Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2014-2016 LIC. NO.

8311.8

GROUP	1	FUNGICIDE

Thiophanate-methyl 4.1 SC T&O

Fungicide

ACTIVE INGREDIENT:
Thiophanate-methyl (dimethyl[1,2-phenylene)-bis(iminocarbonothioyl)]bis[carbamate])* 41.3%
OTHER INGREDIENTS: 58.7%
TOTAL: 100.0%

Contains 4.11 pounds thiophanate-methyl per gallon.
*Also known as dimethyl 4,4'-o-phenylenebis[3-thioallophanate]

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID
If on skin or clothing:

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

If swallowed:

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

Have the product container or label with you when calling a poison control center or doctor or going for treatment. Contact the Rocky Mountain Poison Control Center at 1-866-673-6671 for emergency medical treatment information.

EPA Reg. No.8033-130 EPA Est. No.

NET CONTENTS: _____ Gallons Batch/Lot # _____

Sold by: Nippon Soda Co., Ltd.
c/o Nisso America Inc.
88 Pine St., 14th FL.
New York, NY 10005

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if absorbed through the skin or if swallowed. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

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

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

All other mixers, loaders, and applicators must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves,
- Chemical-resistant apron for mixers, loaders, and other handlers exposed to the concentrate.

User Safety Requirements

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

ENGINEERING CONTROLS

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

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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

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

DIRECTIONS FOR USE

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.

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

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). Exemption: 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.

Do not enter or allow workers entry into treated areas during the restricted-entry interval (REI). The REI for each crop is listed in the directions for use associated with that crop.

Exemption: If this 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 over long-sleeved shirt and long pants,
- Chemical-resistant gloves made of any waterproof material,
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposures.

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.

Do not allow others to enter until sprays have dried.

GENERAL INFORMATION for Turf and Ornamental Uses

Thiophanate Methyl 4.1 SC T&O Fungicide 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 Thiophanate Methyl 4.1 SC T&O Fungicide 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 Directions For Use. Read and follow these instructions carefully for this method of application.

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 Thiophanate Methyl 4.1 SC T&O Fungicide is recommended. Add required amount of Thiophanate Methyl 4.1 SC T&O Fungicide 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: Thiophanate Methyl 4.1 SC T&O Fungicide 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. Thiophanate Methyl 4.1 SC T&O Fungicide 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, Thiophanate Methyl 4.1 SC T&O Fungicide should always be tank-mixed with a fungicide of different chemistry, and/or a fungicide of different chemistry should be alternated with Thiophanate Methyl 4.1 SC T&O Fungicide. DO NOT USE PRODUCTS CONTAINING THIABENDAZOLE OR OTHER PRODUCTS CONTAINING

THIOPHANATE-METHYL IN COMBINATION, IN ROTATION, OR AS A SUBSTITUTE FOR THIOPHANATE METHYL 4.1 SC T&O FUNGICIDE AS THEY ARE OF SIMILAR CHEMISTRY AND WILL CONTRIBUTE TO THE DEVELOPMENT OF RESISTANCE. If after using Thiophanate Methyl 4.1 SC T&O Fungicide as recommended, and the treatment is not effective, a tolerant or resistant strain of fungi may be present. Discontinue the use of Thiophanate Methyl 4.1 SC T&O Fungicide for at least one season. As long as these precautions are followed, Thiophanate Methyl 4.1 SC T&O Fungicide can be useful for disease control, even if resistant strains are present.

TURF APPLICATION –Not for homeowner use. For use only by certified applicators or those under their immediate supervision. Do not apply with fixed wing or rotary aircraft. Not for use on turf being grown for sale or other commercial use as sod.

Do not enter or allow others to enter until sprays have dried.

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, Thiophanate Methyl 4.1 SC T&O Fungicide is not phytotoxic to any of the above mentioned grasses. Thiophanate Methyl 4.1 SC T&O Fungicide has both preventive and curative activity, and is to be used for the prevention and control of the diseases mentioned below.

Ground Application: Apply Thiophanate Methyl 4.1 SC T&O Fungicide 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 Thiophanate Methyl 4.1 SC T&O Fungicide 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.
- Do not apply ·with fixed wing or rotary aircraft.
- Minimum retreatment interval on turf is 14 days.
- Do not enter or allow others to enter until sprays have dried.

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

- do not apply more than 2.0 fl.oz. product/1000 ft^2 in one application
- do not apply more than 7.8 fl.oz. product/1000 ft^2 per year

Restrictions for use on golf courses (tees, greens, apron):

- Do not apply more than 5.8 fl. oz. product/ 1000 ft^2 in one application
- Do not apply more than 15.7 fl. oz. product/1000 ft^2 to tees or greens per year
- Do not apply more than 3.9 fl. oz. product/1000 ft^2 to fairways (except Florida) per year
- In Florida, do not apply more than 2.0 fl.oz. product/1000 ft^2 to fairways per year

	Rate: fl. oz. product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways **	*	Instructions
Anthracnose: basal *Colletotrichum graminicola* Anthracnose: foliar *Colletotrichum graminicola*	3.9-5.9 2.2-4.4	3.9	2.0	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: *Gaeumannomyces graminis var. graminis* Take-All-Patch: *Gaeumannomyces graminis var. avenae*	3.9- 5.9	3.9	2.0	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: *Rhizoctonia cerealis* Necrotic Ring Spot: *Leptosphaeria korrea* Spring Dead Spot: *Leptosphaeria korrea*	3.9- 5.9	3.9	2.0	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: *Coprinus psychromorbidus*	3.9- 5.9	3.9	2.0	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: *Fusarium roseum, F. triticum*	3.9- 5.9	3.9	2.0	Apply when disease first appears at 14-day intervals.

	Rate: fl. oz. product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways **	*	Instructions
Dollar Spot: *Moellerodiscus, Lanzia* Large Brown Patch: *Rhizoctonia solani* Ascochyta Leaf Blight: *Ascochyta* Copper Spot: *Gloeocercospora sorghi* Fusarium patch: *Fusarium nivale* Red Thread: *Corticum fuciforme* Zoysia Patch: *Rhizoctonia solani*	2.2 – 3.9	2.2- 3.9	2.0	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),: *Pyricularia grisea*	3.9- 5.9	3.9	2.0	Make preventative application before expected period of disease development. Continue applications at 14 day intervals.
Leaf Spot*: Drechlsera* Leaf, crown, and root diseases: *Bipolaris, Curvularia, Exserohilum*	3.9- 5.9	3.9	2.0	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: *Michrodochium nivale*	2.2- 3.9	2.2- 3.9	2.0	Apply in late fall to early winter before turf has stopped all growth activity. A second application may be used in combination with chlorthalonil, or thiram at recommended rates before snow cover or during spring thaw.

	Rate: fl. oz. product/1,000 sq. ft.			
	Golf courses		Non Golf Course	
Diseases	Tees & Greens	Fairways **	*	Instructions
Rusts*: Puccinia, Uromyces*	3.9- 5.9	3.9	2.0	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*: Ustilago striiformis*	3.9- 5.9	3.9	2.0	Apply at 14-day intervals when disease first appears. For prevention, apply in spring and fall.
Summer Patch: *Magnaporthe poae*	3.9- 5.9	3.9	2.0	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.

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

** In Florida, do not apply more than 2.0 fl. oz. product/1000 ft^2 per year to fairways

HORTICULTURAL APPLICATIONS
Nursery Greenhouse, Landscape & Interiorscape
Annual and Perennial Flowers, Bedding Plants, Foliage Plants, Ground Covers, plus Deciduous and Evergreen Trees and Shrubs

Do not apply this product in a way that will contact any person, pet, either directly or through drift. Keep people and pets out of the area during application.

Homeowners: For use on ornamentals only. Do not apply to home orchards/fruit trees. DO NOT ALLOW PEOPLE OR PETS TO ENTER THE TREATED AREA UNTIL SPRAYS HAVE DRIED.

Certified applicators: Do not enter or allow others to enter until sprays have dried.

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

Not for homeowner use in New York State.

Thiophanate Methyl 4.1 SC T&O Fungicide is a broad spectrum systemic fungicide which controls a variety of foliar, stem, and root diseases on a wide range of commercially important plants. Thiophanate Methyl 4.1 SC T&O Fungicide 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. Thiophanate Methyl 4.1 SC T&O Fungicide may be used to control listed diseases on "backyard" ornamental fruit and nut trees such as almond, apple, apricot, cherry, nectarine, peach, pecan, plum, and prune trees. Thiophanate Methyl 4.1 SC T&O Fungicide 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 (*Nephrolepis exhaltata*), Boston Fern (*Plectranthus australis*), and Easter Cactus (*Hatiora gaertneri*).

Some plants may occasionally show some sensitivity to Thiophanate Methyl 4.1 SC T&O Fungicide 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 10.9 – 21.8 oz. of Thiophanate Methyl 4.1 SC T&O Fungicide 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 Thiophanate Methyl 4.1 SC /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 56 fl. oz. product per acre per single application (1.3 fl. oz. per 1000 sq. ft.).
For cut flowers do not apply more than 15.5 fl. oz. Thiophanate Methyl 4.1 SC T&O Fungicide (0.5 lb a.i.) per acre per application.

FOLIAR APPLICATION

Diseases Controlled	Rate fl. oz. product/100 gallons or per acre	Instructions
Anthracnose	10.9- 21.8	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 *Diplocarpon rosae*	10.9- 21.8	Apply in early summer or at first sign of disease. Repeat at 7-14 days as needed during disease period.
Brown Rot and Blight	10.9- 21.8	Apply in late spring or at first sign of disease.

Monilinia, Sclerotinia, Whetzellinia		Repeat every 7-14 days as needed during disease period.
Fusicladium and Venturia Leaf Scabs on: Crabapple, Hawthorn, Pear, Mountain Ash, Pyracantha, etc.	10.9- 21.8	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: *Ascochyta, Blumeriella, Botrytis, Cercospora, Coccomyces, Corynespora, Curvularia, Didymellina, Entomosporium, Fabraea, Fusarium, Ramularia, Rhizoctonia, Marssonina, Mycosphaerella, Myrothecium, Phoma, Physalospora, Schizothyrium, Septoria, Sphaceloma*	10.9- 21.8	Apply when disease symptoms first appear. Repeat every 7-14 days as needed during disease period. Rotations and/or tank mix combinations with mancozeb or chlorothalonil can be utilized.
Ovulinia Blight	10.9- 16.3	Apply as flowers open. Repeat every 7-14 days as needed during disease period.
Powdery Mildews *Erysiphe, Microsphaera, Phyllactinia, Podosphaera, Oidium, Sphaerotheca*	10.9- 21.8	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: *Puccinia, Gymnosporangium, Uromyces*	10.9- 21.8	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 *Sphaeropsis sapinea, Diplodia pinea*	16.3- 21.8	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	16.3- 21.8	Apply when symptoms first appear. Repeat every 7-14 days as needed during disease

Diaporthe, Kabatina, Phoma, Phompsis		period.

SOIL DRENCH APPLICATION

Germination of seedlings of some species and cultivars planted in soil drenched with Thiophanate Methyl 4.1 SC T&O Fungicide 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: Botrytis, Cylindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia Black Root Rot:*Thielaviopsis*	10.9- 21.8	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 (7.6 oz.) or after transplanting (12.0-15.3 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: Thiophanate Methyl 4.1 SC T&O Fungicide does not control Pythium or Phytophthora. Tank mix combinations with metalaxyl, mefenoxam, etridiazole, fosetyl-Al or propamocarb are required for the control of Pythium and Phytophthora.

PLANT DIP APPLICATIONS

Diseases Controlled	Rate Fl. Oz. product/100 gal.	Instructions
Plant or Cutting Diseases caused by: *Botrytis, Cylindrocladium, Fusarium, Gliocladium, Myrothecium, Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis*	10.9- 21.8	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: *Botrytis, Cylindrocladium, Fusarium, Gliocladium, Myrothecium Penicillium, Ramularia, Rhizoctonia, Sclerotinia, Thielaviopsis*	10.9- 21.8	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; 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 Thiophanate Methyl 4.1 SC T&O Fungicide 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.
Thiophanate Methyl 4.1 SC T&O Fungicide 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 Thiophanate Methyl 4.1 SC T&O Fungicide in a mix tank. Fill the tank with ½ or ¾ the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Thiophanate Methyl 4.1 SC T&O Fungicide and then the remaining volume of water.

Sprinkler Irrigation - Notes
Observe all System Requirements and Application Instructions above.
Set sprinkler system to deliver a maximum of 0.4 inch of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of Thiophanate Methyl 4.1 SC T&O Fungicide into the irrigation water line so as to deliver the desired rate per acre. The suspension of Thiophanate Methyl 4.1 SC T&O Fungicide 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 Thiophanate Methyl 4.1 SC T&O Fungicide 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.
A pesticide supply tank is recommended

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.
PESTICIDE STORAGE: Store in the original container in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during 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: 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 by use 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 HANDLING: Nonrefillable container. Do not reuse or refill this container.

For containers ≤ 5 gallons:

Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available 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.

For containers > 5 gallons:

Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth

several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available 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.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Nippon Soda Co., Ltd. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent allowable by applicable laws Nippon Soda Co., Ltd. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Nippon Soda Co., Ltd. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent allowable by applicable laws Nippon Soda Co., Ltd. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent allowable by applicable laws the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid, or at Nippon Soda Co., Ltd.'s election, the replacement of product.

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