

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Trade name: BOTECTOR®
Reg No.: MAPP 19443

1.2 Relevant identified uses of the substance or mixture and uses advised against

Plant protection product.

1.3 Details of the supplier of the safety data sheet

Supplier: bio-ferm, Biotechnologische Entwicklung und Produktion GmbH
Address: Erber Campus 1
3131 Getzersdorf
Country: Austria

Information contact:

Company: bio-ferm, Biotechnologische Entwicklung und Produktion GmbH
Phone: +43 (0) 2782 803-0
Fax: +43 (0) 2782 803-11244
Email: office@bio-ferm.com

1.4 Emergency telephone number

Call local emergency information

2 HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Not classified, the classification criteria are not met.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazard statements:

EUH208: Contains *Aureobasidium pullulans*. May produce an allergic reaction.

EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P261: Avoid breathing dust.
P270: Do not eat, drink, or smoke when using this product.
P280: Wear protective gloves.
P391: Collect spillage.
P501: Dispose of contents/container to a licensed waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

Microorganisms may have the potential to provoke sensitizing reactions.
The substances contained in the product do are not classified as PBT- or vPvB-substance.

3 COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

This product is a mixture.

3.2 Mixtures

Substance name: *Aureobasidium pullulans* DSM 14940
CAS-No.: 67891-88-7
Concentration: 50%
Classification acc. to Regulation (EC) No 1272/2008: -

Substance name: *Aureobasidium pullulans* DSM 14941
CAS-Nr.: 67891-88-7
Concentration: 50%
Classification acc. to Regulation (EC) No 1272/2008: -

4 FIRST-AID-MEASURES**4.1 Description of first aid measures**

General advice: Remove from source of exposure. No specific treatment after contact with cells of *A. pullulans* is required since no specific clinical symptoms are known to occur. As a general precautionary measure, persons who may want to seek medical advice, should inform the physician about the identity of the fungus on species level, and may show the label of the packing as supporting information. In case of severely immunocompromised persons, an antifungal treatment may be chosen despite the lacking infectiveness of this strain.

Inhalation: Supply fresh air; consult doctor in case of complaints.

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

Skin contact: Remove contaminated clothes; wash the affected skin with water and soap. If symptoms persist, seek medical advice.

Eye contact: Rinse open eyes immediately with plenty of water for at least 10 minutes. If symptoms persist, seek medical advice.

Ingestion: Flush with copious amounts of water (only if person is conscious). If symptoms of indisposition persist, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No symptoms known or expected.

4.3 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*.

5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable: CO₂, dry chemical powder, foam or water spray
Unsuitable: not recorded

5.2 Special hazards arising from the substance or mixture

Not recorded

5.3 Advice for fire-fighters

Regarding the product, no special protective equipment is necessary. Use protective equipment suitable to the situation.

6 ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Please notice instructions for person-related safety precautions and wear protective equipment (see 8).

6.2 Environmental precautions

No special measures required.

6.3 Methods and material for containment and cleaning up

Cells of *Aureobasidium pullulans* can be inactivated by heating above 80 °C or by spraying with a disinfecting agent (e.g. 70% ethanol). Collect spilled material with shovel, place into a clean container

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

and cover container loosely. Prevent formation of dust. Place into lockable, labeled salvage container for disposal according to the regulations.

6.4 Reference to other sections

Protective measures in Section 7 and 8. Waste disposal in Section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

To avoid risks to man and the environment, comply with the instructions for use. Misuse can lead to injury of health. Prevent formation of dust. Ensure good ventilation/exhaustion at the workplace. Refer to Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in a cool, well ventilated and dry place. Consider expiry date. Do not freeze. For reasons of storage stability do not expose the product to temperatures above 40°C. Do not store the product above 20°C for a longer period. Refer to the product label.

Information about storage in one common storage facility

Do not store food, beverages and animal feeding stuffs in the storage area.

Further information on storage conditions

Keep out of the reach of children and domestic animals.

7.3 Specific end uses

Plant protection product. Refer to the product label.

8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

If ventilation on working space is insufficient, an exhaustor should be installed.

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

8.2.2 Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Eye/Face protection: Safety goggles or face protection.

Skin protection: Rubber gloves or synthetic gloves.

Respiratory protection: In case of extensive formation of dust a protective dust mask is recommended.

Body protection: Protective work clothing (e.g. boots, long-sleeved body covering clothing).

General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Avoid unnecessary contact with the product. Do not eat, drink or smoke at workplace and keep it tidy. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Use Rubber gloves or synthetic gloves when handling the product.

8.2.3 Environmental exposure control

See section 6 and 7.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Granule
Color:	pale pink to pale brown
Odor:	similar to bread
Melting point/range (°C):	Not applicable.
Boiling point/range (°C):	Not applicable.
Flash point (°C):	Not applicable.
Ignition temperature (°C):	Product is not flammable. (EEC A.10)
Danger of explosion:	Product does not present an explosion hazard. (EEC A.14)
Solubility in/ Miscibility with water:	Dispersible.
pH-value (10g/l) at 20°C:	5 - 7

9.2 Other safety information

No further safety related physical-chemical data are known.

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

10 STABILITY AND REACTIVITY

10.1 Reactivity

Not determined

10.2 Chemical stability

Refer to 7.2.

10.3 Possibility of hazardous reactions

No dangerous reactions known if used according to specifications.

10.4 Conditions to avoid

Product must be stored out of direct sunlight in a cool dry place. Do not freeze. For reasons of storage stability, do not expose the product to temperatures above 40°C. Do not store the product above 20°C for a longer period. Keep dry. Consider information on expiry date on the product label!

10.5 Incompatible materials

Not recorded

10.6 Hazardous decomposition products

No hazardous decomposition products under normal storage conditions known.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD ₅₀ > 2000 mg/kg (Rat)
Acute dermal toxicity	LD ₅₀ > 2000 mg/kg (Rat)
Acute inhalation toxicity	LC _{50/4h} > 5.18 mg/L (Rat)
Skin irritation:	Not irritating (rabbit, OECD 404)
Eye irritation	Not irritating (rabbit, OECD 405)
Sensitization	May cause sensitization by skin contact (guinea-pig, OECD 406)

Assessment STOT Specific target organ toxicity – repeated exposure

No further relevant information available

Toxicity to reproduction

No further relevant information available

Carcinogenicity

No further relevant information available

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

Mutagenicity

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

Reproductive toxicity

No further relevant information available

Additional toxicological information

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

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity

EC₅₀/48h >200 mg/L (Water flea (*Daphnia magna*))
EC/LC₅₀/21d >200 mg/L (Water flea (*Daphnia magna*))
EC₅₀/7d >100 mg/L (Water lense (*Lemna minor*))
EC₅₀/7d >250 mg/L (Water lense (*Lemna gibba*))
EC₅₀/72h >100 mg/L (Algae (*Pseudokirchneriella subcapitata*))
EC₅₀/96h >100 mg/L (Rainbow trout (*Oncorhynchus mykiss*))

Effects on earthworms

LC₅₀/14d >1000 mg/kg soil (Earthworm (*Dendrobena hortensis*))

Effects on spider mites

A laboratory test with the predatory mite *Typhlodromus pyri* resulted in a LR₅₀ above the maximum application rate.

Effects on birds

LD₅₀/30d >2000 mg/kg-bw*
ID₅₀/30d >2000 mg/kg-bw*

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

Effects on bees

LD₅₀/22d >200 µg/bee
NOEC/22d 200 µg/bee

12.2 Persistence and degradability

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

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

12.3 Bioaccumulative potential

Evaluation of bioaccumulation is not relevant for microorganisms.

12.4 Mobility in soil

Evaluation of bioaccumulation is not relevant for microorganisms.

12.5 Results of PBT and vPvB assessment

Evaluation of bioaccumulation is not relevant for microorganisms.

12.6 Other adverse effects

No further relevant information available

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Do not reuse contaminated packaging for other purposes; dispose according to official regulations. Do not dispose waste or remains together with domestic waste, do not empty into sink or toilet, hand over to hazardous waste disposers. To minimize generation of left-overs, users are recommended to store not more than will be consumed within the shelf life period of the product. To minimize product waste, users are required not to prepare more than they will use for the treatment. Reminders of the spray shall be diluted and sprayed over already treated areas. Small amounts could be added to the compost.

European waste catalogue for unused product:

02 01 09 Agrochemical waste other than those mentioned in 02 01 08

14 TRANSPORT INFORMATION

14.1 UN-No

Not applicable.

14.2 Proper shipping name

Not applicable.

14.3 Class(es)

Road-/Rail transport ADR/RID-Class: no dangerous good

Maritime transport IMDG/GGVSee-Class: no dangerous good

Air transport ICAO-TI and IATA-DGR-Class: no dangerous good

Production date: December 11, 2018
Revision date: April 7, 2020
Trade name: BOTECTOR®

14.4 Packing group

Not applicable

14.5 Environmental hazards

Road-/Rail transport ADR/RID-Class: no dangerous good
Maritime transport IMDG/GGVSee-Class: no dangerous good
Air transport ICAO-TI and IATA-DGR-Class: no dangerous good

14.6 Special precautions for user

See Sections 6 to 8

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

The product is sold only in appropriate packaging.

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the mixture

EU regulations

The product is classified according to EC guidelines.

15.2 Chemical Safety Assessment

The mixture was not subject to a chemical safety assessment.

16 OTHER INFORMATION

Further information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Indication of changes (last version: 1)

Section: 1