

**Section 1 Identification of the mixture and of the company**
**1.1 Product identifier**

Product name Eco-Bb®  
 Synonyms Bb-Protec , Pest Pro , Bassidor

**1.2 Relevant identified uses of the mixture and uses advised against**

Use of the product Bioinsecticide  
 Uses advised against Do not use for any other purpose than described on the product label

**1.3 Details of the supplier of the Safety Data Sheet**

Manufacturer Andermatt PHP (Pty) Ltd  
 Address P.O. Box 207  
 Nottingham Road 3280  
 Kwazulu-Natal, South Africa  
 Phone +27 33 2666130  
 E-mail info@andermatt-php.co.za

**1.4 Emergency telephone number**

Phone (medical) +27 861555777 (South African Poison Information Centre)

**Section 2 Hazards identification**
**2.1 Classification of the mixture**

Conforms to the requirements of the GHS and to Section 14 of the Regulations for Hazardous Chemical Agents, 2021

Not Classified

**2.2 Label elements**
**Precautionary statements**

May cause eye irritation  
 Read the label before use  
 Keep out of the reach of children  
 Wear protective gloves/protective clothing/eye protection  
 In case of inadequate ventilation, wear respiratory protection  
 Do not eat, drink, or smoke when using this product.  
 Wash hands and face thoroughly after handling. Do not touch eyes  
 Avoid breathing dust, mist or spray.  
 IF IN THE EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.  
 IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical help. Take off contaminated clothing and wash it before reuse.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get emergency medical help immediately  
 Contaminated work clothing should not be allowed out of the workplace.  
 Dispose of contents and/or container in accordance with regulations  
 If medical advice is needed, have product container or label at hand

**Warning statements**

Contains *Beauveria bassiana*. Microorganisms may have the potential to provoke sensitising reactions

**2.3 Other hazards**

This mixture does not contain any substances, which are persistent, bioaccumulative and toxic (PBT), very persistent and very bioaccumulative (vPvB) or endocrine disruptors

**Section 3 Composition/information on ingredients**
**3.1 Substances**

This product is a mixture

**3.2 Mixtures**

*Beauveria bassiana* strain R444 spores in an inert carrier  
 There are no other ingredients which are hazardous within the meaning of GHS and South African Occupational Health and Safety Act (85/1993): Regulations for Hazardous Chemical Agents, 2021

**Section 4 First aid measures**
**4.1 Description of first aid measures**

## General notes

Change any contaminated or wetted clothing at once.  
 If poisoning occurs, contact a doctor or local poison/toxicology centre.

## Following inhalation

Move to fresh air, rest, half upright position, loosen clothing.  
 Oxygen or artificial respiration if there is difficulty in breathing.  
 Seek medical advice after significant exposure. Symptomatic treatment is advised.

## Following skin contact

Remove contaminated clothing. Seek medical advice if irritation develops. Launder clothes before reuse. After contact with skin, wash immediately with plenty of water.

## Following eye contact

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

## Following ingestion

No typical symptoms and effects known. Drink water.

## Advice to physician

Symptomatic treatment

**4.2 Most important symptoms and effects, both acute and delayed**

No typical symptoms and effects known.

**4.3 Indication of any immediate medical attention and special treatment needed**

None

**Section 5 Firefighting measures**
**5.1 Extinguishing media**

Suitable extinguishing media Water, Foam, Carbon dioxide

Unsuitable extinguishing media None

**5.2 Special hazards arising from the mixture**

Carbon monoxide, carbon dioxide

**5.3 Advice for firefighters**

None

**Section 6 Accidental release measures**
**6.1 Personal precautions, protective equipment and emergency procedures**

Use protective clothing, gloves, safety goggles and boots. Do not inhale.

**6.2 Environmental precautions**

Prevent entry of the product into drains and water. Contact the relevant authority if the product enters such water bodies.

**6.3 Methods and material for containment and cleaning up**

Sweep or vacuum, without creating dust, into a suitable container for disposal and wash area with water.

**6.4 Reference to other sections**

See personal protective equipment under Section 8 of SDS.

**Section 7 Handling and storage**
**7.1 Precautions for safe handling**

The usual precautions for handling chemicals should be observed. Ensure adequate ventilation when handling. Respiratory protection is recommended.

**7.2 Conditions for safe storage, including any incompatibilities**

Must be stored under cool, dry conditions between 4 and 10°C. Use within one month of opening. Avoid contact with fungicides and other chemicals that are toxic to microorganisms

**7.3 Specific end use(s)**

Bioinsecticide

**Section 8 Exposure controls/personal protection**
**8.1 Control parameters**

The usual precautionary measures for handling chemicals should be observed. Provide adequate ventilation.

**8.2 Exposure controls**

Eye/face protection	Wear a face shield or goggles
Skin protection	Use protective clothing, chemical-resistant gloves and boots
Respiratory protection	Respiratory protection is recommended
Thermal hazards	No specific recommendations
Other information	None

**Section 9 Physical and chemical properties**
**9.1 Information on basic physical and chemical properties**

Physical state	Powder
Colour	White
Odour	No odour
pH	7.3 (1% solution in water)
Melting point/freezing point	Not available
Initial boiling point and boiling range	Not applicable
Flash point	Not flammable
Flammability	Not flammable
Upper/lower flammability or explosive limits	Not flammable
Vapour pressure	Not applicable
Vapour density	Not relevant
Bulk density	0.58 g/mL

Solubility(ies)	Partly soluble
Moisture content	8%
Partition coefficient: n-cotanol/water	Not applicable
Auto-ignition temperature	Not available
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	Not explosive
Oxidising properties	Not determined
Corrosivity	Non-corrosive
Particle characteristics	2.41% by volume <10µm

**9.2 Other information**

None

**Section 10 Stability and Reactivity**
**10.1 Reactivity**

Not reactive

**10.2 Chemical stability**

No decomposition if stored and handled properly

**10.3 Possibility of hazardous reactions**

Not relevant

**10.4 Conditions to avoid**

Minimize dust formation. Avoid very low or very high temperatures.

**10.5 Incompatible materials**

Fungicides and other chemicals that are toxic to microorganisms

**10.6 Hazardous decomposition products**

None

**Section 11 Toxicological information**
**11.1 Information on toxicological effects**

Acute toxicity	Not classified Oral toxicity LD <sub>50</sub> (rat) > 3.13 × 10 <sup>8</sup> CFU/animal Dermal toxicity LD <sub>50</sub> (rat) > 5050 mg/kg
Skin corrosion/irritation	Not classified Rabbit, 500mg/animal
Acute eye damage/irritation	Not classified. May cause eye irritation Rabbit, 100 mg per eye
Respiratory or skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Classification is not possible.
Aspiration hazard	Not determined

**11.2 Information on other hazards**

Not applicable

**Section 12 Ecological information**

## 12.1 Toxicity

**Acute (short-term) toxicity**

Fish	Not classified <i>Danio rerio</i> : 96-hour LC <sub>50</sub> > 100 mg/L
Crustacea	Not classified <i>Daphnia magna</i> : 48-hour LC <sub>50</sub> > 100 mg/L
Algae/aquatic plants	Not determined
Other organisms	Quail, LD <sub>50</sub> > 5mL/kg body weight Honeybee, oral (96 hours) LD <sub>50</sub> > 100 x MFAR Honeybee, contact (96 hours) LD <sub>50</sub> > 100 x MFAR Green lacewing larvae, LC <sub>50</sub> > 1 x 10 <sup>8</sup> spores/g diet Ladybird beetle larvae, LC <sub>50</sub> > 1 x 10 <sup>8</sup> spores/g diet Parasitic wasp, LC <sub>50</sub> > 1 x 10 <sup>8</sup> spores/g diet Earthworm LC <sub>50</sub> > 1000mg/kg soil

**Chronic (long-term) toxicity**

Fish	<i>Danio rerio</i> : 21-day LC <sub>50</sub> > 100 mg/L. Not classified
Crustacea	Not determined
Algae/aquatic plants	Not determined
Other organisms	Not determined

## 12.2 Persistence and degradability

Abiotic Degradation	Not determined
Physical- and photo-chemical elimination	Not determined
Biodegradation	Not determined

## 12.3 Bioaccumulative potential

Octanol/water partition coefficient (K <sub>ow</sub> )	Not determined
Bioconcentration factor (BCF)	Not determined

## 12.4 Mobility in soil

Known or predicted distribution to environmental compartments	Not determined
Surface tension	Not determined
Adsorption/Desorption	Not determined

## 12.5 Results of PBT and vPvB assessment

This mixture does not contain any PBT or vPvB substances.

## 12.6 Other adverse effects

None

## 12.7 Additional information

None

**Section 13 Disposal considerations**
**13.1 Waste treatment methods**

Product/Packaging disposal	Use pressure rinsing devices or triple rinsing with water to reduce any product residues in the container to insignificant levels. Don't dispose product or containers on ponds, rivers or ditches. Don't re-use containers for other purposes. Waste disposal and recycling contractors will take cleaned containers. Waste resulting from the use of the product must be disposed on site or on an approved waste disposal facility. Empty the sprayer out in the field being treated by spraying out on to a relatively pest free part of the field left unsprayed or under-dosed for the crop.
Waste codes/waste designations	Not applicable
Waste treatment-relevant information	None
Sewage disposal-relevant information	No information available
Other disposal recommendations	None

**Section 14 Transport Information**
**14.1 UN number or ID number**

Not applicable

**14.2 UN proper shipping name**

No dangerous goods

**14.3 Transport hazard class(es)**

Not applicable

**14.4 Packing group**

Not applicable

**14.5 Environmental hazards**

Not environmentally hazardous

**14.6 Special precautions for user**

Not applicable

**14.7 Maritime transport in bulk according to IMO instruments**
**Section 15 Regulatory information**
**15.1 Safety, health and environmental regulations/legislation specific for the mixture**

Authorisations	Not relevant
Restrictions on use	Not relevant
Relevant safety regulations	Regulations for hazardous chemical agents 2021, Department of Employment and Labour (March 2021).
Relevant health regulations:	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). The National Environmental Management Act, 107 of 1998 (NEMA).
Relevant environmental regulations:	Guidelines on the administration of incidents, as described in section 30 of the NEMA, Department of Environmental Affairs (2019).

**15.2 Chemical Safety Assessment**

Advice on product handling can be found in sections 7 and 8 of this SDS.

### Section 16 Other information

The information only concerns the above-mentioned product and does not need to be valid if used with other products or in any process. The information is, to our best present knowledge, correct and complete and is given in good faith but without warranty. It remains the user's responsibility to make sure that the information is appropriate and complete for particular use of the product.