

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

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

**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 19 Petrus Stroom Road, Dargle, 3265  
 KwaZulu-Natal, South Africa  
 Phone +27 33 2666130  
 E-mail [info@andermatt-php.co.za](mailto:info@andermatt-php.co.za)

**1.4 Emergency telephone number**

Phone (medical) +27 861555777 (24-H; South African Poison Information Centre)  
 Emergency number: +27 82 446 8946 (24-H; GPIC)

**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

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	Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get emergency medical help immediately
Following skin contact	Wash with plenty of water. If skin irritation or rash occurs: Get medical help. Take off contaminated clothing and wash it before reuse.
Following eye contact	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.
Following ingestion	Rinse mouth with water for several minutes. Get medical help if you feel unwell.
Advice to physician	Symptomatic treatment

4.2 Most important symptoms and effects, both acute and delayed

Microorganisms may have the potential to provoke sensitising reactions.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

**Section 5 Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media Water, Foam, Carbon dioxide or dry powder may be used but select extinguishing media that is appropriate for local circumstances and the surroundings.

5.2 Special hazards arising from the mixture

Development of hazardous combustion gasses or vapours is possible in the event of fire.

5.3 Advice for firefighters

Avoid breathing vapours and combustion by-products that may be emitted. Use self-contained breathing apparatus and complete protective clothing. Do not attempt to act without suitable protective equipment

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

The wearing of suitable protective equipment (including personal protective equipment, see Section 8 of the SDS) to prevent any contamination of skin, eyes and personal clothing. Wash hands thoroughly after handling.

**6.2 Environmental precautions**

Do not apply directly to water courses or to areas where surface water is present. Do not dispose of rinsate or containers in water courses. Prevent spills from entering storm sewers or drains.

**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**

Wear protective gloves/protective clothing/eyewear.  
 Ensure that open wounds are covered.  
 Do not eat, drink, or smoke when using this product.  
 Wash hands and face thoroughly after handling.

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

Store in the original container under cool, dry conditions between 4 and 10°C. Avoid contact with fungicides and all materials toxic to microorganisms to maintain product quality. Keep out of reach of children and uninformed persons

**7.3 Specific end use(s)**

Bioinsecticide

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

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

**8.2 Exposure controls**

Eye/face protection	Wear eye protection
Skin protection	Wear protective clothing
Respiratory protection	In case of inadequate ventilation, wear respiratory protection.
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 according to recommendations

**10.3 Possibility of hazardous reactions**

No known hazardous reactions

**10.4 Conditions to avoid**

Avoid very low or very high temperatures.

**10.5 Incompatible materials**

Fungicides and toxic compounds (to maintain product viability)

**10.6 Hazardous decomposition products**

The mixture is not expected to produce hazardous decomposition products when used and stored properly

**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 Inhalation toxicity of the active: LC <sub>50</sub> > 3.22mg/L Pulmonary toxicity LD <sub>50</sub> (rat) > 1.25 × 10 <sup>8</sup> CFU/mL
Skin corrosion/irritation	Not classified Rabbit, 500mg/animal
Acute eye damage/irritation	Not classified. 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> : LC <sub>50</sub> > 2000mg/L <i>Oncorhynchus mykiss</i> : LC <sub>50</sub> > 1 x 10 <sup>4</sup> CFU/mL
Crustacea	Not classified <i>Daphnia magna</i> : EC <sub>50</sub> > 2000 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	Not determined
Crustacea	Not classified <i>Daphnia magna</i> : adverse effects at 1x10 <sup>5</sup> CFU/mL
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 (Kow)	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	Waste should not be disposed of by release to sewers
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.