realIPM
biological crop protection



REAL METARHIZIUM 78

Reg. no. L11484 / Act 36 of 1947

Read the label before use. Peel open for full particulars. **Keep out of reach of children and animals.**

LIVE BIOLOGICAL CONTROL AGENT

REAL METARHIZIUM 78 is an emulsifiable spore concentrate that is used as a contact bio-insecticide. **REAL METARHIZIUM 78** doesn't kill predators or parasitoids, despite effectively killing a variety of insect pests including Spider mites.

This product is not classified as Hazardous under GHS

Active ingredient:
***Metarhizium anisopliae* Strain ICIPE 78.**
At least 1 x 10^9 cfu/ml.

1 ℓ

Approved by ECOCERT INPUTS

Controlled by ECOCERT F-32600

Product allowed for use in organic agriculture according to EU regulation 2018/848, 2021/1165 & the NOP

Registration holder:
realIPM South Africa (Pty) Ltd
Co. Reg. 2012/034646/07
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Emergency Number: +27 86 155 5777

Batch number:

Expiry date:

WARNINGS

WITHHOLDING PERIODS:

REAL METARHIZIUM 78 has a 0 day PHI on all other crops between the last application and period until harvest.

- Store in a cool, dark place out of direct sunlight at between 8-20 ˚C.
- Shake well before use.
- This product is not considered to be hazardous to humans or to the environment.
- The product is not toxic, infective or pathogenic via ingestion, skin contact or inhalation.
- The ingredients in this product are not listed by NTP, OSHA, or IARC as a carcinogen and have no known chronic side effects.

DISCLAIMER

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be effective under all conditions as the action and effect thereof might be affected by factors such as abnormal climatic or storage conditions, quality of dilution water in the spray tank, compatibility of other substances not indicated on the label, the resistance of the pest against the remedy concerned, as well as method and accuracy of the application.

Furthermore, the registration holder does not accept responsibility for damage to crops, vegetation, the environment, nor harm to man nor animal. Neither does the registration holder accept responsibility for lack of performance of the remedy due to failure of the user to follow the label instructions nor the occurrence of conditions, which could not have been foreseen in terms of registration.

Consult the supplier in the event of uncertainty.

PRECAUTIONS AND FIRST AID

Inhalation	This product is not considered to be a risk to the respiratory system. Do not inhale spray mist. If inhaled, move person to fresh air.
Skin contact	Remove contaminated clothing. Wash thoroughly with soap and water immediately. It may cause mild irritation. Get medical attention if irritation develops.
Eye contact	In cases of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Chronic	Call a physician if a large amount is swallowed. Do not give anything by mouth to an unconscious person.
Ingestion	Active ingredient has shown no mammalian toxicity.

- Wear protective clothing, rubber gloves and face mask when mixing.
- Do not eat, drink or smoke whilst mixing or applying, nor before washing hands and face.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams and areas not under treatment.
- Rinse empty containers three times with a volume equal to 10% of the volume of the container. Add the rinsings into the contents of the spray tank.
- Empty container can be recycled or disposed of in a safe way.
- Prevent contamination of food, feeds and drinking water.
- In case of spillage, absorb the liquid and scrub the area.

MODE OF ACTION

REAL METARHIZIUM 78 is a contact bio-pesticide that does not need to be ingested for effective action.

Once the **REAL METARHIZIUM 78** spores come into contact with the cuticle of the target pest, they germinate, secreting enzymes which are specific in their ability to weaken the insect cuticle. This action then allows the fungus to penetrate the insect cuticle and feed on the insect's internal organs, ultimately killing the pest.

Insect death occurs between 3-5 days in small insects and 5-7 days in larger insects, dependent on the fungal load, temperature and pest life stage.

DIRECTIONS

The effectiveness of applications depends on the spores coming into contact with the pest.

Metarhizium spores are UV light sensitive, limiting any residual activity.

REAL METARHIZIUM 78 does not harm bees, fish, birds, beneficial insects or wildlife and is compatible with an Integrated Pest Management (IPM) programme. **Treated crops may be harvested at any stage after application.**

For improved efficacy, is it recommended that **REAL METARHIZIUM 78** be applied with an approved adjuvant.

CROP	PEST	DOSAGE/HA	PHI	DIRECTIONS
All Crops	Spider mite	200-400 ml	0 Days	Foliar spray weekly
Berries & other Small Fruit	African bollworm	200-400 ml	0 Days	Foliar spray weekly

MIXING INSTRUCTIONS

Shake the container very well before every use.

- Pre-mix the required volume of **REAL METARHIZIUM 78** into 10 ℓ of water while stirring vigorously.
- Fill the spray tank with half the required water volume and start the agitator mechanism.
- Add the pre-mix to the spray tank, while maintaining agitation.
- Fill with water to the required level.
- Agitate spray tank continuously during application.
- For best results, mixtures must be applied as soon as possible and not left overnight, or in direct sunlight.

COMPATIBILITY

NB: DO NOT MIX WITH THE FOLLOWING ACTIVE INGREDIENTS:
BENOMYL, CARBENDAZIM, QUATERNARY AMMONIUM.

APPLICATION INSTRUCTIONS

- Apply **REAL METARHIZIUM 78** at the first sign of pest presence. Use the higher dosage rate if pest pressure increases.
- Apply **REAL METARHIZIUM 78** as a full cover film spray with good coverage. Do not spray to the point of run-off.
- **REAL METARHIZIUM 78** is compatible with all spray application equipment including micro, drip and overhead irrigation systems for soil drench applications.
- Fungal spores are not affected by the normal pH of the spray tank water.
- Optimum time for application is when the pest is active and can be contacted. Under extreme pest pressure, additional crop protection interventions should be considered.

STORAGE INSTRUCTIONS

- Store in a cool, dark place between 8-20 ˚C, to maintain oil viscosity and miscibility of spores in suspension.
- **Product must be used before expiration date.**
- Use immediately once opened.