



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 30, 2022

Rachel Hardie  
Regulatory Consultant to  
DSM Food Specialties B.V.  
c/o Technology Sciences Group Inc.  
1150 18<sup>th</sup> St., Suite 475  
Washington DC, 20036

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – Add mucor  
piriformis claims; Add ABM Zivion™ F  
Product Name: Natamycin L  
EPA Registration Number: 87485-2  
Application Date: 07/19/2022  
OPP Case Number: 00379291

Dear Mr. Hardie:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

The alternate brand name “Zivion™ F” has been added to the registration, and our records have been updated accordingly. This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or 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 (1) copy of the final printed labeling before you release this 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 your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims

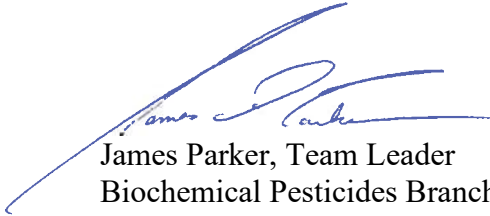
Page 2 of 2  
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OPP Case No. 00379291

made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA 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 Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

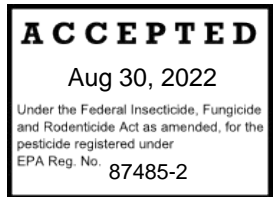
If you have any questions, please contact Susannah Powell via email at [powell.susannah@epa.gov](mailto:powell.susannah@epa.gov).

Sincerely,



James Parker, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

# NATAMYCIN L



## Master Label

**Sublabel A: Agricultural-Use Mushrooms**

**Sublabel B: Postharvest Use**

**Sublabel C: All Crop Groups Agricultural Use – Preplant,  
transplant & at plant (nonfood use pattern)**

# Sublabel A: Agricultural-Use Mushrooms

# Natamycin L

[alternate brand name: Zivion™ M]

## Liquid Suspension Formulation—For Agricultural Use Only

For use to control Dry Bubble Disease caused by *Verticillium fungicola* in enclosed mushroom production facilities

### Active Ingredient:

Natamycin ..... 10.34%

**Other Ingredients:** ..... 89.66%

**Total:** ..... 100.00%

This product contains 0.93 pounds of Natamycin per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION

See side/back panel for precautionary statements

| First Aid  |  |
|--|--|
| <b>If swallowed</b>  | <ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have a person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul> |
| <b>If in eyes</b>  | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>  |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information call: Poison Control Center Emergency Number, 1-800-222-1222, 24 hours a day, 7 days a week |  |

Manufactured by:

**DSM Food Specialties, B.V.**  
PO Box 1, 2600 MA, Delft  
The Netherlands  
+31 (15) 279 34 74

EPA Reg. No.: 87485-2  
EPA Est. No. 87485-FRA-001  
**Batch/Lot Code:** \_\_\_\_\_

Questions?

Phone: 1-574-232-5000

Fax: 1-574-232-2468

**Net Weight: 0.26 Gallon (1 Liter)**

Information in brackets [...] is optional label language  
Information in braces {...} is informational

**Natamycin L**; EPA Reg. No. 87485-2  
AMENDMENT: Mucor Rot to Stone Fruit/Cherries/Sublabel B  
MASTER LABEL – label version (5b) dated July 19, 2022  
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## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**Handler Personal Protective Equipment (PPE):** Mixers, Loaders, Applicators and all other handlers must wear:

- Protective eyewear
- Long sleeved shirt
- Long pants
- Socks plus shoes
- Water proof gloves

### Statement for Contaminated PPE

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

#### USER SAFETY RECOMMENDATIONS:

- Users should 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 discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.** Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult that State or Tribal agency responsible for pesticide regulation.

*{Note to Reviewer: (\*) and ((\*)Not for use in California) may be used in association with any crop, pest, or disease throughout this label.}*

### Agricultural Use Requirements

Use this product 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 the label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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

- Protective eyewear
- Long-sleeved shirt and long pants
- Shoes plus socks
- Water proof gloves

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

**Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 4 hours.**

### General Information

**Natamycin L** is a stable aqueous suspension of Natamycin crystals, a natural fermentation product of *Streptomyces natalensis*. The active ingredient, Natamycin, is a fungistat that acts as a barrier to entry of fungal disease by preventing germination of fungal spores and inhibiting beginning growth of hypha.

**Natamycin has no effect against other types of microorganism**, nor against fungal mycelium once growth begins. This product is formulated for use in enclosed mushroom production facilities for the control of Dry Bubble Disease caused by *Verticillium fungicola* in mushroom production beds.

### Mixing Instructions

Measure the amount of Natamycin L to be applied based on the area to be treated (see rates and timing on next page). Add Natamycin L while stirring to the volume of water to be applied, or to a smaller volume that is then added to more water to make the expected final volume. Continuously stir the treatment solution unless it is to be applied immediately.

### Application Instructions:

**Do not apply this product by chemigation.** Apply the final dilution by hand or through automatic watering systems. See additional application instructions below.

**For use in mushroom production**

| <b>Target Pest</b>                           | <b>Dry Bubble Disease (<i>Verticillium fungicola</i>)</b>   |
|--|---|
| Application Time                             | May be applied:<br>1) Before first break<br>2) Between first and second break   |
| Application Rate After Casing                | Apply Natamycin L at the rate of 3.1 to 6.3 fl. oz. per 1000 square feet as a surface drench once at any time after the casing layer has been applied and before flushing, using sufficient water to ensure an even application.  |
| Application Rate After Flushing              | Apply Natamycin L at the rate of 3.1 to 6.3 fl. oz. per 1000 square feet as a surface drench once at any time after flushing up until 6 hours (6-hour PHI) before picking begins, using sufficient water to ensure an even application.   |
| Application Rate When Applied Between Breaks | Apply Natamycin L at the rate of 3.1 to 6.3 fl. oz. per 1000 square feet as a surface drench at any time between each set of breaks, up until 6 hours (6-hour PHI) before picking begins, using sufficient water to ensure an even application. Do not apply to mushrooms remaining on the beds that will be harvested within 6 hours after application. Do not apply to mushrooms remaining more than one time between each set of breaks. |
| Maximum Number of Applications               | 2 applications maximum  |
| Pre-Harvest Interval (PHI)                   | DO NOT apply within 6 hours of harvest.   |
| Disposal of Compact & Casing                 | All spent medium must be steamed at the end of each production run before disposal outdoors: <ul style="list-style-type: none"> <li>• No less than 4 hours at a temperature of 160°F (70°C)</li> <li>Or</li> <li>• No less than 12 hours at a temperature of 150°F (65°C)</li> </ul>  |
| Additional Comments                          | Natamycin L is to be used preventatively for control of Dry Bubble Disease ( <i>Verticillium fungicola</i> ). Make application prior to or in early status of disease development.<br><br>Integrate Natamycin L into an overall disease management strategy. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for specific mushroom crops and locations   |
| For Answers to Grower Questions, Call        | Phone: 1-574-232-5000<br>Fax: 1-574-232-2468  |

## Storage and Disposal

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

**Pesticide Storage:** Store only in original container in a cool, dry, dark place.

**Pesticide Disposal:** To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

### **Container Disposal:**

#### **For containers less than or equal to 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Triple rinse 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 drop. 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 drop. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

#### **For containers greater than 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. 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 over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.



## Warranty Statement

The directions for use of this product are believed to be adequate and must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result due to such factors as weather conditions, presence or absence of other materials, or the manner of use or application, all of which are beyond the control of DSM Food Specialties B.V., the manufacturer or the seller.

To the extent consistent with applicable law, the products sold to you are furnished “as is” by DSM Food Specialties B.V. To the extent consistent with applicable law, the manufacturer and the seller are subject only to the manufacturer’s warranties, if any, which appear on the label of the product sold to you. To the extent consistent with applicable law and except as warranted by this label, DSM Food Specialties B.V., the manufacturer, or the seller makes no warranties, guarantees, or representatives of any kind to the buyer or the user, either express or implied, or by usage of trade, statutory or otherwise, with regard to the product sold or use of the product, including, but not limited to, merchantability, fitness for a particular purpose or use, or eligibility of the product for any particular trade usage. To the extent consistent with applicable law, buyer’s or user’s exclusive remedy, and DSM Food Specialties B.V., the manufacturer or the seller’s total liability shall be limited to damages not exceeding the cost of the product. No agent or employee of DSM Food Specialties B.V., or the seller is authorized to amend the terms of the warranty disclaimer or the product’s label or to make a presentation or recommendation differ from or inconsistent with the label of this product.

To the extent consistent with applicable law, DSM Food Specialties B.V., the manufacturer, or the seller shall not be liable for consequential, special, or indirect damages resulting from the use, handling, application, storage, or disposal of this product or for damages in the nature of penalties.

## Sublabel B: Postharvest Use

# Natamycin L

[Alternate brand names: BIOSPECTRA 100SC<sub>1</sub>, BIOSHIELD 100SC, Nature's Shield 100SC, Zivion™ F]

For use to control several postharvest diseases on citrus, pome, and stone fruit (crop groups), (cherries), avocado, kiwi, mango and pomegranate

### Active Ingredient:

Natamycin[\*]..... 10.34%

Other Ingredients: ..... 89.66%

Total: ..... 100.00%

[\*CAS No. 7681-93-8]

Contains 0.93 lbs Natamycin per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See side/back panel for precautionary statements

| First Aid   |  |
|---|--|
| <b>If swallowed</b>   | <ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have a person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul> |
| <b>If in eyes</b>   | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>  |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. [For emergency information call: Poison Control Center Emergency Number, 1-800-222-1222, 24 hours a day, 7 days a week.] |  |
| <b>[HOT LINE NUMBER]</b><br>Medical Emergency Phone Number 888-271-4649 [PROSAR]<br>Transportation Emergency Phone Number 800-424-9300 [CHEMTREC]]  |  |

Manufactured by:  
**DSM Food Specialties, B.V.**  
PO Box 1, 2600 MA, Delft  
The Netherlands  
+31 (15) 279 34 74

(Marketed by:  
Pace International LLC  
5661 Branch Road  
Wapato, WA 98951  
800.936.6750  
www.paceint.com)

Questions? – Phone: 1-574-232-5000  
Fax: 1-574-232-2468

EPA Reg. No.: 87485-2  
EPA Est. No. 87485-FRA-001 (xxxxx-xx-x)  
Batch/Lot Code:  
Production Date:\_\_\_

**Net Contents: \_\_\_\_\_**

Information in brackets [...] is optional label language  
Information in braces {...} is informational

**Natamycin L**; EPA Reg. No. 87485-2  
AMENDMENT: Mucor Rot to Stone Fruit/Cherries/Sublabel B  
MASTER LABEL – label version (5b) dated July 19, 2022  
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## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Mixers, Loaders, Applicators and all other handlers must wear:

- Protective eyewear
- Long sleeved shirt
- Long pants
- Socks plus shoes
- Water proof gloves

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

### USER SAFETY RECOMMENDATIONS:

- Users should 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 discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.** Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult that State or Tribal agency responsible for pesticide regulation.

*{Note to Reviewer: (\*) and ((\*)Not for use in California) may be used in association with any crop, pest, or disease throughout this label.}*

### General Information

**Natamycin L** is a stable aqueous suspension of Natamycin crystals, a natural fermentation product of *Streptomyces natalensis*. Natamycin is classified as a macrolide polyene antifungal compound and has a unique mode of action binding to ergosterol which is present in the cell membranes of yeasts and fungi preventing germination of fungal spores and inhibiting beginning growth of hypha. Natamycin has no effect against other types of microorganism or against fungal mycelium once growth begins.

Information in brackets [...] is optional label language  
Information in braces {...} is informational

**Natamycin L**; EPA Reg. No. 87485-2  
AMENDMENT: Mucor Rot to Stone Fruit/Cherries/Sublabel B  
MASTER LABEL – label version (5b) dated July 19, 2022  
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## Fungicide Resistance Management

Use of Natamycin L should be integrated into an overall disease management program within each packinghouse. Fungal pathways can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of postharvest resistance management strategies should be practiced. These may include rotating and/or tank mixing with product having different modes of action. Responsible resistance management practices are necessary to ensure the long-term effectiveness for decay control.

## Mixing Instructions

Fill tank with half of the required amount of water or water wax and start mechanical agitation. Add the required amount of Natamycin L and then add the remaining volume of water or water wax. Maintain agitation after mixing and do not allow treating solution to stand overnight or for prolonged periods. For in-line injection systems better distribution will be achieved by injecting a larger volume of a more dilute solution per unit of time.

The physical compatibility of Natamycin L with all tank mix partners and wax types has not been fully investigated. This product cannot be mixed with any product containing a label prohibition against such mixing. Follow the more restrictive labeling requirements of any tank mix partner. No label dosage rates for the individual products may be exceeded.

Prior to tank mixing with Natamycin L, conduct a jar test with the volumes and rates typically used for postharvest disease control. Add proportionate amounts of the products to a small container of water or water wax in the following order: Wettable powders and water-dispersible granules first, followed by liquid flowables, and emulsifiable concentrates last. After thorough mixing, let stand for at least 15 minutes. Separation, globules, sludge, flakes or other precipitates are indicative of physical incompatibility. Physical compatibility is indicated if the combination remains mixed or can be remixed readily.

THE CROP SAFETY OF ALL POTENTIAL PESTICIDE TANK MIXES WITH NATAMYCIN L INCLUDING ANTI-SCALD AGENTS AND WAXES, HAS NOT BEEN TESTED ON ALL CROPS AND VARIETIES. BEFORE APPLYING ANY TANK MIXTURE, CONFIRM SAFETY TO THE TARGET CROP BEFORE USE.

## Crop Use Directions

CITRUS: Calamondin (*Citrus mitis*, *Citrofortunella mitis*), Citrus citron (*Citrus medica*), Citrus hybrids (*Citrus* spp.) (includes chironja, tangelo, tangor), Grapefruit (*Citrus paradise*), Kumquat (*Fortunella* spp.), Lemon (*Citrus jambhiri*, *Citrus limon*), Lime (*Citrus arantiifolia*), Mandarin (tangerine) (*Citrus reticulata*), Orange, sour (*Citrus aurantium*), Orange, sweet (*Citrus sinensis*), Pummelo (*Citrus grandis*, *Citrus maxima*), Satsuma mandarin (*Citrus unshiu*), and all cultivars and hybrids.

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Green or Blue mold (*Penicillium* spp.)
- Sour rot (*Geotricum citri-aurantii*, *Geotricum candidum*)
- Gray mold (*Botrytis cinerea*)
- Mucor rot (*Mucor piriformis*)

| Application Method  | Disease   | Rate (fl. oz.)                 | Directions   |
|---|---|--------------------------------|--|
| In-Line Dip/Drench  | Green mold<br>Blue mold<br>Sour rot<br>Gray mold<br>Mucor rot | 57-114 fl. oz./<br>100 gallons | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Dip for 10 seconds and allow the fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating Spray Application  |   | 57-114 fl. oz./<br>100 gallons | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Clean citrus fruits treated by aqueous or wax line spray applications prior to application.</li> </ul> |   |                                |  |

POME FRUIT: Apple (*Malus domestica*), Crabapple (*Malus spp.*), Loquat (*Eriobotrya japonica*), Mayhaw (*Crataegus azarolus*), Pear (*Pyrus communis*), Oriental pear (*Pyrus spp.*), Quince (*Chaenomeles spp.*) and cultivars, varieties and/or hybrids of these.

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Blue mold (*Penicillium expansum*)
- Gray mold (*Botrytis cinerea*)
- Mucor rot (*Mucor piriformis*)
- Sphaeropsis rot (*Sphaeropsis pyriputrescens*)
- Phacidiopycnis rot (*Phacidiopycnis piri*)
- Speck rot (*Phacidiopycnis washingtonensis*)

| Application Method                                 | Disease   | Rate (fl. oz.)                 | Directions   |
|--|---|--------------------------------|--|
| Bin/Truck Drench or In-Line Dip/Drench or Flooders | Blue mold<br>Gray mold<br>Mucor rot<br>Sphaeropsis rot<br>Phacidiopycnis rot<br>Speck rot | 57-114 fl. oz./<br>100 gallons | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• For in-line dip or drench applications, treat fruit for 10 seconds and allow the fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating Spray Application |   | 57-114 fl. oz./<br>100 gallons | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Use T-jet, CDA or similar application system</li> </ul>  |

STONE FRUIT: Apricot (*Prunus armeniaca*), Nectarine (*Prunus persica*), Peach (*Prunus persica*), Plum, Chickasaw (*Prunus agustifolia*); Plum, Damson (*Prunus domestica* spp. *insititia*); Plum, Japanese (*Prunus salicina*); Plumcot (*Prunus armeniaca* x *P. domestica*); Prune (fresh)(*Prunus domestica*, *Prunus spp.*); as well as all other cultivars and hybrids of these.

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Brown rot (*Monilinia spp.*)
- Gray mold (*Botrytis cinerea*)
- Sour rot (*Geotricum spp.*)
- Rhizopus rot (*Rhizopus spp.*)
- Mucor rot (*Mucor piriformis*)

| Application Method                                 | Disease   | Rate (fl. oz.)                          | Directions  |
|--|---|---|---|
| In-line Dip/Drench                                 | Brown rot<br>Gray mold<br>Sour rot<br>Rhizopus rot<br>Mucor rot | 57-114 fl. oz./<br>100 gallons          | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Dip for 10 seconds and allow the fruit to drain.</li> </ul>  |
| In-line Aqueous or Fruit Coating Spray Application |   | 28-114 fl. oz./<br>200,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Use T-jet, CDA or similar application system</li> </ul> |

CHERRIES: Cherry, sweet (*Prunus avium*); Cherry, tart (*Prunus cerasis*); and all other cultivars and hybrids of these.

Use Natamycin L as a post-harvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Brown rot (*Monilinia spp.*)
- Gray mold (*Botrytis cinerea*)
- Mucor rot (*Mucor piriformis*)

| Application Method  | Disease                             | Rate (fl. oz.)                         | Directions  |
|---|-------------------------------------|--|---|
| In-line Aqueous or Flooder Application<br><br>High volume application | Brown rot<br>Gray mold<br>Mucor rot | 28-114 fl. oz./<br>50,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 28-114 fl. oz. in 100 gallons of water, wax/emulsion, or aqueous dilution of wax/oil emulsion.</li> <li>• Use flooder, T-jet or similar application system.</li> </ul> |

#### AVOCADO

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Anthracnose (*Colletotrichum spp.*)
- Stem end rot (*Dothiorella spp.*)

| Application Method                                 | Disease                     | Rate (fl. oz.)                          | Directions  |
|--|-----------------------------|---|---|
| In-line Dip/Drench                                 | Anthracnose<br>Stem end rot | 57-114 fl. oz./<br>100 gallons          | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• For in-line dip or drench applications, treat fruits for 10 seconds and allow the fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating Spray Application |                             | 57-114 fl. oz./<br>200,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> </ul>   |

#### KIWI

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Botrytis fruit rot (*Botrytis cinerea*)

| Application Method                                 | Disease            | Rate (fl. oz.)                          | Directions  |
|--|--------------------|---|---|
| In-line Dip/Drench                                 | Botrytis fruit rot | 57-114 fl. oz./<br>100 gallons          | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• For in-line dip or drench applications, treat fruits for 10 seconds and allow the fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating Spray Application |                    | 57-114 fl. oz./<br>200,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> </ul>   |

#### MANGO

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Anthracnose (*Colletotrichum spp.*)
- Stem end rot (*Dothiorella spp.*)

| Application Method                                 | Disease                     | Rate (fl. oz.)                          | Directions  |
|--|-----------------------------|---|---|
| In-line Dip/Drench                                 | Anthracnose<br>Stem end rot | 57-114 fl. oz./<br>100 gallons          | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• For in-line dip or drench applications, treat fruits for 10 seconds and allow fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating Spray Application |                             | 57-114 fl. oz./<br>200,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> </ul>   |

Information in brackets [...] is optional label language  
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## POMEGRANATE

Use Natamycin L as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Botrytis fruit rot (*Botrytis cinerea*)
- Blue mold (*Penicillium expansum*)

| Application Method | Disease                         | Rate (fl. oz.)                 | Directions  |
|--------------------|---------------------------------|--------------------------------|---|
| In-line Dip/Drench | Botrytis fruit rot<br>Blue mold | 57-114 fl. oz./<br>100 gallons | <ul style="list-style-type: none"><li>• Ensure proper coverage of fruit.</li><li>• Mix 57-114 fl. oz. in 100 gallons of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li><li>• For in-line dip or drench applications, treat fruits for 10 seconds and allow the fruit to drain.</li></ul> |

### Storage and Disposal

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

**Pesticide Storage:** Store only in original container in a cool, dry, dark place.

**Pesticide Disposal:** To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

#### Container Handling:

##### For containers less than or equal to 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Triple rinse 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 drop. 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 drop. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

##### For containers greater than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. 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 over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.



## Warranty Statement

The directions for use of this product are believed to be adequate and must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result due to such factors as weather conditions, presence or absence of other materials, or the manner of use or application, all of which are beyond the control of DSM Food Specialties B.V., the manufacturer or the seller.

To the extent consistent with applicable law, the products sold to you are furnished “as is” by DSM Food Specialties B.V. To the extent consistent with applicable law, the manufacturer and the seller are subject only to the manufacturer’s warranties, if any, which appear on the label of the product sold to you. To the extent consistent with applicable law and except as warranted by this label, DSM Food Specialties B.V., the manufacturer, or the seller makes no warranties, guarantees, or representations of any kind to the buyer or the user, either express or implied, or by usage of trade, statutory or otherwise, with regard to the product sold or use of the product, including, but not limited to, merchantability, fitness for a particular purpose or use, or eligibility of the product for any particular trade usage. To the extent consistent with applicable law, buyer’s or user’s exclusive remedy, and DSM Food Specialties B.V., the manufacturers of the seller’s total liability shall be limited to damages not exceeding the cost of the product. No agent or employee of DSM Food Specialties B.V., or the seller is authorized to amend the terms of the warranty disclaimer or the product’s label or to make a presentation or recommendation differ from or inconsistent with the label of this product.

To the extent consistent with applicable law, DSM Food Specialties B.V., the manufacturer, or the seller shall not be liable for consequential, special, or indirect damages resulting from the use, handling, application, storage, or disposal of this product or for damages in the nature of penalties.

### NOTICE TO BUYER

**IMPORTANT:** Read the information below before using this product. If the terms are not acceptable, you should return the unopened product container immediately for a complete refund.

### LIMITED WARRANTY, TERMS OF SALE, AND LIMITATION OF LIABILITY

Upon purchase of this product, purchaser and user agree to the following terms:

**Warranty:** Pace International, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects. To the extent consistent with applicable law, except as expressly stated in the forgoing statement, the Company makes no further warranties, expressly disclaims any implied warranties of merchantability or fitness for a particular purpose, and any representation or warranty.

**Terms of Sale:** The Company’s directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner or use or application (including failure to adhere to label directions), all of which are beyond the Company’s control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental, or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived.

To the extent consistent with applicable law, the Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale, and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

## Optional Label Claims

- Postharvest Fungicide
- Postharvest Fungicide for Citrus, Pome, and Stone Fruit (Crop Groups), Cherries, Avocado, Kiwi, Mango and Pomegranates
- A flowable suspension concentrate
- Postharvest Fungicide for Drench and Dip Treatment

**Sublabel C: All Crop Groups Agricultural Use – Preplant, transplant & at plant treatment (nonfood use pattern)**

# Natamycin L

[alternate brand name: Zivion™ S]

## Liquid Suspension Formulation—For Agricultural Use Only

For use as a pre-plant, transplant and at plant treatment as a broad spectrum pre-harvest biofungicide to control Anthracnose, Gray Mold, Black Mold, Powdery Mildew, Verticillium Wilt, Rhizopus Rot, Mucor Fruit Rot, Fusarium Wilt, Charcoal Rot\*, Smut, White Rot, Southern Blight, Crown & Root Rot, Storage Rot, and common Leaf Spots, Box Rot, in all crop groups.

**Active Ingredient:**

Natamycin ..... 10.34%

**Other Ingredients:** ..... 89.66%

**Total:** ..... 100.00%

This product contains 0.93 pounds of Natamycin per gallon.

### KEEP OUT OF REACH OF CHILDREN CAUTION

See side/back panel for precautionary statements

| First Aid  |  |
|--|--|
| <b>If swallowed</b>  | <ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have a person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul> |
| <b>If in eyes</b>  | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>  |
| Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information call: Poison Control Center Emergency Number, 1-800-222-1222, 24 hours a day, 7 days a week |  |

Manufactured by:

**DSM Food Specialties, B.V.**  
PO Box 1, 2600 MA, Delft  
The Netherlands  
+31 (15) 279 34 74

EPA Reg. No.: 87485-2  
EPA Est. No. 87485-FRA-001  
Batch/Lot Code: \_\_\_\_\_

Questions?

Phone: 1-574-232-5000

Fax: 1-574-232-2468

**Net Weight: 0.26 Gallon (1 Liter)**

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## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS – CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, and chewing gum, using tobacco or using the toilet.

**Handler Personal Protective Equipment (PPE):** Mixers, Loaders, Applicators and all other handlers must wear:

- Protective eyewear
- Long sleeved shirt
- Long pants
- Socks plus shoes
- Water proof gloves

### Statement for Contaminated PPE

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

#### USER SAFETY RECOMMENDATIONS:

- Users should 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 discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.** Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult that State or Tribal agency responsible for pesticide regulation.

*{Note to Reviewer: (\*) and ((\*)Not for use in California) may be used in association with any crop, pest, or disease throughout this label.}*

### Agricultural Use Requirements

Use this product 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 the label about personal protective equipment and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

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

- Protective eyewear
- Long-sleeved shirt and long pants
- Shoes plus socks
- Water proof gloves

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

EXCEPTION: If the product 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.

### General Information

**Natamycin L** is a stable aqueous suspension of Natamycin crystals, a natural fermentation product of *Streptomyces natalensis*. The active ingredient, Natamycin, is a fungistat that acts as a barrier to entry of fungal disease by preventing germination of fungal spores and inhibiting beginning growth of hypha. Natamycin has no effect against other types of microorganisms, nor against fungal mycelium once growth begins.

Use Natamycin L on **any** fruits, vegetables (including leafy, fruiting and cole crops), or ornamentals that are transplanted.

This product is formulated for use as a pre-plant or transplant root and/or whole plant dip treatment in and on all food commodities. Do not apply to harvestable commodities. Do not apply this product through any type of irrigation system. Specific and selected examples of crops for illustration purposes are provided in tables below:

| Commodity Treated   | Disease(s)  |
|---|---|
| Berry and Small Fruit<br>Crop Group 13-07<br><br>Strawberry | Anthracnose ( <i>Colletotrichum</i> spp.),<br>Gray Mold ( <i>Botrytis</i> spp.)<br>Powdery Mildew ( <i>Sphaerotheca macularis</i> )<br>Verticillium Wilt<br>Rhizopus Rot<br>Mucor Fruit Rot<br>Black Root Rot ( <i>Cylindrocarpon</i> spp.)<br>Charcoal Rot ( <i>Macrophomina phaseolina</i> )*<br>Box Rot ( <i>Botrytis cinerea</i> )  |
| Fruiting Vegetable<br>Crop Group 8-10                       | Septoria Leaf Spots ( <i>Septoria</i> spp.)<br>Anthracnose ( <i>Colletotrichum</i> spp.)<br>Early Blight ( <i>Alternaria</i> spp.)<br>Verticillium Wilt<br>Fusarium Wilt<br>Gray Leaf Spots ( <i>Stemphylium</i> spp.)<br>Frogeye Leaf Spots ( <i>Cercospora</i> spp.)<br>Rhizoctonia damping-off, stem canker and soil rot ( <i>Rhizoctonia solani</i> )<br>Powdery Mildew ( <i>Leveillula taurica</i> )<br>Southern Blight ( <i>Sclerotium rolfsii</i> )  |
| Root and Tuber<br>Vegetables<br>Crop Group 1                | Alternaria Leaf Spot<br>Anthracnose ( <i>Colletotrichum dematium</i> )<br>Cercospora Leaf Spot<br>Charcoal Rot ( <i>Macrophomina phaseolina</i> )*<br>Choanephora Rot<br>Damping-Off<br>Black Leg<br>Black Root and Seedling Blight ( <i>Cylindrocladium</i> spp.,<br><i>Fusarium</i> spp.,<br><i>Phoma betae</i> ,<br><i>Pleospora betae</i> ,<br><i>Rhizoctonia solani</i> ,<br><i>Thanatephorus cucumeris</i> )<br>Phoma Leaf Spot and Root Rot ( <i>Phoma betae</i> )<br>Phymatotrichum Root Rot (cotton root rot, <i>Phymatotrichopsis omnivora</i> )<br>Powdery Mildew ( <i>Erysiphe polygoni</i> )<br>Ramularia Leaf Spot ( <i>Ramularia beticola</i> )<br>Rhizoctonia Foliar Blight Crown and Root Rot ( <i>Rhizoctonia solani</i> )<br>Rhizopus Root Rot ( <i>Rhizopus</i> spp.)<br>Sclerotinia Crown & Root Rot ( <i>Sclerotinia sclerotiorum</i> )<br>Southern Blight, Sclerotium Root Rot and Stem Rot ( <i>Sclerotium rolfsii</i> )<br>Stemphylium Leaf Spot ( <i>Stemphylium botryosum</i> , <i>Pleospora</i> spp.)<br>Storage Rots ( <i>Botrytis cinerea</i> , <i>Botryotinia fuckeliana</i> , <i>Penicillium</i> spp., <i>Phoma betae</i> )<br>Verticillium Wilt ( <i>Verticillium albo-atrum</i> )<br>Violet Root Rot ( <i>Helicobasidium brebissonii</i> , <i>Rhizoctonia crocorum</i> )<br>Black rot ( <i>Ceratocystis fimbriata</i> )<br>Chlorotic leaf distortion ( <i>Fusarium denticulatum</i> )<br>Dry rot ( <i>Diaporthe phaseolorum</i> )<br>Foot rot & Fusarium Wilt (Die-off)<br>Geotrichum sour rot<br>Gray mold rot ( <i>Botrytis cinerea</i> ) |

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| <b>Commodity Treated</b>                                 | <b>Disease(s)</b>   |
|--|---|
| Bulb Vegetables<br>( <i>Allium</i> spp.)<br>Crop Group 3 | Black Mold ( <i>Aspergillus</i> spp.)<br>Botrytis Leaf Blight<br>Fusarium Basal Plate Rot and Damping-Off ( <i>Fusarium oxysporum</i> )<br>Pink Root ( <i>Phoma terrestris</i> )<br>Purple Blotch ( <i>Alternaria porri</i> )<br>Smut ( <i>Urocystis colchici</i> )<br>White rot ( <i>Sclerotium cepivorum</i> )  |
| Leafy Vegetables<br>Crop Group 4-16<br><br>Spinach       | Alternaria Leaf Spot ( <i>Alternaria</i> spp.)<br>Black Leg ( <i>Phoma lingam</i> )<br>Wirestem ( <i>Rhizoctonia solani</i> )<br>Fusarium Yellows<br>Sclerotinia Blight   |
| Cucurbit Vegetables<br>Crop Group 9                      | Powdery Mildew ( <i>Erysiphe cichoracearum</i> and <i>Sphaerotheca fuliginea</i> )<br>Gummy Stem Blight ( <i>Didymella bryoniae</i> )<br>Anthracnose ( <i>Colletotrichum obiculare</i> )<br>Fusarium Wilt<br>Alternaria Leaf Spot<br>Cercospora Leaf Spot   |
| Tree Nuts<br>Crop Group 14                               | Alternaria Leaf Spot<br>Anthracnose<br>Armillaria Root Rot<br>Green Fruit Rot <i>Botrytis</i><br>Brown Rot ( <i>Monilinia fructicola</i> )<br>Hull rot ( <i>Monilinia fructicola</i> , <i>Rhizopus</i> spp.)<br>Leaf Blight<br>Leaf Curl ( <i>Taphrina deformans</i> , <i>Leucostoma</i> spp.)<br>Phomopsis Canker and Fruit Rot ( <i>Phomopsis amygdali</i> )<br>Powdery Mildew ( <i>Podosphaera tridactyla</i> , <i>Oidium passerinii</i> , <i>Sphaerotheca pannosa</i> )<br>Red Leaf Blotch<br>Rust<br>Scab<br>Shot Hole<br>Silver Leaf<br>Verticillium Wilt |

| Commodity Treated   | Disease(s)   |
|---|--|
| Legume Vegetables<br>(Succulent or Dried)<br>Crop Group 6 | Red Crown Rot ( <i>Calonectria pyrochroa</i> )<br>Stem ( <i>Diaporthe phaseolorum</i> )<br>Sudden Death Syndrome ( <i>Fusarium virguliforme</i> )<br>Brown Stem Rot ( <i>Cadophora spp.</i> )<br>Alternaria Leaf Spot<br>Anthracnose<br>Black Leaf Blight ( <i>Arkoola nigra</i> )<br>Black Root Rot ( <i>Thielaviopsis basicola</i> )<br>Brown Spot ( <i>Septoria glycines</i> )<br>Charcoal Rot ( <i>Macrophomina phaseolina</i> )*<br>Fusarium Root Rot ( <i>Fusarium spp.</i> )<br>Phomopsis Seed Decay ( <i>Phomopsis spp.</i> )<br>Cotton Root Rot ( <i>Phymatotrichopsis omnivore</i> )<br>Pod and Stem Blight ( <i>Diaporthe phaseolorum</i> )<br>Powdery Mildew ( <i>Microsphaera diffusa</i> )<br>Red Leaf Blotch ( <i>Dactuliochaeta glycines</i> )<br>Rhizoctonia Aerial Blight ( <i>Rhizoctonia solani</i> )<br>Rust ( <i>Phakopsora pachyrhizi</i> )<br>Scab ( <i>Spaceloma glycines</i> )<br>Sclerotinia Stem Rot ( <i>Sclerotinia sclerotiorum</i> )<br>Stem Canker ( <i>Diaporthe phaseolorum</i> )<br>Stemphylium Leaf Blight ( <i>Stemphylium botryosum</i> )<br>Target Spot ( <i>Corynespora cassiicola</i> ) and Yeast Spot ( <i>Nematospora coryli</i> ) |



| Commodity Treated                                 | Disease(s)  |
|---|---|
| Cereal Grains Group<br>Crop Group 15<br><br>Corn  | Anthracnose Leaf Blight ( <i>Colletotrichum graminicola</i> )<br>Aspergillus Ear and Kernel Rot ( <i>Aspergillus flavus</i> )<br>Banded Leaf and Sheath Spot ( <i>Rhizoctonia solani</i> )<br>Black Bundle Disease ( <i>Cephalosporium acremonium</i> )<br>Black Kernel Rot ( <i>Lasiodiplodia theobromae</i> )<br>Brown Spot<br>Black Spot<br>Stalk Rot ( <i>Physoderma maydis</i> )<br>Cephalosporium Kernel Rot ( <i>Acremonium strictum</i> )<br>Charcoal Rot ( <i>Macrophomina phaseolina</i> )*<br>Corticium Ear Rot ( <i>Thanatephorus cucumeris</i> )<br>Curvularia Leaf Spot ( <i>Curvularia clavate</i> )<br>Diplodia Ear Rot, Stalk Rot and Seedling Blight ( <i>Diplodia maydis</i> )<br>Dry Ear Rot, Cob, Kernel and Stalk Rot ( <i>Nigrospora oryzae</i> )<br>Fusarium Ear and Stalk Rot ( <i>Fusarium subglutinans</i> )<br>Gray Leaf Spot ( <i>Cercospora leaf spot</i> )<br>Northern Corn Leaf Blight<br>White Blast<br>Crown Stalk Rot Stripe ( <i>Setosphaeria turcic</i> )<br>Penicillium Ear Rot<br>Rhizoctonia Ear Rot<br>Mucor Rot<br>Rust ( <i>Puccinia</i> spp.)<br>Sclerotium Ear Rot<br>Seed Rot-seedling Blight ( <i>Bipolaris sorokiniana</i> )<br>Shuck Rot ( <i>Myrothecium gramineum</i> )<br>Silage Mold ( <i>Monascus purpureus</i> )<br>Smut, common ( <i>Ustilago</i> spp.)<br>Storage Rots ( <i>Aspergillus</i> spp., <i>Penicillium</i> spp. and other fungi)<br>Tar Spot ( <i>Phyllachora maydis</i> )<br>Zonate Leaf Spot ( <i>Gloeocercospora sorghi</i> ) |
| Citrus Fruit Group<br>Crop Group 10<br><br>Orange | Albinism ( <i>Alternaria</i> spp., <i>Aspergillus flavus</i> )<br>Anthracnose ( <i>Glomerella cingulata</i> )<br>Areolate Leaf Spot<br>Damping-off ( <i>Rhizoctonia solani</i> )<br>Black Mold Rot ( <i>Aspergillus niger</i> )<br>Black Root Rot ( <i>Thielaviopsis basicola</i> )<br>Black Rot ( <i>Alternaria citri</i> )<br>Black Spot ( <i>Guignardia citricarpa</i> )<br>Blue Mold ( <i>Penicillium italicum</i> )<br>Botrytis Blossom, Twig Blight and Gummosis ( <i>Botrytis cinerea</i> )<br>Branch Knot ( <i>Sphaeropsis tumefaciens</i> )<br>Charcoal Rot ( <i>Macrophomina phaseolina</i> )*<br>Citrus Black Spot ( <i>Guignardia citricarpa</i> )<br>Dry Root Rot complex ( <i>Nectria haematococca</i> )<br>Fly Speck ( <i>Schizothyrium pomi</i> )<br>Fusarium Wilt ( <i>Fusarium oxysporum</i> f.sp. <i>citri</i> )<br>Greasy Spot and Greasy Spot Rind Blotch ( <i>Mycosphaerella citri</i> )<br>Green Mold ( <i>Penicillium digitatum</i> )<br>Heart Rot ( <i>Ganoderma applanatum</i> )<br>Leaf Spot ( <i>Mycosphaerella horii</i> )<br>Mushroom Root Rot ( <i>Armillaria mellea</i> )   |

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| Commodity Treated                 | Disease(s)   |
|-----------------------------------|--|
|                                   | Pink Disease ( <i>Erythricium salmonicolor</i> )<br>Pink Mold ( <i>Gliocladium roseum</i> )<br>Post Bloom Fruit Drop ( <i>Colletotrichum acutatum</i> )<br>Powdery Mildew ( <i>Oidium tingitaninum</i> )<br>Rhizopus Rot ( <i>Rhizopus stolonifer</i> )<br>Scab ( <i>Elsinoë fawcettii</i> )<br>Sclerotinia Twig Blight, Fruit Rot and Root Rot ( <i>Sclerotinia sclerotiorum</i> )<br>Trichoderma Rot ( <i>Trichoderma viride</i> )<br>Twig Blight ( <i>Rhytidhysterium rufulum</i> )<br>Ustilina Root Rot ( <i>Ustilina deusta</i> )<br>Whisker Mold ( <i>Penicillium ulaiense</i> )<br>White Root Rot ( <i>Rosellinia necatrix</i> )  |
| Pome Fruit Group<br>Crop Group 11 | Alternaria Blotch<br>American Brown Rot ( <i>Monilinia fructicola</i> )<br>Anthracnose Canker and Bull's-eye Rot ( <i>Neofabraea malicorticis</i> )<br>Apple Scab ( <i>Venturia inaequalis</i> )<br>Apple Ring Rot and Canker ( <i>Botryosphaeria berengeriana</i> )<br>Bitter Rot ( <i>Glomerella cingulata</i> , <i>Colletotrichum gloeosporioides</i> )<br>Black Pox ( <i>Helminthosporium papulosum</i> )<br>Black Root Rot ( <i>Xylaria mali</i> )<br>Black Rot, Frogeye Leafspot and Canker ( <i>Botryosphaeria obtusa</i> )<br>Blister Canker ( <i>Biscogniauxia marginata</i> )<br>Blue Mold ( <i>Penicillium</i> spp.)<br>Brown Rot Blossom Blight<br>Calyx-end Rot ( <i>Sclerotinia sclerotiorum</i> )<br>European Brown Rot ( <i>Monilinia fructigena</i> )<br>Fisheye Rot <i>Butlerella eustacei</i> ,<br>Flyspeck <i>Schizothyrium pomi</i> ,<br>Leaf Spot and Twig Canker ( <i>Phyllosticta solitaria</i> )<br>Gray Mold Rot ( <i>Botrytis cinerea</i> )<br>Moldy Core and Core Rot ( <i>Alternaria</i> spp.)<br>Monilia Leaf and Blossom Blight ( <i>Monilinia mali</i> )<br>Mucor Rot ( <i>Mucor</i> spp.)<br>Nectria Twig Blight ( <i>Nectria cinnabarina</i> )<br>Perennial Canker ( <i>Neofabraea</i> spp.)<br>Phomopsis Rot ( <i>Phomopsis mali</i> )<br>Pink mold Rot ( <i>Trichothecium roseum</i> )<br>Powdery Mildew ( <i>Podosphaera leucotricha</i> )<br>Rosellinia Root Rot ( <i>Rosellinia necatrix</i> )<br>Rust ( <i>Gymnosporangium</i> spp.)<br>Side Rot ( <i>Phialophora malorum</i> )<br>Silver Leaf ( <i>Chondrostereum purpureum</i> )<br>Sooty Blotch Complex ( <i>Peltaster fructicola</i> )<br>Southern Blight ( <i>Sclerotium rolfsii</i> )<br>White Rot ( <i>Botryosphaeria dothidea</i> )<br>Zonate Leaf Spot <i>Cristulariella moricola</i> |

| Commodity Treated                          | Disease(s)   |
|--|--|
| Stone Fruits<br>Crop Group 12<br><br>Peach | Brown Rot ( <i>Monilinia fructicola</i> )<br>Leaf Curl ( <i>Taphrina deformans</i> )<br>Scab ( <i>Cladosporium carpophilum</i> )<br>Mushroom Root Rot ( <i>Clitocybe tabescens</i> <i>Armillaria mellea</i> )<br>Perennial Canker ( <i>Cytospora</i> spp. )<br>Shot Hole ( <i>Wilsonomyces carpophilus</i> )<br>Rust ( <i>Tranzschelia discolor</i> )<br>Rhizopus Rot ( <i>Rhizopus stolonifer</i> )<br>Oxyporus Root and Crown Rot ( <i>Oxyporus</i> spp. )<br>Leucostoma Canker ( <i>Leucostoma cinata</i> ) |
| Avocado                                    | Anthrachnose ( <i>Colletotrichum gloeosporioides</i> )<br>Cotton Root Rot ( <i>Phymatotrichopsis omnivore</i> )<br>Scab ( <i>Sphaceloma perseae</i> )<br>Wood Rot ( <i>Ganoderma lucidum</i> )   |

### Mixing Instructions

Measure the amount of Natamycin L to be applied based on the area to be treated (see rates and timing on below). Add Natamycin L while stirring to the volume of water to be applied, or to a smaller volume that is then added to more water to make the expected final volume. Continuously stir the treatment solution unless it is to be applied immediately.

### Directions for Use

|                                       |   |
|---------------------------------------|---|
| Application Time                      | Apply prior to planting as a preplant, transplant root or whole plant dip treatment. Do not apply after planting or to harvestable commodities.   |
| Application Rate                      | <b>Root or whole plant dip:</b><br>Mix 6-12 fl. oz. (0.04 – 0.08 lbs a.i.) of Natamycin L per 10 gallons of water. Dip plants for a minimum of 2 minutes, but no more than 5 minutes. Plant treated plants after dip application. |
| Additional Comments                   | Transplants should be washed to remove excess soil prior to dipping.  |
| For Answers to Grower Questions, Call | Phone: 1-574-232-5000<br>Fax: 1-574-232-2468  |

## Storage and Disposal

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

**Pesticide Storage:** Store only in original container in a cool, dry, dark place.

**Pesticide Disposal:** To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

### **Container Disposal:**

#### **For containers less than or equal to 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Triple rinse 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 drop. 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 drop. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

#### **For containers greater than 5 gallons:**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. 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 over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

## Warranty Statement

The directions for use of this product are believed to be adequate and must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result due to such factors as weather conditions, presence or absence of other materials, or the manner of use or application, all of which are beyond the control of DSM Food Specialties B.V., the manufacturer or the seller.

To the extent consistent with applicable law, the products sold to you are furnished “as is” by DSM Food Specialties B.V. To the extent consistent with applicable law, the manufacturer and the seller are subject only to the manufacturer’s warranties, if any, which appear on the label of the product sold to you. To the extent consistent with applicable law and except as warranted by this label, DSM Food Specialties B.V., the manufacturer, or the seller makes no warranties, guarantees, or representatives of any kind to the buyer or the user, either express or implied, or by usage of trade, statutory or otherwise, with regard to the product sold or use of the product, including, but not limited to, merchantability, fitness for a particular purpose or use, or eligibility of the product for any particular trade usage. To the extent consistent with applicable law, buyer’s or user’s exclusive remedy, and DSM Food Specialties B.V., the manufacturer or the seller’s total liability shall be limited to damages not exceeding the cost of the product. No agent or employee of DSM Food Specialties B.V., or the seller is authorized to amend the terms of the warranty disclaimer or the product’s label or to make a presentation or recommendation differ from or inconsistent with the label of this product.

To the extent consistent with applicable law, DSM Food Specialties B.V., the manufacturer, or the seller shall not be liable for consequential, special, or indirect damages resulting from the use, handling, application, storage, or disposal of this product or for damages in the nature of penalties.