



STATE OF HAWAII
Department of Agriculture

ACCEPTED

LICENSE NO. **8033.44**

Disc.

TAVANO™ 5%SC Fungicide

For Control of Fungal Diseases of Grapes, Strawberries, and Other Small Fruits

GROUP 19 FUNGICIDE

ACTIVE INGREDIENT

Polyoxin D zinc salt 5.0%

OTHER INGREDIENTS 95.0%

TOTAL 100.0%

Contains 7.03 ounces of active ingredient per gallon.

NET CONTENTS:

1 Quart (32 Fluid Ounces)

EPA Reg. No. 68173-4-70051

EPA Est. No. 70051-CA-1

Lot Number:

Distributed by: Certis U.S.A. L.L.C.
9145 Guilford Road, Suite 175
Columbia, MD 21046-1883
800-250-5024



**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See attached booklet for additional Precautionary Statements,
First Aid Statements, Directions for Use, and Storage and Disposal Statements.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

Caution. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID	
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> 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 IN EYES:	<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 the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> 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 do so by the poison control center or doctor. Do not give anything to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. HOT LINE NUMBER: 1-800-255-3924.	

PERSONAL PROTECTIVE EQUIPMENT (PPE):

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Socks;
- Shoes; and
- Chemical-resistant gloves.

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides, the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticides get inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial use. This pesticide is moderately toxic to aquatic invertebrates and fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not allow runoff into lakes, streams, ponds or public waterways. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Observe the most restrictive labeling limitations and precautions of all products used in mixtures.

GENERAL INFORMATION

TAVANO 5%SC Fungicide can be applied as a preventative or curative treatment in conjunction with good management practices.

TAVANO 5%SC Fungicide can be used alone or, when diseases not specified on this label are present or expected, in combination and/or rotation with other appropriately labeled fungicides as a tool for integrated disease management in labeled agricultural crops. See "Mixing and Handling Instructions" below for additional information.

Preharvest Interval (PHI) = 0 days. TAVANO 5%SC Fungicide is exempt from the requirement for residue tolerance and therefore can be applied up to and including the day of harvest.

RESISTANCE MANAGEMENT RECOMMENDATIONS

TAVANO 5%SC Fungicide contains a fungicide classified in FRAC target site of action Group 19. Fungal isolates with acquired resistance to Group 19 may eventually dominate the fungal population if Group 19 fungicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by TAVANO 5%SC Fungicide or other Group 19 Fungicides.

The following actions may prevent or delay fungicide resistance:

- Avoid consecutive use of TAVANO 5%SC Fungicide or other Group 19 fungicides against the same pathogens.
 - Use tank-mixes or premixes with fungicides from different target site of action Groups. Do this only with products that are registered for the same use and are effective at the tank mix or premix rate against the target pathogen(s).
 - Use fungicides as part of a comprehensive Integrated Pest Management (IPM) program.
 - Monitor treated fungal populations for loss of field efficacy.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer representative for fungicide resistance management and/or IPM recommendations for specific crops and resistant pathogens.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

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.

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 intervals. 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 unless wearing appropriate PPE.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: coveralls, socks, shoes, and chemical-resistant gloves.

Low rate (3.75 fl. oz./acre) may be used for preventative applications before onset of visible disease, in periods of low disease pressure, or in a tank mix with other fungicides for resistance management. Use higher rates (6.5 to 13.0 fl. oz./acre) when disease pressure is high, or in stand-alone applications.

MIXING AND APPLICATION INSTRUCTIONS

TAVANO 5%SC Fungicide may be applied by ground or aerial spray equipment or by chemigation through sprinklers. See the table below for information on application methods and timing for specific crops and diseases.

For spray application, mix TAVANO 5%SC Fungicide in water and apply as a spray to foliage, fruit, or other above-ground plant parts. For optimum control of labeled diseases, apply in sufficient volume of water to provide thorough coverage with minimal run-off.

See “Chemigation Instructions” below for information about applying TAVANO 5%SC Fungicide through irrigation systems.

Mixing instructions for TAVANO 5%SC Fungicide:

- Shake well before use.
- Fill tank with water to ½ of the intended final volume.
- Start agitation of the spray tank.
- Add the appropriate amount of product to the tank according to the rates in this label.
- Agitate to ensure thorough mixing while adding the remaining required water.
- Do not allow the mixture to stand without agitation.
- Mix only the amount of solution needed to treat the desired area.

When tank mixing TAVANO 5%SC Fungicide with other products, observe all precautions and limitations on each separate product label.

When planning to mix this product with others, it is advisable to conduct a “jar test” to determine the physical compatibility of this product with the others. Using a quart jar, add the products (with agitation) to approximately one quart of water in the proportions they will appear in the final mixture. Add dry formulations first, followed by flowables, then emulsifiable concentrates like TAVANO 5%SC Fungicide last. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same sequence for adding required ingredients to the tank.

To assess the potential for phytotoxicity, test tank mixtures on a small number of plants prior to more widespread application.

If more applications or shorter intervals than indicated in the table below are needed to maintain disease control, alternate TAVANO 5%SC Fungicide with other fungicides having different modes of action to avoid or slow development of pathogen resistance. See “Resistance Management Recommendations” above for more information.

Use of an adjuvant may enhance spray coverage of dense crop canopy, or plants that are difficult to wet due to waxy or hairy surfaces. Use only adjuvants that are labeled for such uses. Refer to “Mixing and Application Instructions” above for information on testing physical compatibility of TAVANO 5%SC Fungicide with other products.

BANDED APPLICATION

Use the table below to determine the correct application rate in fluid ounces of product per 1,000 row feet based on row spacing and desired rate per acre. Mix the required amount of TAVANO 5%SC Fungicide in water and apply as banded spray (4” to 6” wide) centered over the planting furrow. The volume of water required per acre or per 1,000 row feet will depend on the application equipment used. Consult your local cooperative extension service if you need assistance calibrating band spraying equipment.

Rates for banded application: Find desired application rate in the left column. Read across the line to the correct row spacing indicated at the top to find the number of fluid ounces per 1000 row feet that will provide the desired application rate per acre.

Fluid oz. per acre	Fluid ounces per 1000 row feet														
	Space between rows (inches)														
	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
3.75	0.09	0.10	0.11	0.13	0.14	0.16	0.17	0.19	0.20	0.22	0.23	0.24	0.26	0.27	0.29
6.50	0.15	0.17	0.20	0.22	0.25	0.27	0.30	0.32	0.35	0.37	0.40	0.42	0.45	0.47	0.50
13.00	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	0.99

CHEMIGATION INSTRUCTIONS

GENERAL INFORMATION:

- Apply this product through pressurized irrigation systems such as sprinkler irrigation (including impact or microsprinklers, microjet, overhead boom, water gun, solid set, lateral move, end tow, side-roll, center pivot, or hand move, including mist-type systems); or with hand-held calibrated irrigation equipment (such as a hand-held wand with injector). Do not apply this product through any other type of irrigation system.
- Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- Public water system means a system for the provision to the public of piped water for human consumption if such 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.

CHEMIGATION INSTRUCTIONS (continued)

- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- The pesticide injection pipeline must 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, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and flush with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.

SPRINKLER CHEMIGATION:

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

CROPS, DISEASES AND APPLICATION RATES

BERRIES AND SMALL FRUITS:		
Amur river grape, Aronia berry, Bayberry, Bearberry, Bilberry, Blackberry, Blueberry, Buffalo currant, Buffaloberry, Che, Chilean Guava, Chokecherry, Cloudberry, Cranberry, Currant (red and black), Elderberry, European barberry, Gooseberry, Highbush cranberry, Honeysuckle (edible), Huckleberry, Jostaberry, Juneberry, Kiwi (fuzzy and hardy), Loganberry, Maypop, Mountain pepper berries, Mulberry, Muntries, Native currant, Partridgeberry, Phalsa, Pincherry, Raspberry (black and red), Riberry, Salal, Schisandra berry, Sea buckthorn, Serviceberry, Strawberry, Wild raspberries, Cultivars, varieties, and/or hybrids of these		
DISEASES/PATHOGENS	RATES	ADDITIONAL INFORMATION
Alternaria leaf spot and fruit rot (<i>Alternaria</i> spp.)	3.75 – 13.0 fl. oz./acre (0.21 – 0.72 oz. a.i./acre)	Apply as a foliar spray in sufficient water to provide thorough coverage. Can also be applied through overhead sprinkler irrigation. See "Chemigation Instructions" for additional information. Begin as a preventative application and continue on a 7-14 day interval as needed to maintain control. For control of <i>Botrytis</i> and other fruit diseases, begin applications at flowering.
Anthraxnose leaf & fruit rot (<i>Colletotrichum</i> spp.)*	Do not apply more than 4.2 oz. a.i./acre/season (6 appl. at max. rate).	
Gray mold/fruit rot/Botrytis blight (<i>Botrytis cinerea</i>)		
Powdery mildew (<i>Sphaerotheca macularis</i> , <i>Erysiphe</i> spp.)		
*Suppression only. A rate of 6.5 fl. oz./acre may be used for preventative applications before onset of visible disease, in periods of low disease pressure, or in a tank mix with other fungicides for resistance management. Otherwise, use a rate of 13.0 fl. oz./acre.		

GRAPES: For pre-harvest use on all grapes		
DISEASES/PATHOGENS	RATES	ADDITIONAL INFORMATION
Gray mold/bunch rot (<i>Botrytis cinerea</i>)	3.75 – 13.0 fl. oz./acre (0.21 – 0.72 oz. a.i./acre)	For <i>Botrytis</i> bunch rot, apply at veraison and 7 days before harvest.
Powdery mildew (<i>Erysiphe</i> (<i>Uncinula</i>) <i>necator</i>)	Do not apply more than 4.2 oz. a.i./acre/season (6 appl. at max. rate).	For powdery mildew, begin as a preventative spray and repeat every 14 days as needed to maintain control.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in dry place away from food or feed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty container into application equipment. Triple rinse container (or equivalent) 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 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 or reconditioning (if available), or puncture and dispose of in a sanitary landfill or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

WARRANTY

Certis U.S.A. L.L.C. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purpose referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease problem, condition of the crop, incompatibility with other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage, or handling of this material not in strict accordance with directions given herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESSED OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

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