

Section 1 Identification of the mixture and of the company

1.1 Product identifier

Product name Eco-77[®]
Synonyms T-77, Atroverde 77

1.2 Relevant identified uses of the mixture and uses advised against

Use of the product Biofungicide
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 *Trichoderma atroviride*. 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

Trichoderma atroviride strain 77B 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. Avoid contact with fungicides and other chemicals that are toxic to microorganisms.

7.3 Specific end use(s)

Biofungicide

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
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	Light grey
Odour	Odourless
pH	7.1 (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	0.52 g/mL
Solubility(ies)	Insoluble
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
Particle characteristics	0.37% w/w > 75µm
Corrosivity	Non-corrosive

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 ₅₀ (rat) > 5000 mg/kg Dermal toxicity: LD ₅₀ (rat) > 5050 mg/kg Inhalation toxicity: LC ₅₀ (rat) > 2.05 mg/L (the maximum attainable concentration)- no adverse effect
Skin corrosion/irritation	Not classified Rabbit, 500mg/animal Mean score ≤ 0.25.
Serious eye damage/irritation	Not classified May cause eye irritation Rabbit, 100 mg/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 ₅₀ > 1.00 x 10 ⁹ spores/L
Crustacea	Not classified <i>Daphnia magna</i> : LC ₅₀ > 1,00 x 10 ⁹ spores/L
Algae/aquatic plants	Not determined
Other organisms	Honeybee, oral (96 hours) LD ₅₀ > 100 x MFAR Honeybee, contact (96 hours) LD ₅₀ > 100 x MFAR Quail, LD ₅₀ > 5mL/kg body weight

Chronic (long-term) toxicity

Fish	Not classified <i>Danio rerio</i> : LC ₅₀ > 1.00 x 10 ⁹ spores/L
Crustacea	Not classified <i>Daphnia magna</i> : LC ₅₀ > 1,00 x 10 ⁹ spores/L
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 _{ow})	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 restricted

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

Not applicable

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).
Relevant environmental regulations:	The National Environmental Management Act, 107 of 1998 (NEMA). 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.