



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 2, 2019

John J. Wrubel  
Director of Regulatory Affairs  
Nippon Soda Co.  
c/o Nisso America Inc.  
88 Pine Street, 14<sup>th</sup> Floor  
New York, NY 10005

Subject: Label Amendment – Updating Resistance Management to comply with PRN 2017-1  
Product Name: Thiophanate-methyl 4.1 SC Fungicide  
EPA Registration Number: 8033-129  
Application Date: 8/21/2018  
Decision Number: 555693

Dear Mr Wrubel:

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

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

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

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at [mellor.nathan@epa.gov](mailto:mellor.nathan@epa.gov).

A handwritten signature in black ink, reading "Shaja B. Joyner". The signature is written in a cursive style with a large initial 'S'.

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

Enclosure

**ACCEPTED**

10/02/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8033-129

Thiophanate-methyl	GROUP 1	FUNGICIDE
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# Thiophanate-Methyl 4.1 SC 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 by mouth 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.

\*\*[See additional precautionary statements and directions for use inside booklet.]

\*\*[Read the label carefully before opening the container.]

\*\*[Peel back book here.]

*\*\*Note to EPA Product Manager: Text in brackets [ ] above is optional.*

EPA Reg. No.8033-129

EPA Est. No.

NET CONTENTS: \_\_\_\_\_ Gallons

Batch/Lot # \_\_\_\_\_

Nippon Soda Co., Ltd. c/o Nisso America Inc.  
88 Pine St., 14<sup>th</sup> floor, New York, NY 10005

Notification – Resistance Management (PR Notice 2017-1) Revised 9-26-19

**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 barrier laminate, nitrile rubber ( $\geq 14$  mils), butyl rubber ( $\geq 14$  mils), neoprene rubber ( $\geq 14$  mils), polyvinyl chloride (PVC) ( $\geq 14$  mils), and Viton ( $\geq 14$  mils).

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.

Seed treatment applicators and other seed treatment handlers must wear:

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

Note: Persons involved in bagging treated seed, sewing or moving bags of treated seed, or cleaning up bagging areas or seed treatment equipment are pesticide handlers and must wear the PPE required on this label for pesticide handlers.

#### User Safety Requirements

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

#### ENGINEERING CONTROLS

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 or rinsate.

#### 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 or if treated seed is soil-injected or soil incorporated, 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, including plants, soil, or water, is:

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

### **PRODUCT APPLICATION AND INSTRUCTIONS**

#### **RESISTANCE MANAGEMENT**

For resistance management, Thiophanate-Methyl 4.1 SC contains a Group 1 fungicide. Any fungal population may contain individuals naturally resistant to Thiophanate-Methyl 4.1 SC and other Group 1 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Thiophanate-Methyl 4.1 SC Fungicide or other Group 1 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.

- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM directions for specific crops and pathogens.
- For further information or to report suspected resistance contact Nippon Soda Co., Ltd. at 212-490-0350. You can also contact your pesticide distributor or university extension specialist to report resistance."

## INSTRUCTIONS

Apply Thiophanate-methyl 4.1 SC with ground or aerial equipment, using sufficient volume of spray to provide thorough coverage. Continuous agitation is required to keep the material in suspension. Nippon Soda Co., Ltd. does not advise tank mixes with highly alkaline pesticides, including 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 directions 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 5 gallons/A for row crops, and a minimum of 10 gallons/A for tree crops. For ground applications use a minimum of 20 gallons/A for row crops and 30 gallons/A for tree crops. Higher spray volume will generally result in better coverage and better disease control. Lack of control when using below minimum spray volumes is solely at the risk of the applicator/user, including use of electrostatic sprayers.

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

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

**Use on all labeled non-bearing tree fruit and tree nuts:** Thiophanate-methyl 4.1 SC may be used for control of the 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 or expected. Tank mixing with a protectant fungicide is strongly advised for resistance management.

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
<p><b>Almonds</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days.</p>	<p>Brown Rot Blossom Blight (Monilinia) Scab (Cladosporium) Jacket Rot (Monilinia, Sclerotinia, Botrytis) Leaf Blight (Seimatosporium)</p>	<p>21.8-32.7  (0.7 – 1.05)</p>		<p>Apply as needed at 10 to 14-day intervals between pink bud and petal fall. Thiophanate-methyl 4.1 SC may be applied alone at pink bud for Brown Rot control. For all other applications, Thiophanate-methyl 4.1 SC needs to be applied with a contact fungicide for broad spectrum control and resistance management.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 32.7 fl. oz./A (1.05 lb ai/A) per application.</li> <li>-Do not apply more than a total of 65.4 fl. oz. of product (2.1 lbs a.i.)/A/year.</li> <li>-The minimum retreatment interval is ten (10) days.</li> <li>-Do not apply more than three (3) applications per year.</li> </ul>
<p><b>Apples</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 2 days.</p>	<p>Apple Scab (Venturia) Black Pox*** (Helminthosporium papulosum) Flyspeck (Zygophiala) Powdery Mildew (Podosphaera) Sooty Blotch (Gloeodes) Black Rot (Botryosphaeria obtusa) Brooks Fruit Spot (Mycosphaerella) White Rot*** (Botryosphaeria dothidia)</p>	<p>16.3-21.8 (0.52- 0.7)  [in CA use 32.7]  (1.1)</p>	<p>4.1-5.5</p>	<p>Apply at 5 to 10-day intervals from green tip through petal fall; continue at 7 to 14-day intervals in cover sprays.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.</li> <li>-In California, do not apply more than 32.7 fl. oz./A (1.1 lb. a.i./A) per application.</li> <li>-Do not apply more than a total of 87.2 fl. oz. of product (2.8 lbs a.i.)/A/year.</li> <li>-Pre-harvest interval: 1 day</li> </ul>



Crops/ REI	Diseases	FL. OZ./ Acre (lb. a.i./A)	FL. OZ./ 100 Gal	Application Instructions
				<p>-The minimum retreatment interval is five (5) days.</p> <p>-Do not apply more than five (5) applications per year.</p> <p>Follow resistance management guidelines under Directions for Use.</p>
Pre-Harvest use to control Post-Harvest Diseases on Apples				
	Storage Rot Blue Mold <i>(Penicillium expansum)</i> Gray Mold <i>(Botrytis cinerea)</i> Bulls-Eye Rot <i>(Neofabraea spp.)</i>	16.3–21.8 (0.52-0.7)	4.1-5.5	<p>Apply as a pre-harvest spray within 2 weeks to 3 days of harvest.</p> <p>Thorough coverage of the fruit is required. Application closer to harvest may provide better efficacy.</p> <p>For resistance management, do not use a benzimidazole fungicide post-harvest following Thiophanate-methyl 4.1 SC pre-harvest application. Application of a non-benzimidazole post-harvest fungicide will provide additional protection from post-harvest diseases.</p> <p><b>Restrictions:</b></p> <p>-Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.</p> <p>-Do not apply more than a total of 87.2 fl.oz. of product (2.8 lbs a.i.)/A/year.</p> <p>-The minimum retreatment interval is five (5) days.</p> <p>-Do not apply more than five (5)</p>

Crops/ REI	Diseases	FL. OZ./ Acre (lb. a.i./A)	FL. OZ./ 100 Gal	Application Instructions
				<p>applications per year.</p> <p>-Pre-harvest interval: 1 day</p>
<p><b>Beans, dry and succulent</b></p> <p>Including: Lima bean Snap bean Kidney bean Mung bean Navy bean Pinto bean Wax bean Broad bean Fava bean Asparagus bean Blackeyed pea Cowpea Sweet lupine White lupine White Sweet lupine Grain lupine Chick pea Garbanzo bean</p> <p>Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours for succulent beans and 3 days for dry beans.</p>	<p>White Mold (Sclerotinia) Gray Mold (Botrytis) Anthracnose (Colletotrichum)</p>	<p>32.7-43.6 (1.1-1.4)</p> <p><b>OR</b></p> <p>21.8-32.7 (0.7-1.1)</p>		<p>For one application: Apply when 100% of plants have at least one open bloom or when conditions are favorable for disease development.</p> <p><b>OR</b></p> <p>For multiple applications: Make the first application when 10% to 30% of plants have at least one open bloom and follow with sequential applications on a 4 to 7day interval. Apply prior to the development of disease for best results.</p> <p><b>Restrictions:</b></p> <p>-Do not apply more than 43.6 fl.oz./A (1.4 lb a.i./A per application.</p> <p>-Do not apply more than 87.2 of product (2.8 lbs a.i./A)/year.</p> <p>- The minimum retreatment interval is four (4) days.</p> <p>-Do not apply more than five (5) applications per year.</p> <p>-Pre-harvest interval: <b>California only</b>, 14 days for succulent beans, 28 days for dry beans and lima beans.</p> <p>-Pre-harvest interval: <b>all other States</b>, 14 days for succulent beans and lima beans, 28 days for dry beans.</p>

Crops/ REI	Diseases	FL. OZ./ Acre (lb. a.i./A)	FL. OZ./ 100 Gal	Application Instructions
<p><b>Cucurbits:</b> Cantaloupe, Casaba, Cucumbers, Melons, Pumpkins, Summer and Winter Squash, and Watermelons</p> <p>Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.</p>				<p>Thiophanate-methyl 4.1 SC can be used in a tank mix with mancozeb or chlorothalonil for additional disease control and resistance management. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Follow resistance management guidelines under Directions for Use.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 10.9 fl. oz./A (0.35 lb. a.i./A) per application.</li> <li>-Do not apply more than 65.4 fl.oz. of product (2.1 lbs a.i.)/A/year from any combination of application timings.</li> <li>-The minimum retreatment interval is four (4) days.</li> <li>-Do not apply more than five (5) applications per year.</li> <li>-Pre-harvest interval: 1 day</li> </ul>
	Acremonium/ Cephalosporium Hypocotyl Rot	10.9 (0.35)		<p>Apply in-furrow, on top of the seeds at planting.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not use less than 10 gallons of water per acre.</li> </ul>

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
	Anthracnose*** (Colletotrichum) Gummy Stem Blight*** (Didymella) Powdery Mildew (Erysiphe, Sphaerotheca) Target Spot*** (Corynespora)	10.9 (0.35)		Begin applications when plants begin to run or when disease first appears, and repeat at 7-14 day intervals or as needed.  For Target Spot, use at 7-day intervals as needed.  <b>Restrictions:</b>  -The minimum retreatment interval is seven (7) days.  -Do not apply more than six (6) applications per year.
	Belly Rots*** (Rhizoctonia, Fusarium)	10.9 (0.35)		Apply in sufficient volume to allow runoff to the soil. Will not control Pythium or Phytophthora.
	Suppression of Vine Decline (Monosporascus) Charcoal Rot (Macrophomina)	10.9 (0.35)		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 to 6 weeks prior to harvest will also offer suppression, but may not be as effective as a season-long program.  <b>Restrictions:</b>  -The minimum retreatment interval is fourteen (14) days.  -Do not apply more than six (6) applications per year.
<b>Garlic</b> (clove treatment)	Penicillium Clove Rot		21.8	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. Dry cloves after treatment and prior to planting.

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
<p><b>Onions*</b> <b>Garlic</b> (In furrow)</p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days.</p>	<p>White Rot (Sclerotium cepivorum)</p>	<p>43.6 (1.4) broadcast</p>		<p>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.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 43.6 fl. oz./A (1.4 lb. a.i./A) per application.</li> <li>-Do not apply more than 43.6 fl. oz. of product (1.4 lbs a.i.)/A/year.</li> </ul> <p>Do not apply more than one (1) application per year.</p>
<p><b>Peanuts</b> Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.</p>	<p>Early Leaf Spot (Cercospora) Late Leaf Spot (Cercosporidium) Rust (Puccinia) Limb Rot (Rhizoctonia) Web Blotch (Ascochyta)</p>	<p>10.9 (0.35)</p>		<p>Begin applications when disease first appears and repeat at 14-day intervals as needed.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 10 fl. oz./A (0.35 lb. a.i./A) per application.</li> <li>-Do not apply more than 43.6 fl.oz. of product (1.4 lbs a.i.)/A/year.</li> <li>-The minimum retreatment interval is fourteen (14) days.</li> <li>-Do not apply more than four (4) applications per year.</li> <li>-Pre-harvest interval: 14 days</li> <li>-Thiophanate-methyl 4.1 SC must not be used alone. Use only in combination with a non-benzimidazole fungicide like chlorothalonil.</li> <li>-Follow resistance management guidelines under Directions for Use.</li> </ul>
<p><b>Pecans</b> Do not enter or allow worker</p>	<p>Brown Spot (Cercospora) Downy Spot (Mycosphaerella) Liver Spot</p>	<p>21.8 (0.7)</p>		<p>Begin applications when first leaves are showing and repeat at 3 to 4-week intervals until shuck split. Do not apply after shuck split.</p>

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
entry into treated areas during the restricted entry interval (REI) of 3 days.	(Gnomonia) Powdery Mildew (Microsphaera) Scab (Fusicladium) Stem End Blight (Botryosphaeria) Zonate Leaf Spot (Cristulariella)			<b>Restrictions:</b> -Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application. -Do not apply more than 65.4 fl. oz. of product (2.1 lbs a.i./A)/year. -The minimum retreatment interval is twenty one (21) days. -Do not apply more than three (3) applications per year. -Pre-harvest interval: 1 day -Follow resistance management guidelines under Directions for Use.
<b>Pistachios</b>  Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days.	<b>Shoot Blight</b> (Botrytis, Botryosphaeria)	32.7-43.6 (1.1-1.4)		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.  <b>Restrictions:</b> -Do not apply more than 43.6 fl. oz./A (1.4 lb. a.i./A) per application. -Do not apply more than 43.6 fl. oz. of product (1.4 lbs a.i./A)/year.  Do not apply more than one (1) application per year.

Crops/ REI	Diseases	FL. OZ./ Acre (lb. a.i./A)	FL. OZ./ 100 Gal	Application Instructions
<p><b>Potatoes</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 2 days.</p>	<p>White Mold (Sclerotinia sclerotiorum)</p>	<p>21.8-32.7 (0.7-1.1)</p>		<p>Make first application at row closure to full bloom of the primary flower clusters (prior to petal drop). Repeat the application within 7-14 days and at 7-14 day intervals if conditions for disease development are favorable. Thorough coverage of the flowers, stems, and branches is essential for disease control.</p> <p>Use a minimum of 6 gallons/A for aerial application. Apply prior to the development of disease for the best results.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 32.7 fl. oz./A (1.1 lb. a.i./A) per application.</li> <li>-Do not apply more than 87.2 fl. oz. of product (2.8 lbs a.i.)/A/year.</li> <li>-The minimum retreatment interval is seven (7) days.</li> <li>-Do not apply more than four (4) applications per year.</li> <li>-Pre-harvest interval: 21 days</li> <li>-May be tank mixed with mancozeb for Early and Late Blight control. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</li> </ul>

Crops/ REI	Diseases	FL. OZ./ Acre (lb. a.i./A)	FL. OZ./ 100 Gal	Application Instructions
<b>Soybeans</b>  Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.				<b>Restrictions:</b>  -Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.  -Do not apply more than 43.6 fl. oz. of product (1.4 lbs a.i.)/A/year.  -The minimum retreatment interval is seven (7) days.  -Do not apply more than two (2) applications per year.  -Pre-harvest interval: 21 days  -Do not graze or feed treated vines or hay to livestock.
	Anthracnose (Colletotrichum) Brown Spot (Septoria) Frogeye Leaf Spot (Cercospora) Pod and Stem Blight (Diaporthe, Phomopsis) Purple Seed Stain (Cercospora)	10.9-21.8 (0.35-0.7)		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.
	Purple Seed Stain (Cercospora)	21.8 (0.7)		<b>FOR SEED BEANS ONLY</b>  -For seed quality, make a single application when beans form in the pod.
	White Mold (Sclerotinia)	16.3-21.8 (0.52-0.7)		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. Thorough coverage of the flowers, stems, and branches is essential for disease control. Use a minimum of 5 gallons water/A by air.
	Aerial Blight (suppression)	21.8 (0.7)		Make initial application when disease threatens and repeat 14-21 days later if needed.



<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
<p><b>Stone Fruit</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 2 days.</p>				<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 32.7 fl. oz./A (1.1 lb. a.i./A) per application.</li> <li>-Do not apply more than 87.2 fl. oz. of product (2.8 lbs a.i.)/A/year.</li> <li>-The minimum retreatment interval is ten (10) days.</li> <li>Do not make more than four (4) applications per year.</li> <li>-Pre-harvest interval: 1 day</li> <li>-Follow resistance management guidelines under Directions for Use.</li> </ul>
Apricots	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Apply at early bloom (red bud). Make a second application at full bloom. If needed, under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
Cherries Sweet and Sour	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Apply at early bloom (early popcorn). Make a second application at full bloom. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
	Cherry Leaf Spot (Coccomyces)	25.0-32.7 (0.8-1.1)	8.2-10.9	Applications may be made 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.

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
	Powdery Mildew (Podosphaera, Sphaerotheca)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)  <b>PLUS</b>  25.0-32.7 (0.8-1.1)	7.3-10.9  <b>PLUS</b>  8.2-10.9	Apply at early bloom (early popcorn). Make a second application at full bloom.  <b>PLUS</b>  Apply at shuck fall and first cover.
Nectarines	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
Peaches	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	21.8-32.7 (0.7-1.1) [in CA use 32.7]	7.3-10.9	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.
	Peach Scab (Cladosporium)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)  <b>PLUS</b>  25.0-32.7 (0.8-1.1)	7.3-10.9  <b>PLUS</b>  8.2-10.9	Apply at early bloom (pink bud). Make a second application at full bloom if conditions favor disease development.  <b>PLUS</b>  Apply at shuck split and at first cover sprays.
Plums and Prunes	Brown Rot Blossom Blight Fruit Brown Rot (Monilinia)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Apply at early bloom (green tip). Make a second application at full bloom. If needed under severe disease pressure, apply additional sprays at 10 to 14-day intervals between full bloom and final pre-harvest sprays.

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
	Black Knot (Dibotryon)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Apply at pre-bloom, petal fall, and at first, second, or third cover sprays at 10 to 14-day intervals.
	Leaf Spot (Coccomyces)	21.8-32.7 (0.7-1.1) [in CA use 32.7] (1.1)	7.3-10.9	Applications may be made at petal fall, shuck split, and at first, second, and third cover sprays at 10 to 14-day intervals and 1 spray 14 to 21 days after harvest.
<b>Strawberries</b>  Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.				<b>Restrictions:</b>  -Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.  -Do not apply more than 87.2 fl. oz. of product (2.8 lbs a.i.)/A/year.  -The minimum retreatment interval is seven (7) days.  -Do not apply more than 4 applications per year.  -Pre-harvest interval: 1 day  -Follow resistance management guidelines under Directions for Use.
	Crown Rot*** (Colletotrichum spp.)  Suppression only	16.3-21.8 (0.52-0.7)		Begin applications after establishment of the transplants and continue through first bloom at 10 to 14-day intervals. Use the high rate if the fields have a history of Colletotrichum crown rot and/or conditions are favorable for development of the disease. Will not control Phytophthora species.

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
	Fruit Rot (Botrytis) Leaf Blight (Dendrophoma) Leaf Scorch (Diplocarpon) Powdery Mildew (Sphaerotheca)	16.3-21.8 (0.52-0.7)		Begin applications at early bloom and continue at 7 to 10-day intervals. Use the higher rate under conditions of severe disease pressure.
<p><b>Sugar Beets</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.</p>				<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.</li> <li>-Do not apply more than 65.4 fl. oz. of product (2.1 lbs a.i./A)/year.</li> <li>-The minimum retreatment interval is fourteen (14) days.</li> <li>-Do not apply more than 3 applications per year.</li> <li>-Pre-harvest interval: 21 days</li> <li>-Follow resistance management guidelines under Directions for Use.</li> </ul>
	Cercospora Leaf Spot (Cercospora)	10.9-21.8 (0.35-0.7)		<p>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.</p> <p>Thiophanate-methyl 4.1 SC must be tank mixed with a protectant fungicide when resistant strains of Cercospora are present in the field.</p> <p>For areas east of the Rocky Mountains: Do not make more than one application of Thiophanate-methyl 4.1 SC per season for Cercospora Leaf Spot.</p>

<b>Crops/ REI</b>	<b>Diseases</b>	<b>FL. OZ./ Acre (lb. a.i./A)</b>	<b>FL. OZ./ 100 Gal</b>	<b>Application Instructions</b>
	Powdery Mildew (Erysiphe)	10.9-21.8 (0.35-0.7)		<p>Apply as soon as disease symptoms appear and follow with a non-benzimidazole fungicide at a 14-day interval or as needed.</p> <p>Thiophanate-methyl 4.1 SC can be tank mixed with sulfur products for additional disease control and resistance management.</p>
<p><b>Triticale and Fall-seeded Wheat</b></p> <p><b>For this use in Idaho, Oregon, and Washington ONLY</b></p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.</p>	Foot Rot, Strawbreaker, Eye Spot (Pseudocercospora)	21.8 (0.7)		<p>Apply Thiophanate-methyl 4.1 SC at the rate indicated in a single application by air or ground after tillering but before stem elongation has begun.</p> <p>Use sufficient water to obtain thorough coverage.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 21.8 fl. oz./A (0.7 lb. a.i./A) per application.</li> <li>-Do not apply more than 21.8 fl.oz. of product (0.7 lb a.i.)/A/year.</li> <li>-Do not cut for hay within 90 days of application.</li> <li>-Do not allow livestock to graze in treated areas before harvest.</li> </ul>

\*\*\* Not for this use in California

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

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

CROPS	DISEASE	RATE (fl. oz./A), MINIMUM GALLONAGE	APPLICATION INSTRUCTIONS AND RESTRICTIONS
<p><b>Conifers</b> (Pine) Austrian Red Scots Christmas Trees</p> <p>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.</p>	<p>Tip Blight (Diplodia)</p>	<p>21.8 fl. oz. per 100 gal./A</p>	<p>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.</p> <p>Add a spreader/sticker to improve coverage.</p> <ul style="list-style-type: none"> <li>- Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers.</li> </ul> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 65.4 fl. oz. of product (2.1 lbs. a.i.)/A/year.</li> <li>-The minimum retreatment interval is ten (10) days.</li> <li>-Do not apply more than 3 applications per year.</li> <li>-Do not graze livestock in treated areas.</li> </ul>
<p><b>Conifers</b> (Fir) Douglas</p>	<p>Swiss Needle Cast (Phaenocarpa) Rhabdochloa Needle Cast</p>	<p>21.8 fl. oz. per 50 gal./A</p>	<p>Apply initially in early May. Repeat at 4-week intervals.</p> <p>Add a spreader/sticker to improve coverage.</p> <ul style="list-style-type: none"> <li>- Use minimum gallonage with mist-blower types of sprayers and higher gallonage with conventional sprayers.</li> </ul> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>-Do not apply more than 109 fl. oz. of product (3.5 lbs. a.i.)/A/year.</li> <li>-The minimum retreatment interval is (28) days.</li> <li>-Do not apply more than 5 applications per year.</li> </ul>
<p><b>Conifers</b> (seedling treatment) Longleaf</p>	<p>Brown Needle Blight (Scirrhia)</p>	<p>1.4 fl. oz. product per 9.5 oz. dry Kaolinite clay for seedling roots</p>	<p>Wet seedling roots in clean water, then apply Thiophanate-methyl 4.1 SC/Kaolinite mixture to wet roots.</p>
<p>Loblolly Longleaf Slash</p>	<p>Fusarium and Rhizoctonia Root Rot</p>	<p>2.7 fl. oz. product per 50 oz. Kaolinite clay, plus enough water to make a slurry</p>	<p>Thoroughly cover seedling roots with Thiophanate-methyl 4.1 SC/Kaolinite slurry.</p>
<p>Restrictions for Seedling Treatment: -Do not apply mixture to seedling foliage. -Avoid excess drying of roots or exposure to temperatures greater than 90° F or less than 32° F.</p>			

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

Note: Thiophanate Methyl 4.1 SC does not control Pythium or Phytophthora.

## **DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS**

**USE IN CALIFORNIA BY CHEMIGATION ONLY FOR BEANS, CUCURBITS (CANTALOPE, CASABA, CUCUMBERS, MELONS, PUMPKINS, SQUASH, WATERMELONS), PEANUTS, POTATOES, SOYBEANS, STRAWBERRIES, AND SUGAR BEETS.**

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 must 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 if needed. 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 needs to 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 (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 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 specified quantities of irrigation water per acre may result in decreased product performance.

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 may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, including aqueous ammonia, is likely to cause a degradation of the pesticide, resulting in reduced performance and needs to be avoided.

#### **RESTRICTIONS:**

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.

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

#### **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 in a mix tank. Fill the tank with  $\frac{1}{2}$  or  $\frac{3}{4}$  the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Thiophanate-methyl 4.1 SC 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 into the irrigation water line so as to deliver the desired rate per acre. The suspension of Thiophanate-methyl 4.1 SC needs to be injected with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. When treatment with Thiophanate-methyl 4.1 SC has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.



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 advised.

### **SEED TREATMENT USE**

#### **PRODUCT APPLICATION AND INSTRUCTIONS**

Thiophanate-methyl 4.1 SC is an effective fungicide for seed treatment that provides early season protection of seedlings against rhizoctonia. Seed needs to be sound and well-cured before treatment.

Read and follow carefully all label directions of each combination product. When using combinations of products, the most restrictive of label limitations and precautions must be followed.

Seed Treatment Equipment: Thiophanate-methyl 4.1 SC may be used both for commercial and for on-farm application. It can be applied with mechanical, slurry, or mist-type seed treating equipment, as long as the equipment can be calibrated to accurately and uniformly apply the product to seed without undue mechanical damage to the seed. Uniform application to seed is important for all seed treatment products.

Treatment of mechanically damaged seed or seed of low vigor or poor quality may result in reduced germination. Treat and conduct germination tests on a small test sample of seed before using this product on commercial quantities. Due to seed quality and seed storage conditions beyond the control of Nippon Soda Co., Ltd. (Nisso), Nisso makes no claims or guarantees as to germination of carry-over seed.

#### **PRODUCT INSTRUCTIONS**

Seed needs to be sound and well-cured before treatment. Refer to the label rates below. Thiophanate-methyl 4.1 SC is typically diluted with water and/or mixed with other products to attain an appropriate slurry application volume (fl. oz./cwt slurry rates) to provide effective treating. The appropriate volume of slurry depends on crop, weather, type of treater and other factors and needs to be adjusted as per normal treating practices for the circumstances. Contact your local supplier or distributor representative for specific directions.

**TO ENSURE UNIFORMITY, MIX PRODUCT WELL BEFORE USE.**

Thiophanate-methyl 4.1 SC plus water and/or other treatments need to be mixed thoroughly prior to treating seed. Recalibrate treating equipment to compensate for the required slurry rate to ensure all products are applied at the correct rate.

**Restrictions:**

Do not use Thiophanate-methyl 4.1 SC in combination with other seed treatment products unless compatibility has been verified.

Crop(s)	Application Rate
<p>WHEAT, TRITICALE</p> <p>For early season control of seed decay (Fusarium, Rhizoctonia) and suppression of seedling blight (Fusarium, Rhizoctonia)</p>	<p>0.153 – 0.307 fl. oz./cwt</p>
<p>SOYBEANS</p> <p>NOTE: Seed may be treated on a fl. oz./seed unit (to deliver a target mg active ingredient/kernel) basis or and a per weight of seed basis, as shown.</p> <p>For early season control of seed decay (Phomopsis, Fusarium, Rhizoctonia) and suppression of seedling blight (Fusarium, Rhizoctonia)</p>	<p>Per Seed Unit: 0.072-0.144 fl. oz./seed unit (140,000 seeds) (applies 0.0075-0.015 mg ai/seed)</p> <p>OR</p> <p>Per Seed Weight: 0.153 – 0.307 fl. oz./cwt</p>
<p>DRY BEANS and SNAP BEANS:</p> <p>For early season control of seed decay (Phomopsis, Rhizoctonia) and suppression of seedling blight (Fusarium, Rhizoctonia)</p>	<p>0.153 – 0.307 fl. oz./cwt</p>

Use higher rates for higher levels of seedling blight protection.

TREATED SEED LABELING

THE FEDERAL SEED ACT REQUIRES THAT BAGS CONTAINING TREATED SEED MUST BE LABELED WITH THE FOLLOWING INFORMATION:

- "This bag contains seed treated with Thiophanate-methyl 4.1 SC containing thiophanate-methyl. **Do not** use for food, feed, or oil purposes. Store away from feed and food stuffs."

- **Coloring Treated Seed**

This product does not contain colorant. The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent its accidental use as food for man or feed for animals. Refer to 21CFR, part

2.25. Any colorant added to treated seed must be cleared for use under 40CFR, part 153.155. Alternatively, use in combination with other colored seed treatment products may provide adequate coloration.

LABELS FOR COMMERCIALY TREATED SEED MUST ALSO INCLUDE THE FOLLOWING ENVIRONMENTAL HAZARDS STATEMENTS:

- “Exposed treated seed may be hazardous to birds and wildlife. Dispose of all excess treated seed and seed packaging or containers by burial away from bodies of water in accordance with any local requirements. Cover, incorporate, or collect treated seeds spilled during loading and planting. **DO NOT** contaminate bodies of water when disposing of planting equipment wash water.”

THE U.S. ENVIRONMENTAL PROTECTION AGENCY REQUIRES THE FOLLOWING STATEMENTS ON CONTAINERS CONTAINING TREATED SEED:

- “DO NOT allow children, pets or livestock to have access to treated seeds.”
- “DO NOT graze or feed livestock on treated areas for 45 days after planting.”
- “Wear long pants, long-sleeved shirt, shoes, socks and chemical-resistant gloves when opening this bag or loading/pouring the treated seed.”
- “After the seeds have been planted, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the treated seed is soil-injected or soil-incorporated, 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, including plants, soil or water is: coveralls, chemical-resistant gloves made of any waterproof material, and chemical-resistant footwear.”

#### USE RESTRICTIONS

Care must be exercised in the handling of treated seed. Augers used for handling treated seed must not be used to move seed for feed, food or oil processing. Do not re-use bags from treated seed to handle food or feed products.

#### **STORAGE AND DISPOSAL**

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

**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.

**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

### NON-REFILLABLE CONTAINERS

**[For containers 5 gallons or less:]** Do not reuse or refill this container. 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  $\frac{1}{4}$  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 with a capacity > 5 gallons:]**

**Triple rinse or pressure rinse non-refillable containers too large to shake as follows:**

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  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 on 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip: Hold container upside down over application equipment or mix tank and collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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.

### REFILLABLE CONTAINERS

**[Bulk Containers:]** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When the container is empty, replace the cap and seal all openings that have been opened during use; and return to the point of purchase, or to a designated location named at the time of purchase of this product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged or leaking, call Chem-Trec. If the container is damaged and leaking or material has been spilled, follow these procedures:

- Cover spill with absorbent material.
- Sweep into disposal container.
- Wash area with detergent and water and follow with clean water rinse.
- Do not allow to contaminate water supplies.
- Dispose of according to instructions.

If not returned to the point of purchase or to a designated location, clean empty container as instructed above and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

**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.

SEED TREATMENT: Treatment of seed, especially seed that is mechanically damaged or seed known to be of low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small test sample of seed before treating commercial quantities with a selected chemical treatment that includes this product. Due to seed quality and seed storage conditions beyond the control of Nippon Soda Co., Ltd. (Nisso), Nisso makes no claims or guarantees as to germination of carry-over seed.

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