per acre by air. For aerial application, fly over every row or center. Do not apply more than 40 oz product (1.4 lbs ai)/A per season. For pistachios only: do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days unless appropriate PPE for early entry is worn.
Potatoes	White Mold (<i>Sclerotinia</i> sp.)	20-30		Make first application just prior to row closure. Repeat the application within 7-14 days and at 7-14 day intervals if conditions for disease development are favorable. Thorough coverage of the lower stems and branches is essential for disease

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
				control. Do not apply more than 80 oz. product (2.8 lbs. a.i.)/A per season. Do not apply within 21 days of harvest. May be tank mixed with other fungicides labeled for early and late blight control.
Soybeans	Anthracnose (<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.)	10-20		Apply from full bloom to when pods are 1/8" to 1/4" 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. Pre-harvest interval: 21 days
	White Mold (<i>Sclerotinia</i> sp.)	15-20		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. Pre-harvest interval: 21 days
	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

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
				livestock. Pre-harvest interval: 21 days
<u>Stone Fruit</u> Apricots	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	20-30 (in CA use 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Cherries	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	20-30 (in CA use 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
	Cherry Leaf Spot (Coccomyces sp.)	22.5-30	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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
				guidance under Directions for Use, above.
	Powdery Mildew (Podosphaera sp. and Sphaerotheca sp.)	20-30 (in CA use 30) PLUS 22.5-30	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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Nectarines	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	20-30 (in CA use 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Peaches	Brown Rot Blossom Blight (Monilinia sp.) Fruit Brown Rot (Monilinia sp.)	20-30 (in CA use 30)	6 $\frac{2}{3}$ -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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.).

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Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
				rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
	Peach Scab (<i>Cladosporium</i> sp.)	20-30 (in CA use 30) PLUS 22.5-30	6 $\frac{2}{3}$ -10 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Plums and Prunes	Brown Rot Blossom Blight (<i>Monilinia</i> sp.) Fruit Brown Rot (<i>Monilinia</i> sp.)	20-30 (in CA use 30)	10	Apply at early bloom (green tip). 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
	Black Knot (<i>Dibotryon</i> sp.)	20-30 (in CA use 30)	10	Apply at pre-bloom, petal fall, and at first, second, and third cover sprays at 10- to 14-day intervals. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management

Crop	Diseases	Fl Oz/ Acre	Fl Oz/100 gal	Remarks
				guidance under Directions for Use, above.
	Leaf Spot (<i>Coccomyces</i> sp.)	20-30 (in CA use 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. The maximum seasonal application rate is 80 fl oz/acre (2.8 lbs. a.i.). Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Strawberries	Fruit Rot (<i>Botrytis</i> sp.) Leaf Blight (<i>Dendrophoma</i> sp.) Leaf Scorch (<i>Diplocarpon</i> sp.) Powdery Mildew	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 more than 80 fl oz product (2.8 lbs. a.i.)/ A/year. Pre-harvest interval: 1 day. Follow Resistance Management guidance under Directions for Use, above.
Sugar Beets	General Instructions			Do not apply more than 60 oz. product (2.1 lbs. a.i.)/A/season. Pre-harvest interval: 21 days.
	Cercospora Leaf Spot (<i>Cercospora</i> sp.)	10-20 Note: in California rate is 10		Apply when conditions become favorable for disease development before the disease appears and follow with a non-benzimidazole fungicide within 14 days of application or as needed. Follow Resistance Management guidance under Directions for Use, above.
	Powdery Mildew (<i>Erysiphe</i> sp.)	10-20		Apply as soon as disease symptoms appear and repeat at 14-day intervals or as needed. Topsin 4.5FL can be tank-mixed with 5 to 10 lbs. of Microthiol Disperss per acre.

* Not for this use in California

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

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

DISEASES	Fl Oz/ ACRE	REMARKS
Pseudocercospora sp. (Foot Rot, Strawbreaker, Eye Spot)	20	Apply TOPSIN 4.5FL at the rate indicated in a single application by air or ground after tillering 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.

DIRECTIONS FOR USE ON CONIFERS (Not for this use in California)

CROP	DISEASE	LIMIT/ACRE/ CROP	RATE, MINIMUM GALLONAGE	DIRECTIONS
Conifers (Pine) Austrian Red Scots Christmas Trees	Tip Blight (Diplodia)	60 fl oz	20 fl oz per 100 gal/A	Apply at bud break. Repeat 10 to 14 days later, just before needles emerge from sheath; repeat again 10 to 14 days after needle emergence.
(Fir) Douglas	Swiss Needle Cast (Phaenocarpa) Rhabdochloa Needle Cast	100 fl oz	20 fl oz per 50 gal/A	Apply initially in early May. Repeat at 4 week intervals.
- Add a spreader/sticker to improve coverage. - Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers. - Do not graze livestock in treated areas.				
Conifers (seedling treatment)	Brown Needle Blight (Scirrhia)	N/A	1.25 fl oz/9.5 oz. dry Kaolinite clay	Wet seedling roots in clean water, then apply TOPSIN 4.5FL/Kaolinite mixture to

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Longleaf			for seedling roots	wet roots.
Loblolly Longleaf Slash	Fusarium and Rhizoctonia Root Rot	N/A	2.5 fl oz./ 50oz. Kaolinite clay, plus enough water to make a slurry	Thoroughly cover seedling roots with TOPSIN 4.5FL/Kaolinite slurry.
<ul style="list-style-type: none"> - Do not apply mixture to seedling foliage. - During treatment, avoid excessive drying of roots or exposure to temperatures greater than 90 °F or less than 32 °F. - TOPSIN 4.5FL does not control Pythium or Phytophthora. 				

GENERAL INFORMATION for Turf and Ornamental Uses

TOPSIN 4.5FL is a broad spectrum fungicide exhibiting preventative, curative, and systemic properties. It is useful on a wide variety of turf and ornamental disease problems. Apply TOPSIN 4.5FL with ground equipment, using sufficient volume of spray to provide thorough coverage. Use the higher rates under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules.

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

Mixing instructions: SHAKE WELL BEFORE USING. Some settling may occur during prolonged periods of non-use. When high pH tank mixes exist, the interval between mixing and application should be minimized. The buffering of tank water to pH 6-7 prior to the addition of TOPSIN 4.5FL is recommended. Add required amount of TOPSIN 4.5FL to partially filled tank (1/2 total volume), agitate by mechanical or hydraulic means, add tank mix product if used (see below), agitate again and then add remaining required amount of water.

Continuous agitation is recommended to keep the material in proper suspension. For best results, use spray mixture the same day it is prepared.

Tank mixing instructions: TOPSIN 4.5FL is compatible with most commonly used pesticides. If tank mixing with other materials, add products in the following order: wettable powders, dry flowables, liquid flowables, emulsifiable concentrates, and soluble materials such as fertilizers. No claim of compatibility with other products is implied. Do not tank mix with copper-containing materials or with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur. Consult the intended tank mix partner product label for appropriate application rates and use instructions. Follow the label directions for the most restrictive of label precautions and limitations. This product may not be mixed with any product containing a label prohibition against such mixing. Read and observe the most restrictive precautionary statements and other information appearing on product labels used in mixtures. TOPSIN 4.5FL 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.

RESISTANCE MANAGEMENT: To avoid the development of tolerant or resistant strains of fungi, TOPSIN 4.5FL should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with TOPSIN 4.5FL at each application. CEREXAGRI, INC. DOES NOT RECOMMEND THE USE OF PRODUCTS CONTAINING BENOMYL OR THIABENDAZOLE IN COMBINATION OR IN ROTATION WITH TOPSIN 4.5FL. If after using TOPSIN 4.5FL as recommended, the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of TOPSIN 4.5FL for at least one season. Do not use products containing benomyl or thiabendazole as substitutes for TOPSIN 4.5FL, as they are of similar chemistry and will contribute to the development of resistance. As long as these precautions are followed, TOPSIN 4.5FL can be useful for disease control.

TURF APPLICATION –Not for homeowner use. For use by individuals/firms licensed or registered by the state to apply ornamental or turf pest control products. Not for use on turf being grown for sale or other commercial use as sod.

For use on all fine turf applications such as commercial and residential lawns, parks, athletic fields, golf course greens, tees, and fairways, and cemeteries, consisting of cool and warm season grasses such as Bentgrass, Bluegrass, Bermudagrass, Fescue, Ryegrass, St. Augustinegrass, Zoysiagrass, or their mixtures. When used in accordance with the label, TOPSIN 4.5FL is not phytotoxic to any of the above mentioned grasses. TOPSIN 4.5FL has both preventive and curative activity, and is to be used for the prevention and control of the diseases mentioned below.

Ground Application: Apply TOPSIN 4.5FL with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation through appropriate sprinkler irrigation systems. Spray uniformly over the area to be treated. Apply recommended amounts in sufficient water to obtain thorough coverage of treatment area (2-4 gal of finished spray per 1,000 sq ft is suggested). When treating golf greens, always treat aprons and approaches. Use the highest recommended rate under conditions of severe disease pressure. For best results, apply after mowing or avoid mowing for at least twelve hours after application.

Lightly water the treatment area with one to two tenths inch of water to move the fungicide into active root zone. Excessive irrigation may move TOPSIN 4.5FL below active root zone and reduce application effectiveness. Green design and drainage will influence irrigation practices. When tank mixing with contact action fungicides for foliar diseases, applications should be allowed to dry on leaf surfaces. Normal watering may proceed after sprays have dried.

General Restrictions

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

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- Do not apply with fixed wing or rotary aircraft.
- Minimum retreatment interval on turf is 14 days.

Restrictions for use on residential or public turf (commercial and residential lawns, parks, athletic fields, cemeteries):

- do not apply more than 1.8 oz product/1000 ft² in one application
- do not apply more than 7.2 oz product/1000 ft² per year

Restrictions for use on golf courses:

- Do not apply more than 5.34 oz product/1000 ft² in one application
- Do not apply more than 14.4 oz product/1000 ft² to tees or greens per year
- Do not apply more than 3.6 oz product/1000 ft² to fairways (except Florida) per year
- In Florida, do not apply more than 1.8 oz product/1000 ft² to fairways per year

	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Anthracnose: basal <i>Colletotrichum graminicola</i> Anthracnose: foliar <i>Colletotrichum graminicola</i>	3.6 – 5.4 2 – 4	3.6	1.8	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 as needed. Rotations and/or tank mix combinations with chlorothalonil or triadimefon can be used.
Bermudagrass decline: <i>Gaeumannomyces graminis</i> var. <i>graminis</i> Take-All-Patch: <i>Gaeumannomyces graminis</i> var. <i>avenae</i>	3.6 – 5.4	3.6	1.8	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 pressure. Follow proper agronomic recommendations 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>	3.6 – 5.4	3.6	1.8	For prevention, apply in fall before turf has stopped all growth activity. Make 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>	3.6 – 5.4	3.6	1.8	Make 2 treatments at 21-day intervals in late fall to early winter, with the last application made just prior to first permanent snow cover.
Fusarium Blight: <i>Fusarium roseum</i> , <i>F. triticum</i>	3.6 – 5.4	3.6	1.8	Apply when disease first appears at 14-day intervals.

	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Dollar Spot: <i>Moellerodiscus</i> , <i>Lanzia</i> Large Brown Patch: <i>Rhizoctonia solani</i> Ascochyta Leaf Blight: <i>Ascochyta</i> Copper Spot: <i>Gloeocercospora sorghi</i> Fusarium patch: <i>Fusarium</i> <i>nivale</i> Red Thread: <i>Corticium</i> <i>fuciforme</i> Zoysia Patch: <i>Rhizoctonia</i> <i>solani</i>	2 – 3.6	2 - 3.6	1.8	Apply when disease first appears and continue at 14-day intervals. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb can be used.
Gray Leaf Spot (Blast),: <i>Pyricularia grisea</i>	3.6 – 5.4	3.6	1.8	Make preventative application before expected period of disease development. Continue applications at 14 day intervals.
Leaf Spot: <i>Drechlsera</i> Leaf, crown, and root diseases: <i>Bipolaris</i> , <i>Curvularia</i> , <i>Exserohilum</i>	3.6 – 5.4	3.6	1.8	Apply when disease first appears and make applications at 14-day intervals as needed. Rotations and/or tank mix combinations with chlorothalonil, iprodione, or mancozeb are recommended under severe conditions.
Pink Snow Mold: <i>Microdochium nivale</i>	2 – 3.6	2 – 3.6	1.8	Apply in late fall to early winter before turf has stopped all growth activity. A second application may be used in combination with chlorothalonil, or thiram at recommended rates before snow cover or during spring thaw.

	Rate: oz product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways*	**	Instructions
Rusts: <i>Puccinia</i> , <i>Uromyces</i>	3.6 – 5.4	3.6	1.8	Make 2 applications at 14-day intervals when disease first appears. Rotations and/or tank mix combinations with chlorothalonil or mancozeb are recommended.
Stripe Smut: <i>Ustilago striiformis</i>	3.6 – 5.4	3.6	1.8	Apply at 14-day intervals when disease first appears. For prevention, apply in spring and fall.
Summer Patch: <i>Magnaporthe poae</i>	3.6 – 5.4	3.6	1.8	For prevention, make 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.

* in Florida, the maximum application per season is 1.43 oz product/1000 sq ft

** public turf (commercial and residential lawns, parks, athletic fields, cemeteries)

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HORTICULTURAL APPLICATIONS

Nursery Greenhouse, Landscape & Interiorscape

Annual and Perennial Flowers, Bedding Plants, Foliage Plants, Ground Covers, plus
Deciduous and Evergreen Trees and Shrubs

Homeowners: do not apply to home orchards/fruit trees.

Certified applicators: do not apply to home orchards/backyard fruit trees after fruit set.

TOPSIN 4.5FL is a broad spectrum systemic fungicide which controls a variety of foliar, stem, and root diseases on a wide range of commercially important plants. TOPSIN 4.5FL is also effective as a pre-plant dip on cuttings and bulbs. For soil drench applications, best plant 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 development. Make additional applications every 7-14 days or as otherwise instructed for the prevention or control of the listed diseases. Use of a wetting agent is recommended for plants that have leaves that are difficult to wet properly. Use of a spreader-sticker is recommended to enhance product performance in wet weather conditions or during periods of overhead irrigation. TOPSIN 4.5FL may be used to control listed diseases on "backyard" (non-commercial) fruit and nut trees such as almond, apple, apricot, cherry, nectarine, peach, pecan, plum, and prune trees, but do not apply to home orchards/backyard fruit trees after fruit set. TOPSIN 4.5FL 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 aerial application where applicable. See specific instructions below.

Note: The "Directions 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 a 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 (*Neprolepis exaltata*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

Some plants may occasionally show some sensitivity to TOPSIN 4.5FL applications, primarily as seedlings. Symptoms rarely affect marketability of the plants. Please check compatibility under your conditions on small groups of plants to see if there is any sensitivity.

Application Instructions: Apply material with properly calibrated hand held, mechanical or motorized spray equipment or by chemigation thorough 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 10 - 20 oz of TOPSIN 4.5FL per 100 gal 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 irrigation systems, refer to aerial use rates indicated in the foliar application chart. For small volume applications less than 100 gallons, divide recommended rate by 16 to get the number of teaspoons of TOPSIN 4.5FL/gallon water.

Special Instructions For Proportional Injectors (e.g. Dosatron, Dosmatic, Anderson, and similar equipment): Determine the treatment rate as indicated below in the ground application column for crop and pathogen. 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 recommended material per 100 gallons to each gallon of water in a stock bucket or tank. For systems using a 1:200 ratio, multiply the recommended amount per 100 gallons by 2. For systems using a 1:50 ratio, divide the recommended amount per 100 gallons by 2. For systems using a 1:16 ratio, divide the recommended 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 recommended for most greenhouse and nursery systems.

Note: homeowners do not apply more than 51.43 oz product per acre per season. Homeowners do not apply to home orchards/fruit trees.

FOLIAR APPLICATION

Diseases Controlled	Rate fl oz product/100 gallons or per acre	Instructions
Anthracnose	10 - 20	Apply as buds break or at first sign of disease period. Repeat at 7-14 day intervals as needed during disease period.
Black Spot of Rose <i>Diplocarpon rosae</i>	10 - 20	Apply in early summer or at first sign of disease. Repeat at 7-14 days as needed during disease period.
Brown Rot and Blight <i>Monilinia</i> , <i>Sclerotinia</i> , <i>Whetzellinia</i>	10 - 20	Apply in 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.	10 - 20	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.
Leaf Spots and Blights caused by: <i>Ascochyta</i> , <i>Blumeriella</i> , <i>Botrytis</i> , <i>Cercospora</i> , <i>Coccomyces</i> ,	10 - 20	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.

<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>		
Ovulinia Blight	10 - 15	Apply as flowers open. Repeat every 7-14 days as needed during disease period.
Powdery Mildews <i>Erysiphe</i> , <i>Microsphaera</i> , <i>Phyllactinia</i> , <i>Podosphaera</i> , <i>Oidium</i> , <i>Sphaerotheca</i>	10 - 20	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</i> , <i>Gymnosporangium</i> , <i>Uromyces</i>	10 - 20	Apply in 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 chlorathalonil are recommended.
Tip Blight of Pine <i>Sphaeropsis sapinea</i> , <i>Diplodia pinea</i>	15 - 20	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</i> , <i>Kabatina</i> , <i>Phoma</i> , <i>Phomopsis</i>	15 - 20	Apply when symptoms first appear. Repeat every 7-14 days as needed during disease period.

SOIL DRENCH APPLICATION

Germination of seedlings of some species and cultivars planted in soil drenched with TOPSIN 4.5FL may be delayed slightly, but the plants typically recover, and will be protected from seedling root infection. Soil drenches on young plants may cause a slight

chlorosis (yellowing) of lower leaves, but typically do not affect the upper foliage. Other plants may also show a temporary stunting.

Diseases Controlled	Rate Fl. Oz. product/100 gal	Instructions
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> Black Root Rot: <i>Thielaviopsis</i>	10 – 20	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 (7 oz) or after transplanting (11-14 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 general 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: TOPSIN 4.5FL does not control <i>Pythium</i> or <i>Phytophthora</i> . Tank mix combinations with metalaxyl, mefenoxam, etridiazole, fosetyl-Al or propamocarb are required for the control of <i>Pythium</i> and <i>Phytophthora</i> .

PLANT DIP APPLICATIONS

Diseases Controlled	Rate Fl. Oz. product/100 gal	Instructions
Plant or Cutting Diseases 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> , <i>Thielaviopsis</i>	10 – 20	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</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> , <i>Thielaviopsis</i>	10 - 20	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 borne bacterial and water mold fungal diseases.

DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS

GENERAL INSTRUCTIONS

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set or hand move; flood (basin); 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 (including greenhouse systems) used for pesticide irrigation to any public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision of piped water for human consumption if such a 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

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged 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. 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 4.5FL only through systems containing anti-syphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to 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 4.5FL may be applied in conjunction with chemically neutral liquid fertilizers.

Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, is likely to 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 4.5FL in a mix tank. Fill the tank with 1/2 or 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of TOPSIN 4.5FL 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 0.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of TOPSIN 4.5FL into the irrigation water line so as to deliver the desired rate per acre. The suspension of TOPSIN 4.5FL 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 4.5FL 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 distributed 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.

Flood (basin) Chemigation

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and down stream of a hydraulic discontinuity such as 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: Observe all instructions in the General and Specific requirements sections above and the first two items in the sprinkler irrigation requirements.

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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, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal Instructions listed below.

PESTICIDE DISPOSAL INSTRUCTIONS: 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 INSTRUCTIONS: Do not re-use empty container. 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

Cerexagri, Inc. 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.

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