

DANGER
KEEP OUT OF REACH OF CHILDREN
READ LABEL BEFORE USE



Botector®



Active ingredient: 5×10^9 CFU/g (1000g/kg)
Aureobasidium pullulans (strains DSM 14940 and
DSM 14941) in the form of a water dispersible
granule

A biological fungicide to protect grapes from grey mould
(*Botrytis cinerea*) and kiwifruit from Sclerotinia
(*Sclerotinia sclerotiorum*) and Psa (*Pseudomonas*
syringae pv. *actinidiae*).



BOTECTOR®**GHS CLASSIFICATION**

Respiratory sensitisation Category 1, Skin sensitisation Category 1, Designed for biocidal action.

BOTECTOR® may only be applied by professional applicators

This product must not be used for any purpose, or in any manner, contrary to this label unless authorised under appropriate legislation.

DANGER

- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- Do not apply BOTECTOR® into or onto water. Avoid contamination of any water supply with product or empty container.
- Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

HANDLING PRECAUTIONS**STORAGE**

- Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs and out of direct sunlight. Store (refrigerated) at less than 8°C. DO NOT freeze. The product is stable for 30 months if stored this way. In the absence of cold storage, products stored at 20°C or below is stable for 18 months. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
- Stores containing 10000kg of BOTECTOR® require signage and 1000kg require emergency response plans

PERSONAL PROTECTION

- Avoid skin or eye contact and inhalation of dust or spray mist. When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist, a washable hat, protective gloves and disposable face mask covering mouth and nose. In case of inadequate ventilation wear respiratory protection. When using the prepared spray wear protective gloves, cotton overalls buttoned to the neck and wrist and a washable hat. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash contaminated clothing daily after use.

EQUIPMENT

Do not apply BOTECTOR® by air. Apply with well-maintained and calibrated equipment.

DISPOSAL

- Triple rinse empty container and add rinsate to the spray tank. Recycle empty container, otherwise crush and bury in a suitable landfill.
- Dispose of product only by using according to the label, or at an appropriate landfill.

SPILLAGE

Collect spillage. Wear appropriate protective clothing and prevent material from entering waterways. Contain liquid spills and absorb with inert material. Sweep up solids without creating dust. Wash area with water and detergent, absorb with further inert material and dispose of waste safely in an approved landfill.

FIRST AID

If medical advice is needed, have the product container or label at hand. If swallowed do NOT induce vomiting. IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: call the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs get medical advice.

TRANSPORT

Do not carry more than 3kg of BOTECTOR® on a passenger service vehicle

RESISTANCE MANAGEMENT

BOTECTOR® works through aggressively colonising flower and fruit surfaces and competing for space and nutrients. As it does not directly attack the metabolism of fungal pathogens, there is little risk of resistance developing, even with frequent applications. BOTECTOR® may be used in rotation with conventional fungicides, or in tank mixture with compatible fungicides, to contribute to disease control and to reduce the pressure of resistance development to chemical pesticides.

MIXING

1. Clean the tank before using
2. Do not prepare highly concentrated pre-mixtures
3. Add water to the tank. Do not use hot water
4. Add BOTECTOR® to the water while stirring

If required, add compatible products and agitate. Follow all directions on the companion product label. Continue agitation while filling the tank. Agitate the spray solution before and during application, and after a stoppage. Use spray mixture within 8 hours of preparation.

COMPATABILITY

BOTECTOR® is compatible with a range of fungicides, insecticides and adjuvants, including wettable sulphur, copper fungicides (except copper oxychloride and Bordeaux mixture), Prolectus®, Teldor®, Switch®, Luna Sensation®, Luna Privilege®, Quintec®, Vivando®, Kasumin®, Actigard™, Prodigy™, Timorex Gold®, Latron B1956 and JMS Stylet-Oil®

Do not use a concentration of DuWett® or Flume® greater than 20ml/100L or Driftstop greater than 100ml/100L when using with BOTECTOR®.

BOTECTOR® is not compatible with lime sulphur, captan, mancozeb, Delan®, Talendo®, Flint®, Acrobat MZ®, difenoconazole, mancozeb, folpet, and fluazinam products.

Compatibility of BOTECTOR® with streptomycin products has not been confirmed.

Ensure a 3-day interval is adhered to both pre-and post the BOTECTOR® application when using a non-compatible product. Contact your Nufarm representative for additional compatibility information.

Tank Cleaning: Flush spray equipment thoroughly with several rinses of clean water after use.

GENERAL INFORMATION

It is an offence to use the product on animals.

BOTECTOR® is a biological fungicide containing two strains of a naturally occurring, non-pathogenic fungus. After application, BOTECTOR® multiplies rapidly and competes with the pathogen for space and nutrients at entry points on leaves, flowers, or fruit.

Because it does not move on plant surfaces, BOTECTOR® will not colonise fresh entry points created after the application has occurred. BOTECTOR® will not be effective against infection that has occurred prior to application, but can help reduce secondary spread.

Colonisation of BOTECTOR® at entry points can be affected by various factors including poor spray coverage, high temperatures, or heavy rainfall events.

Always apply BOTECTOR® in the morning or evening (not during the hottest part of the day), preferably under slow drying conditions.

Botrytis can be active at different stages in the growing season and this should be considered when planning preventative programmes. BOTECTOR® may be used alone (e.g. for organic production), or to supplement a conventional fungicide programme. (e.g. applied at early flowering or during the pre-harvest interval, or in tank mixture with a compatible fungicide.)

Sclerotinia infects kiwifruit when ascospores are released during warm, wet, humid weather over flowering. Apply BOTECTOR® during flowering to protect flower parts. BOTECTOR® can be applied at flowering to supplement a pre-flowering sclerotinia fungicide.

Psa in kiwifruit is particularly active in spring when conditions are cool, wet, and humid and kiwifruit are growing rapidly. BOTECTOR® should be applied prior to conditions that favour Psa infection. Aim to apply 1-3 days before an infection event, especially when a moderate-severe risk is indicated by the KVH Psa Infection Risk model. Use BOTECTOR® in a programme with alternative products.

DIRECTIONS FOR USE

CROP	PEST	RATE	CRITICAL COMMENTS
Grapes	Botrytis	Apply 100g/100L as a dilute spray to run-off. For a standard canopy* use a constant rate of 20L dilute spray per 100m row. Generally, between 700 and 1100 L/ha, based on row spacing. If bunch line spraying use 60% of the full canopy rate.	Apply as part of a botrytis bunch rot programme, using 3-5 applications, particularly when weather favours disease development. Critical infection periods may occur from early flowering (EL19-20) to 80% capfall (EL25), at pre-bunch closure (EL31-32), at veraison (EL35), and during the pre-harvest period (EL36-37). Apply using MEDIUM spray droplets. Ensure that the spray is directed to get good penetration of the canopy and coverage of flowers or bunches. Adjust rate of dilute product to your canopy density, growth stage and canopy height.
Kiwifruit	<i>Sclerotinia sclerotiorum</i>	Apply 75g/100L as a dilute spray to run-off	Apply 1-2 applications during flowering. Make the first application 5-8 days after the onset of flowering and a second application three days later if conditions favour disease development or flowering is extended. Thorough coverage is essential for good control. The addition of an adjuvant is not required.
	Psa <i>Pseudomonas syringae</i> pv <i>actinidiae</i>	Apply 50g/100L as a dilute spray to run-off.	Apply at 7–10 day intervals as required between budburst and 6 weeks post flowering. Use the shorter interval under high disease pressure and when vines are growing rapidly. Thorough coverage is essential for good control. Adjust water rate/ha to the canopy growth stage and density. The addition of a compatible wetting agent may be used to improve coverage.

*Where a standard canopy is Marlborough Sauvignon Blanc vertical shoot position pruned to 3-4 canes with the following dimensions at final trim:

- Canopy wall height = 1.5m
- Leaf layer number = 4-6

Restricted Entry Interval (REI): All crops: Until dry

The person in charge is responsible for making sure no person enters the application area before the end of the REI. If entering an application area during the REI, ensure appropriate Personal Protective Equipment (PPE) is worn.

WITHHOLDING PERIOD: (based on Good Agricultural Practice)

Grapes: 1 day

Grapes: Leaf plucking: Sheep must not be sent for slaughter, or milked for 2 months after being removed from the vineyard (and placed on clean food).

Kiwifruit: Not required when used according to label directions

EPA specified control: Apply a maximum of 10 applications per year, at a maximum rate of 4.5kg active ingredient/ha, with a minimum spray interval of 5 days, or a maximum of 4 applications per year, at a maximum rate of 1.5kg active ingredient/ha, with a minimum spray interval of 2 days.

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See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval Code HSR101029.

See www.epa.govt.nz for approval controls.

CONDITIONS OF SALE:**CAUTION: READ THIS NOTICE BEFORE OPENING THE CONTAINER**

If you open this container you will be deemed to have accepted the conditions below.

The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier or manufacturer of the product or any of their employees and agents.

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