

Production date: 30.10.2012  
Revision: 01.09.2015  
Trade name: Botector®

## I. PRODUCT INFORMATION

**TRADE NAME:** Botector®  
**MANUFACTURER:** bio-ferm GmbH, Technopark 1, A – 3430 Tulln, Austria  
**DISTRIBUTOR:** Westbridge Agricultural Products, 1260 Avenida Chelsea, Vista, California 92081, USA  
**POISON CONTROL** 1(800)222-1222  
**USE:** A biological agent for the protection of pome fruit from storage diseases, grapes from Botrytis, berries from Anthracnose, Botrytis, Phomopsis and Rhizopus Fruit Rot, and stone fruit from Monilinia (EPA Reg. No. 86174-3)

## II. HAZARDOUS INGREDIENTS

Botector and its ingredients are not listed in the Hazardous Materials List and are not listed as potential carcinogens in OSHA Regulations 29 CFR 1910, Title III of SARA, EPA, RCRA, NTP, IARC, or Extremely Hazardous Substance or Toxic Chemical as defined in Section 302(a)(2) and 313(c) of Federal Register 52 FR (13378-13410 and 347983).

KEEP OUT OF REACH OF CHILDREN

### PRECAUTIONARY STATEMENTS:

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear waterproof gloves. Remove and wash contaminated clothing before reuse.

## III. FIRST AID INFORMATION

**HMIS RATINGS:** Health Hazard: 1 Fire Hazard: 0 Physical Hazard: 0

**EYES:** Flush with water for at least 10 minutes and seek medical advice.  
**INGESTION:** 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 a poison control center or doctor.  
Do not give anything by mouth to an unconscious person.  
**SKIN:** Take off contaminated clothing.  
Rinse skin immediately with plenty water for 15-20 minutes.  
Call a poison control center or doctor for treatment advice.  
**INHALATION:** Remove from source of exposure. Supply fresh air; consult doctor in case of complaints.

### SUSPECTED CANCER AGENT?

X  NO: Federal OSHA, NTP, IARC, Cal/OSHA

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**INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

Symptomatic treatment. According to the results of a test for minimum inhibitory concentration (MIC) Itraconazole treatment would provide sufficient efficacy against *Aureobasidium pullulans*.

**III. PHYSICAL DATA**

<b>PHYSICAL STATE:</b>	Granule
<b>COLOUR:</b>	Off-white to light pink
<b>ODOUR:</b>	similar to bread
<b>MELTING POINT/RANGE (°C):</b>	Not available.
<b>BOILING POINT/RANGE (°C):</b>	Not applicable.
<b>FLASH POINT (°C):</b>	Not applicable.
<b>IGNITION TEMPERATURE (°C):</b>	Product is not flammable (EEC A.10)
<b>DANGER OF EXPLOSION:</b>	Not an explosion hazard. (EECA.14)
<b>SOLUBILITY IN WATER:</b>	Dispersible
<b>pH-VALUE (10g/l) at 20°C:</b>	6.6

**IV. FIRE AND EXPLOSION HAZARD DATA**

<b>FLASH POINT (°C):</b>	N/A
<b>AUTOIGNITION TEMPERATURE:</b>	N/A
<b>EXTINGUISHING MEDIA:</b>	CO <sub>2</sub> , dry chemical powder, foam or water.
<b>UNSUITABLE EXTINGUISHING MEDIA:</b>	Not applicable.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Not applicable.
<b>UNUSUAL FIRE AND EXPLOSION HAZARD:</b>	Not applicable.
<b>FIRE-FIGHTER PROTECTIVE CLOTHING:</b>	Use protective clothing suitable to the situation.

**V. REACTIVITY DATA**

**STABILITY:** Product stable at room temperature.  
**INCOMPATIBILITY (materials to avoid):** Non recorded.  
**DECOMPOSITION HAZARD:** None known under normal storage conditions.  
**CONDITIONS TO AVOID:** Keep dry.

**VI. TOXICOLOGY****ACUTE TOXICITY:**

<b>Oral toxicity:</b>	LD <sub>50</sub>	>2000 mg/kg (rat)
<b>Dermal toxicity:</b>	LD <sub>50</sub>	>2000 mg /kg (rat)
<b>Inhalation toxicity:</b>	LC <sub>50</sub> /4h	>5.18 mg/l (rat)

**PRIMARY IRRITANT EFFECT:**

<b>Skin:</b>	Not irritating (rabbit, OECD 404)
<b>Eye:</b>	Not irritating (rabbit, OECD 405)

**SENSITIZATION EFFECT:**

May cause sensitization (guinea-pig, OECD 405).

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**TOXICITY AT FREQUENT EXPOSURE:**

No information available.

**CORROSIVE EFFECT:**

No information available.

**CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE TOXICITY:****REPRODUCTIVE TOXICITY:**

No information available.

**MUTAGENICITY:**

The strain DSM 14941 did not show mutagen characteristics in the Micronucleus Test in erythrocytes of mammals (EC B12).

**CARCINOGENICITY:**

No information available.

**ADDITIONAL TOXICOLOGICAL INFORMATION:**

The strain DSM 14941 did not show infectivity in an oral (OPPTS 885.3050), inhalative (885.3150) and subcutaneous test (OPPTS 885.3200) on infectivity.

**VII. ECOTOXICITY INFORMATION****AQUATIC TOXICITY:**

EC <sub>50</sub> /48h	>200 mg/l (Water flea ( <i>Daphnia magna</i> ))
EC/LC <sub>50</sub> /21d	>200 mg/l (Water flea ( <i>Daphnia magna</i> ))
EC <sub>50</sub> /7d	>100 mg/l (Water lense ( <i>Lemna minor</i> ))
EC <sub>50</sub> /7d	>250 mg/l (Water lense ( <i>Lemna gibba</i> ))
EC <sub>50</sub> /72h	>100 mg/l (Algae ( <i>Pseudokirchneriella subcapitata</i> ))
EC <sub>50</sub> /96h	>100 mg/l (Rainbow trout ( <i>Oncorhynchus mykiss</i> ))

**EFFECT ON EARTHWORMS:**

LC <sub>50</sub> /14d	>1000 mg/kg soil (earthworm ( <i>Dendrobena hortensis</i> ))
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**EFFECT ON SPIDER MITES:**

A laboratory test with the predatory mite *Typhlodromus pyri* resulted in a LR<sub>50</sub> above the maximum application rate.

**EFFECT ON BIRDS:**

LD <sub>50</sub> /30d	>2000 mg/kg-bw*
ID <sub>50</sub> /30d	>2000 mg/kg-bw*

\* Data refer to a product which contains the strain *Aureobasidium pullulans* DSM 14941.

**EFFECT ON BEES:**

LD <sub>50</sub> /22d	>200 µg/bee
NOEC/22d	200 µg/bee

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**PERSISTENCE AND DEGRADABILITY:**

Degradation in soil: The product is easily biodegradable.  
Not hazardous to water.

**BIOACCUMULATIVE POTENTIAL:**

No information available.

**MOBILITY IN SOIL:**

No information available.

**RESULTS OF PBT AND VPVB ASSESSMENT:**

Not applicable

**VIII. PERSONAL PROTECTIVE EQUIPMENT**

**VENTILATION REQUIREMENTS:** Use in a well ventilated area.

**SPECIFIC PERSONAL PROTECTIVE EQUIPMENT (PPE):**

**EYE:** Protective eyewear

**RESPIRATORY:** Mixer/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Following manufacturers' instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**GLOVES:** Waterproof gloves

**BODY PROTECTION:** Long-sleeved shirt and long pants. Shoes plus socks.

**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.

**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 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 about personal protective equipment (PPE), and restricted entry intervals (REI). The requirements in this section only apply to uses of this product that are covered by the Worker Protection Standard.

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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

Waterproof gloves

Shoes plus socks

## IX. ACCIDENTAL RELEASE

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Wear protective clothing, goggles, gloves: Ventilate area, minimize direct contact with skin and eyes and prevent inhalation.

Collect spilled material and place into a clean, covered container for disposal. Cover container loosely and prevent the formation of dust.

**Always dispose of waste materials in accordance with all State, Federal and Local Regulations**

**OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES, NATURAL PONDS, ESTUARIES, AND COMMERCIAL FISH FARM PONDS:**

### SPRAY DRIFT REDUCTION MANAGEMENT:

The interaction of equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all factors when making application decisions. Avoiding spray drift is the responsibility of the applicator. Use the following as a guide for reducing drift onto non-target sites.

### BUFFER ZONE REQUIREMENTS:

**GROUND/FOLIAR APPLICATIONS:** Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish farm ponds.

**WIND SPEED RESTRICTIONS:** Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. Droplet size, canopy, and equipment specifications may also determine drift potential at any given wind speed.

Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Avoid applications when wind direction is toward aquatic areas.

**RUNOFF MANAGEMENT:** Do not apply within 10 feet of aquatic areas. Consult your local Soil Conservation Service before using this product on erodible soils. Do not apply if soil is saturated with water. Do not apply under conditions that favor runoff from drift.

## X. SPILL, LEAK, STORAGE AND DISPOSAL PROCEDURES

### PESTICIDE STORAGE:

Botector must be stored out of direct sunlight in a cool dry place. Do not freeze. From date of manufacturer, product can be stored: 10 months at room temperature ( $\leq 68^{\circ}\text{F}$ ;  $\leq 20^{\circ}\text{C}$ ) or 24 months at

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cold temperature ( $\leq 46^{\circ}\text{F}$ ;  $\leq 8^{\circ}\text{C}$ ). Store only in original container in an area designated for pesticide storage. Keep out of reach of children.

#### PESTICIDE DISPOSAL:

For disposal, follow all applicable Federal, State and local regulations.

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

Do not dispose waste or remains together with domestic waste; do not empty into sink or toilet.

Do not let enter into drains/surface water bodies or ground water.

#### CONTAINER HANDLING:

Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

#### ENVIRONMENTAL PRECAUTIONS:

For terrestrial uses: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

### XI. TRANSPORTATION

**DOT:** Non-regulated

**IMDG/GGVSee:** Not Classified

**IMDG/GGV-Class:** Not Classified

**ICACO-TI & IATA-DGR:** Not Classified

**ADR/RID-GGVSE:** Not Classified

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

### XII. REGULATORY INFORMATION

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

This product contains no substances which are denoted as toxic chemicals under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

**CERCLA:** Not Regulated

**TSCA:** Not Regulated

**PROPOSITION 65:** This product does not contain any substance(s) which are deemed by the state of California to cause cancer, birth defects, or other reproductive effects.

This document complies with the U.S. Department of Labor's Occupational Safety and Health Administration's (OSHA) requirements.