

**KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

Botector® Fungicide



ACTIVE CONSTITUENT:
5 x 10⁹ cfu/g (1.000 g/kg) *Aureobasidium pullulans*
(strains DSM 14940 and DSM 14941)

A biological fungicide to protect grapes from infections by botrytis bunch rot / grey mould (*Botrytis cinerea*) as per the Directions for Use Table.



Nufarm

Grow a better tomorrow.

APVMA Approval No.: 82495/105881

DIRECTIONS FOR USE

RESTRAINTS:

DO NOT apply during the hottest part of the day when temperatures exceed 25°C.

DO NOT apply if it is likely to rain before the spray is dry.

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Grapes	Botrytis Bunch Rot / Grey Mould (<i>Botrytis cinerea</i>)	100 g / 100 L (minimum rate: 400 g/ha, maximum rate: 1 kg/ha)	Not required when used as directed	Botector should be applied as a preventative treatment within the recommended growth stages. Apply as part of a botrytis bunch rot program, using up to 4 applications, particularly when weather conditions favour disease infection. Application should ensure penetration of canopy and thorough even coverage of flowers/bunches, from growth stages EL 25-37.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

Botector should be applied preventatively within the recommended growth stages.

The product competes for space and nutrients with the pathogen.

Botector colonises entry points on the flowers or developing bunches that are present at the time of application, competing with the pathogen for space and nutrients.

Botector is not mobile on plant surfaces and as such will not colonise fresh entry points created after the application has occurred.

Botector will not be effective in controlling latent or active infection that has occurred prior to application, but can help reduce secondary spread through protection of uninfected bunches.

Botrytis can be active at different stages in the growing season within the vineyard and this must be taken into account when planning preventative programs.

Monitoring conditions in the vineyard that are suitable for botrytis activity can help to select ideal preventative timings for Botector use.

Colonisation of Botector at entry points can be affected by various factors including poor spray coverage, high temperatures, heavy rainfall events with 24 hours of application or the presence of chloride levels within spray water.

Always consider crop stage, environmental conditions and application guidelines when using Botector to maximise performance.

MIXING

Ensure the spray tank is thoroughly cleaned out prior to mixing, as residues of incompatible products in the tank can affect the viability of Botector.

Partly fill the spray tank with water and add the required amount of product while agitating. If required, add compatible products and agitate thoroughly. Continue agitation as filling of the tank is completed. Ensure the temperature of the tank mixture is below 25°C.

Agitate mixture before and during application. Use the spray mixture within 8 hours of preparation.

APPLICATION

Botector must be applied when the temperature is below 25°C, preferably under slow drying conditions.

Depending on weather conditions, *Botrytis* infection starts during the flowering period or later, and continues throughout the vegetation period.

Therefore, to ensure consistent protection against *Botrytis* infection, applications as a foliar spray into the bunch zone or the whole canopy at the following stages are recommended:

EL	Phenological Stage
25	80% of flower hoods fallen
31	Beginning of bunch closure
35	Start of berry softening
37	During ripening

Botector is not mobile within the canopy so coverage is critical. Apply sufficient water to wet all surfaces up to the point of run-off. Apply using MEDIUM spray droplets. Air-blast sprayers are recommended for application to vines with very dense foliage.

Botector can be applied up to the date of harvest.

DILUTE SPRAYING

Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop up to the point of run-off. Avoid excessive run-off. The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice. Add the amount of product specified in the Directions for Use table for each 100L of water. The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

CONCENTRATE SPRAYING

Use a sprayer designed and set up for concentrate spraying (i.e. a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy using a minimum water volume of 400 L. Determine an appropriate dilute spray volume (See Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate. Do NOT concentrate more than 2X. The mixing rate for concentrate can then be calculated in the following way:

EXAMPLE ONLY

1. Dilute spray volume as determined above: For example 800 L/ha
2. Your chosen concentrate spray volume: For example 400 L/ha
3. The concentration factor in this example is: 2X (i.e. $800 \text{ L} \div 400 \text{ L} = 2$)
4. If label rate is 100 g /100 L, so the concentrate rate becomes 2×100 , i.e. 200 g/100 L of concentrate spray.

The chosen spray volume (minimum 400 L), amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows. For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow Industry Best Practices.

APPLICATION BY GROUND-RIG

Apply as a MEDIUM spray in a minimum of 400 litres of water per hectare. Air assisted sprayers are recommended for use on vines with dense foliage/canopy to achieve thorough coverage of flowers/bunches.

Avoid application in very windy conditions or when the temperature and humidity cause rapid drying.

COMPATIBILITY

Botector is compatible with a variety of commercially available fungicides, insecticides and adjuvants.

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 compatibility details.

PROTECTION OF CROPS, NATIVE AND OTHER NONTARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Store (refrigerated) at less than 8°C. DO NOT freeze. The product is stable for 2 years if stored in this way. In the absence of cold storage, products that are stored at room temperature (20°C or below) are stable for 10 months.

Triple-rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. DO NOT burn empty containers or product.

SAFETY DIRECTIONS

Harmful If inhaled. Do not inhale dust. Repeated exposure may cause allergic disorders. Sensitive workers should wear protective clothing. When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist, a washable hat, disposable gloves and disposable dust face mask covering mouth and nose. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat. Wash hands after use. After each day's use wash contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126

ADDITIONAL STATEMENTS (WHS REGULATIONS 2011)

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

SAFETY DATA SHEET

For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or from the Nufarm website – www.nufarm.com.au

In case of emergency: Phone 1800 033 498 Ask for shift supervisor. Toll free 24 hours.

CONDITIONS OF SALE

"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

Nufarm Australia Limited
ACN 004 377 780
103-105 Pipe Road,
Laverton North Victoria 3026
Tel: (03) 9282 1000
nufarm.com.au

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