

# NATURALIS®-L

**A bioinsecticide for the control of whitefly in all edible crops (protected) and ornamental plant production (protected). The product will also provide a reduction in thrips.**

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Professional use only

**TECHNICAL ENQUIRIES:**  
**+44 1903 721591**

**24 HOUR EMERGENCY NUMBER: +44 1903 721591**



This label is compliant with the CPA Voluntary Initiative guidance.

## FOR USE ONLY AS AN AGRICULTURAL / HORTICULTURAL INSECTICIDE

### FORMULATION AND ACTIVE INGREDIENT :

An oil dispersion formulation containing 7.16% w/w

*Beauveria bassiana* ATCC 74040 (2.3 x 10<sup>7</sup> CFU ml<sup>-1</sup>).

For use only on crops under permanent protection.

Do not freeze.

The (COSHH) Control of Substances Hazardous to Health (UK only).

Regulations may apply to the use of this product at work.

Batch number / Production date: see packaging.

**Naturalis®-L** - An oil dispersion formulation containing 7.16% w/w *Beauveria bassiana* ATCC 74040 (2.3 x 10<sup>7</sup> CFU ml<sup>-1</sup>)

**Micro-organisms may have the potential to provoke sensitizing reactions**

Avoid breathing spray.

Do not get in eyes, on skin, or on clothing.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

If exposed or if you feel unwell: Call a POISON CENTER or doctor / physician.

To avoid risks to human health and the environment comply with the instructions for use.

MAPP No. 17526 PCS No. 04187

## IMPORTANT INFORMATION

For use only on crops under permanent protection.

For use only as an insecticide.

Crops	Max. individual Dose (l/ha)	Max. number of treatments	Latest time of application
All edible crops (protected)	3	5	Not applicable
Ornamental plant production (protected)	3	5	Not applicable

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.**

### SAFETY PRECAUTIONS

#### Operator Protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

- Wear suitable protective clothing (coveralls), suitable protective gloves and suitable respiratory protective equipment\* when handling the concentrate or applying the product.

\*Disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

- However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection (UK only).
- IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).

- WHEN USING DO NOT EAT, DRINK OR SMOKE.
- IN CASE OF CONTACT WITH EYES OR SKIN, RINSE IMMEDIATELY with plenty of clean water.
- AVOID CONTACT WITH SKIN AND EYES.
- WASH HANDS AND EXPOSED SKIN before meals and after work.
- USE ONLY IN A WELL VENTILATED AREA.
- DO NOT BREATHE SPRAY.

#### Environmental Protection

- Do not contaminate water with the product or its container. Do not clean application equipment near surface water and avoid contamination via drains from farmyards and roads.

#### Storage and disposal

- KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
- KEEP OUT OF REACH OF CHILDREN.
- KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
- DO NOT RE-USE CONTAINER FOR ANY OTHER PURPOSE.
- WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

#### Storage

Naturalis®-L is a biological product and has a guaranteed shelf-life of 1 year at room temperature. The product preferably should be stored at 4-5 °C to retain maximum spore viability.

#### DIRECTIONS FOR USE

**IMPORTANT: This information is approved as part of the product label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.**

## Restrictions

- Do not apply through spray nozzle filters which are less than 50 mesh.
- Do not apply using irrigation equipment.
- Naturalis®-L should not be tank mixed with any other product. After a Naturalis®-L treatment, leave at least 48 hours before applying a fungicide. The effects of fungicides applied before a Naturalis®-L treatment has not been fully evaluated. Some fungicides may reduce effectiveness of Naturalis®-L.

## Resistance

Naturalis®-L has not been reported to have any insect resistance. However, it is good practice to use such products as components of Integrated Pest Management systems, alternating with other control measures. This is particularly important for sequential crops. The effects of Naturalis®-L on natural enemies has not been fully established, so adverse effects may occur, for example on *Encarsia* sp.

**Naturalis®-L** is a bio-insecticide containing viable spores of the fungus *Beauveria bassiana*, strain ATCC 74040, a naturally occurring and non-genetically modified fungus. It is applied for the control of all stages of whitefly and for the reduction of thrips in crops under permanent protection. The fungus has a unique mode of action: conidiospores germinate to produce a penetration hypha, which when inside the insects body proliferates to cause insect desiccation and death.

## Pest control

Naturalis®-L controls adult and larval stages of whitefly species which belong to the family Aleyrodidae, including the glasshouse whitefly *Trialeurodes vaporariorum* and provides a reduction in numbers of adult and larval stages of thrips species, including Western Flower Thrips, *Frankliniella occidentalis*.

## Crop recommendations

Naturalis®-L is for use on all edible crops (protected) and ornamental plant production (protected). Naturalis®-L has been used on a wide range of crops under a range of conditions. Little phytotoxicity has been seen at recommended rates. Before making applications it is advisable to test Naturalis®-L on a small area of crop.

## Application rate & frequency

Naturalis®-L is to be applied at a concentration of 0.3% w/v (i.e. 3 litres in 1000 l water). It should be applied with a fine spray, ensuring complete

coverage of the plant, to the point just before run-off. Applications should be carried out in the morning or in the evening when adults fly less and relative humidity is higher. Apply at the very first appearance of whitefly or thrips on the crop, and repeat the application at intervals of no less than 5 days, up to a maximum of 5 treatments.

## Efficacy

Naturalis®-L works well when the temperature is between 20 °C and 30 °C, and the relative humidity is over 60%.

## Mixing and spraying

Spraying equipment must be clean and free of pesticide residues. Before measuring out the product, gently rotate the product container to ensure that spores are evenly mixed within the concentrate. Initially, make a solution in half the final volume of water. Once the product is completely dispersed, make up to the final volume with the remaining amount of water. When mixing, continually agitate the solution to ensure that the spores are evenly dispersed. Agitation of the solution when spraying will prevent spore sedimentation. After application, rinse out the spraying equipment several times with water and leave to air dry before being returned to store.

## WARRANTY

The seller makes no warranty, expressed or implied, with regard to the use of the product other than that indicated on the label. The purchaser and user shall assume all risk associated with use and/or handling and/or the storage of the product, if this use and/or handling and/or storage are carried out contrary to the instructions on the label.

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