

# BOTECTOR®

**Biological fungicide for the suppression of grey mold (*Botrytis cinerea*) in grapes, berries, fruiting and leafy vegetables, ornamentals, herbs and spices, for the suppression of anthracnose fruit rot (*Colletotrichum acutatum*) and partial suppression of phomopsis leaf blight (*Phomopsis obscurans*) in berries.**

**COMMERCIAL**  
WATER DISPERSIBLE GRANULE

ACTIVE INGREDIENT:

*Aureobasidium pullulans* DSM 14940 and DSM 14941      5 x 10<sup>9</sup> CFU/g

**REGISTRATION NO. 31248 PEST CONTROL PRODUCTS ACT**

KEEP OUT OF REACH OF CHILDREN  
READ THE LABEL BEFORE USING

CAUTION:  
POTENTIAL SENSITIZER

## REGISTRANT

SAN Agrow Holding GmbH  
Industriestraße 20  
3130 Herzogenburg, Austria

## DISTRIBUTOR

SAN Group Biotech USA, Inc.  
1260 Avenida Chelsea, Vista, CA  
92081 USA  
Phone: (800) 876-2767

DELL TECH LABORATORIES LTD.  
1331 HYDE PARK RD, UNIT 3  
LONDON ON N6H 5M5  
519-858-5024

Net Contents: 0.4 kg / 1.0 kg / 1.2 kg  
Date of Manufacture:

**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

**FIRST AID:****If swallowed:**

Call a poison control centre 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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:**

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:**

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 centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. May cause sensitization. Avoid contact with eyes, skin or clothing. Avoid inhaling/breathing dusts or spray mist. Wear a long-sleeved shirt, long pants, waterproof gloves, socks and shoes and a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter when handling, mixing/loading or applying the product and during all clean-up/repair activities. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity, such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

**ENVIRONMENTAL PRECAUTIONS:**

To reduce runoff from treated areas into aquatic habitats avoid application to areas with moderate to steep slope, compacted soil or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

**STORAGE:**

Store this product away from food or feed. Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. Maximum storage period of 18 months at room temperature (20°C) or 30 months at cool storage (8°C) from date of manufacture.

**DISPOSAL:**

1. Triple- or pressure rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. Dispose unwanted product in accordance with municipal or provincial regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**DIRECTIONS FOR USE**

DO NOT apply by air.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters. For guidance contact the Provincial Regulatory Agency.

The spray solution should be used within 8 hours of being prepared.

**Restricted-Entry Interval (REI):** DO NOT allow worker entry into treated areas for 4 hours or until sprays have dried unless wearing waterproof gloves, long-sleeved shirt, long pants, socks and shoes.

**General description of the product and basic use information**

BOTECTOR® is a preventive biological fungicide for the

- suppression of grey mold (*Botrytis cinerea*) in grapes, berries, fruiting and leafy vegetables, ornamentals, herbs and spices
- suppression of anthracnose fruit rot (*Colletotrichum acutatum*) and partial suppression of phomopsis leaf blight (*Phomopsis obscurans*) in berries

The product contains two strains of *Aureobasidium pullulans* (DSM 14940 and DSM 14941), which provide suppression or partial suppression of grey mold and other labelled diseases. Apply BOTECTOR® as a foliar spray alone or in alternating spray programs with other registered crop protection products. Heavy rainfall, or irrigation shortly after application of the product may require a retreatment. Apply

preventatively preferably in the morning or evening hours and during cool temperatures. Apply BOTECTOR® as a foliar spray using standard spraying equipment.

#### INTEGRATED PEST MANAGEMENT (IPM)

Integrate BOTECTOR® into an overall pest management strategy to reduce the use of chemical fungicide and chemical resistance. Follow practices known to reduce disease development. Observe forecast system, if available. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

FRAC Code: NC (not classified)

#### CROP TOLERANCE:

BOTECTOR® does not cause any phytotoxicological reaction if used according to label recommendation.

#### USE RATE DETERMINATION

Read carefully and follow all label directions, recommendations, use rates and restrictions. Application of BOTECTOR® prior to the disease onset or in the early stages of the disease development provides the best results for management of the target plant disease. Use the specified maximum label rates and shorter spray intervals for conditions conducive to rapid disease development. For proper application, determine the surface area to be treated, the label use rate and select appropriate water amount to ensure good canopy penetration and coverage of plant parts to be protected. Spray plants to the point of running-off. Prepare only the amount of spray solution required to treat the measured acreage.

#### PREHARVEST INTERVAL:

BOTECTOR® can be used up to and including the day of harvest PHI = 0 days.

#### MIXING INSTRUCTIONS

1. Clean tank before using.
  2. Do not prepare highly concentrated premixtures such as thick slurries.
  3. Add the full water amount to the tank. Do not use hot water.
  4. Add BOTECTOR® to the water slowly or step-wise while constantly agitating.
- The spraying suspension should be agitated during application. Use spray suspension within 8 hours. Do not leave unsprayed suspension in the tank.

#### COMPATIBILITY:

Do not apply Botector within three days of another pesticide application. For product compatibility information, contact SAN Group Biotech USA, Inc.

**BOTECTOR® suppresses the following diseases, unless otherwise indicated.**

#### Application Table:

Crop	Disease	Application Rate*	Number of applications per year or crop cycle (min. interval in days)	Timing
Field				
Grape	Grey mold ( <i>Botrytis cinerea</i> )	0.5-1 kg/ha in 1,000 L/ha water volume to whole canopy or 0.5-0.75 kg/ha, if applying into wine	4	BBCH 68-89 * (to be applied according to the phenological development)

		grape bunch zone only The spray volume is to be adapted according to the phenological development stage.		stage indicated below)
Blackberry, Blueberry, highbush, Blueberry, lowbush, Cranberry, Currant, black, Currant, red, Elderberry, Gooseberry, Huckleberry, Jostaberry, Raspberry, black, Raspberry, red, Strawberry	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L of water/ha	6 (Repeat applications on a 7-10 day interval up to harvest.)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
Blueberry, highbush Blueberry, lowbush Strawberry	Anthraco nose fruit rot ( <i>Colletotrichum acutatum</i> )	1kg/ha in 500-2000 L of water/ha	6 (Repeat applications on a 7-10 day interval up to harvest.)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
Strawberry	Partial suppression of Phomopsis leaf blight ( <i>Phomopsis obscurans</i> )	1kg/ha in 500-2000 L of water/ha	6 (Repeat applications on a 7-10 day interval up to harvest.)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
Tomato Eggplant Pepper, bell Pepper, nonbell	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	5 (Repeat applications on a 7-10 day interval up to harvest.)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
Lettuce, head and leaf Endive Radicchio (red chicory)	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	weekly (Repeat applications on a 7 day interval up to harvest.)	Begin preventive applications soon after emergence or transplant, if climatic conditions are favorable for infection as well as at first sign of disease onset.
<b>Greenhouse</b>				
Strawberry	Anthraco nose fruit rot ( <i>Colletotrichum acutatum</i> )	1 kg/ha in 500-2000 L/ha water volume	6 (Repeat applications on a 7-10 day interval up to harvest)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
	Partial suppression of Phomopsis leaf blight ( <i>Phomopsis obscurans</i> )			
	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume		

Tomato Eggplant Pepper, bell Pepper, nonbell	Grey mold ( <i>Botrytis cinerea</i> ),	0.75 kg/ha in 500-2000 L/ha water volume	5 (Repeat applications on a 7-10 day interval up to harvest.)	Preventive, if climatic conditions are favorable for infection as well as at first sign of disease onset.
Lettuce, head and leaf Endive Radicchio (red chicory)	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	weekly (Repeat applications on a 7 day interval up to harvest.)	Begin preventive applications soon after emergence or transplant, if climatic conditions are favorable for infection as well as at first sign of disease onset.
<b>Greenhouse and Field</b>				
Parsley	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	weekly (Repeat applications on a 7 day interval up to harvest.)	Begin preventive applications soon after emergence or transplant, if climatic conditions are favorable for infection as well as at first sign of disease onset.
<b>Herbs and Spices:</b> Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia (bark and buds), Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf or seed), Cumin, Curry (leaf), Dill (seed), Epazote, Fennel Seed (common and	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	weekly (Repeat applications on a 7 day interval up to harvest.)	Begin preventive applications soon after emergence or transplant, if climatic conditions are favorable for infection as well as at first sign of disease onset.

Florence), Fenugreek, White ginger flower, Grains of Paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.				
<b>Ornamentals, grown Outdoors, in Greenhouses or in Protected Environments</b>				
African violet, Asters, Begonia, Chrysanthemum, Cyclamen, Cymbidium, Dahlia, Fuchsia, Gerbera, Geranium, Gladiolus, Hydrangea, Marigolds, Orchids, Pansy, Pelargonium, Petunia, Poinsettia, Primrose, Primula, Ranunculus, Rose, Snapdragon, Zinnia	Grey mold ( <i>Botrytis cinerea</i> )	0.75 kg/ha in 500-2000 L/ha water volume	weekly (Repeat applications on a 7 day interval up to harvest.)	Begin preventive applications soon after emergence or transplant, if climatic conditions are favorable for infection as well as at first sign of disease onset.

**Note: BOTECTOR® will suppress the above listed diseases under low to moderate disease pressure; however, it may only partially suppress these diseases under high disease pressure.**

\* **Application timing for grapes:** BOTECTOR® should be applied preventatively within the recommended growth stages. Botrytis infection starts, depending on weather conditions, already during the flowering period or later, throughout the vegetation period. Therefore, to ensure suppression of grey mold infection on grapes, applications at the following stages of grapevine are recommended:

BBCH	Phenological Stages	Sensitive stage
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68	80% of flower hoods fallen	versus latent infection and infection of flower residues, depending on weather conditions
77	begin of bunch closure	versus stalk- and berry-infection
85	start of berry softening	versus berry-infection (susceptible grapes)
85-89	during ripening	versus berry infection (susceptible grapes, depending on weather conditions)

**Application equipment:**

Apply BOTECTOR® as a foliar spray using standard spraying equipment.

BOTECTOR is a registered trademark of a member of SAN Group (IR-1008746)