



# BIOINSECTICIDE

*Metarhizium brunneum* strain Ma 43

# LALGUARD M52<sup>OD</sup>

Broad spectrum bioinsecticide

## Effectively protect your crops against pests

LALGUARD M52 OD is a bioinsecticide formulated with a high concentration of *Metarhizium brunneum* strain Ma 43. The technology of encapsulating the spores with oil microdroplets promotes the viability of the entomopathogenic fungus. LALGUARD M52 OD is applied by foliar spray for effective control of crop pests in protected and open field conditions.



LIQUID

## MODES OF ACTION

### 1 ADHESION

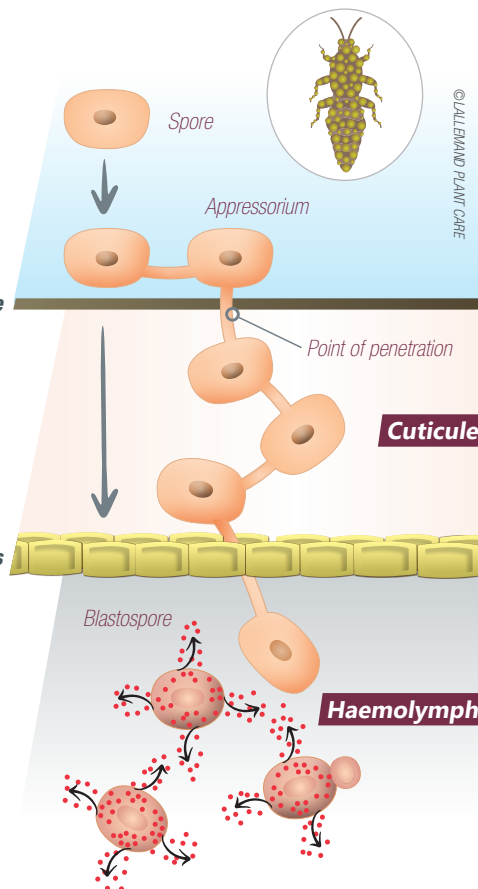
When applied, the fungal spores adhere to the insect cuticle. A germ tube rapidly develops at the point of contact.

### 2 PENETRATION

The germ tube produces a large variety of enzymes in order to perforate the insect's cuticle completely and gain access to the haemolymph.

### 3 COLONISATION

The fungus then multiplies in the form of a large number of blastospores, causing progressive necrosis and death within 3 to 7 days.



## BENEFITS

- **Proven effectiveness against a broad spectrum of pests:** Thrips (*Thysanoptera*), Whiteflies (*Trialeurodes vaporariorum*, *Bemisia tabaci*), Spider mites (*Tetranychidae*)
- **Formulation suitable for use in protected and open-field conditions**
- **Can be used on a wide range of crops:** strawberry, cucumber, courgette, melon, pumpkin, tomato, pepper, chilli, onion, shallot, garlic, leek and ornamental plants

## ADVANTAGES

- **Management of resistance risk**
- **Compatible with Integrated Pest Management (IPM)**
- **No pesticide residues**
- **Can be used in organic farming**

# LALGUARD M52<sup>OD</sup>

## ↓ ↓ AUTHORIZED USES

TYPE	CROP	TARGET	DOSE RATE (L/ha)	STAGE	NUMBER OF TREATMENTS
Protected	Cucumber, courgette, summer squash, melon, winter squash, pumpkin, aubergine	Thrips, spider mites, whitefly	1.25 L/ha	All	8
	Strawberry	Thrips, spider mites			8
	Pepper, chili, tomato	Thrips, spider mites, whitefly			8
	Nursery fruit trees	Whitefly			8
	Ornamental plant production	Whitefly			8
Open field	Leek, onion, spring onion, garlic, and shallot	Thrips			6

A minimum interval of 3 days must be observed between applications.

**NTZ** : respect a non-treated zone (NTZ) from water dam of 5 m for surface cropping, 20 m for crops > 50 cm height and 50 m for trees.




## 🔗 COMPATIBILITY:

In a rotational program, LALGUARD M52 OD is compatible with many fungicides, insecticides and beneficial insects and can be used in Integrated Pest Management (IPM) programs. Please check the compatibility table before mixing with plant protection products of spray in the presence of macro beneficials.

## CHARACTERISTICS

- **ACTIVE INGREDIENT:** *Metarhizium brunneum* strain Ma 43 2.10<sup>12</sup> CFU\*/L  
\*CFU: colony forming unit. Enumeration of living micro-organisms capable of multiplying
- **FORMULATION:** oil dispersion (OD)
- **PACKAGING:** 1 L
- **STORAGE:** 24 months between +4°C and +20°C
- **MAPP 19824 PCS 05859**
- **Can be used in organic farming**

## 📋 USAGE RECOMMENDATIONS

	CROP GROWTH STAGE	PEST OCCURANCE	HOW TO INCORPORATE	BENEFITS
PREVENTIVE	Early crop season	 First pest appearance	Start the crop season with LALGUARD M52 OD applications, 3 to 7 day intervals	Delays increase of pest infestation
	Advanced crop season	 Pest population outburst	Rotate LALGUARD M52 OD with conventional products to knockdown pest populations	Reduces risk of resistance
ROTATIONAL	Harvest time	 Pest management	Rotate LALGUARD M52 OD with conventional products	Tolerance exemption reduces residues in harvested crops

Authorisation holder: DANSTAR FERMENT AG/ LALLEMAND PLANT CARE  
Poststrasse 30,  
CH-6300 Zug  
SWITZERLAND

Microbial by nature

LALLEMAND