

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%

CAUTION

KEEP OUT OF REACH OF CHILDREN

See side/back panel for precautionary statements.

First Aid	
IF SWALLOWED <ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have a 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. 	IF IN EYE <ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information call: Poison Control Center Emergency Number, 1-800-222-1222 , 24 hours per day, 7 days a week.	

Manufactured by:

DSM Food Specialties B.V.

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The Netherlands

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EPA Registration Number 87485-2

EPA Est. No. 87485-FRA-01

Batch/Lot code:

Production date:

Questions?

Phone: 1-574-232-5000

Fax: 1-574-232-2468

Net Contents: 0.26 Gallon.

This product contains 0.93 pounds of Natamycin per gallon.





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

PRECAUTIONARY STATEMENT 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. Remove and wash contaminated clothing before reuse.

Handler Personal Protective Equipment (PPE)

Mixers, Loaders, Applicators and all others handlers must wear:

- protective eyewear
- long sleeved shirt
- long pants
- socks plus shoes

Statements 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 system without previously 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 and Tribe, consult the State/Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box 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

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

Zivion™ M 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 Zivion™ M to be applied based on the area to be treated (see rates and timing on next page). Add Zivion™ M 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 spray equipment or through automatic watering systems. See additional application instructions below.

For use in mushroom production.

Target Pest	Dry Bubble Disease (<i>Verticillium fungicola</i>)
Application Time	May be applied: 1. Immediately after casing 2. After Flushing 3. Between first and second breaks 4. Between second and third breaks.
Application Rate after Casing	Apply Zivion™ M 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 Zivion™ M 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 96 hours (4 day PHI) before picking begins, using sufficient water to ensure an even application.
Application Rate when applied between breaks	Apply Zivion™ M 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 96 hours (4 day 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 96 hours after application. Do not apply more than one time between each set of breaks.

Target Pest	Dry Bubble Disease (<i>Verticillium fungicola</i>)
Maximum number of applications	4 applications maximum.
Pre-Harvest Interval	DO NOT apply within 4 days of harvest.
Disposal of compost & casing	All spent medium must be steamed within the mushroom house at the end of each production run for no less than 24 hours at a temperature of 150°F(65°C) or greater before disposal outdoors.
Additional comments	Zivion™ M is to be used <u>preventatively</u> for control of Dry Bubble Disease (<i>Verticillium fungicola</i>). Make application prior to or in early stages of disease development. Integrate Zivion™ M 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 Fax: 1-574-232-2468

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE:

Store 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 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. 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, 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 manufacturer's 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 this warranty disclaimer or the product's label or to make a presentation or recommendation different 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.

