

TECHNICAL DATA SHEET

1. TRADE NAME: TWIST-TIE MD² inPEST®

Biocidal product (PT 19 – repellent and attractant) consisting of a pheromone dispenser to be used for the mating disruption technique on food moths (*Plodia interpunctella* and *Ephestia kuehniella*).

Authorisation Number: N° AMM: FR-2020-0028, Date of issue of the authorization: 22/07/2020

2. PRODUCT CODE: P-01162 (blue) and P-01156 (grey)

3. PICTURE:



4. TECHNICAL SPECIFICATIONS:

TWIST-TIE MD² inPEST® is a non-toxic device developed for the application of the mating disruption technique on food moths. This safe pest control method, based on the use of the natural-identical sexual pheromone of food moths, allows to reduce the number of insecticide applications inside the treated industries, thanks to the significant reduction of the target pest populations.

The product releases high concentration of the food moth sexual pheromone, 50 times higher than the one used for monitoring. The pheromone saturates the receptor feelers of food moth males, making them difficult to find the females. This disorientation avoids mating and, consequently, the infestation proliferation.

Target insects (used for the efficacy test):

Plodia interpunctella and *Ephestia kuehniella*.

Additional target insects (based on the scientific literature, the same pheromone is perceived also by these moths): *Ephestia elutella*, *Cadra cautella*, *Cadra calidella* and *Cadra figulilella*.

It is composed of:

- Blue or grey silicone rod (circular-cross section) with ferrite; this composition makes the product detectable by the metal detector.
- Sexual pheromone (9Z,12E)-Tetradeca-9,12-dien-1-yl acetate (CAS: 30507-70-1).

It is packed in laminated barrier film (PET/ALU/PE).

TECHNICAL DATA SHEET

Measures:

- Length: 10 m;
- Diameter: 3 mm.

Colour: As in the pictures.

5. HOW TO USE:

Product intended to be used exclusively indoors, in spaces where foodstuffs (both for human and animal) are produced and stored. TWIST-TIE MD² inPEST[®] for mating disruption is a product to be used by professional and trained professional users in food industries, storehouses, supermarkets, mills, feed factories and all those places where foodstuffs are stored or produced, for example: wheat, cereals, biscuits, bread, pasta, chocolate, cocoa, candy, dried fruit, nuts etc.

Dosage of use (theoretical covered volume):

1 m of TWIST-TIE MD² inPEST[®] covers 300 m³ (= 0.3 cm covers 1m³).
10 m (=1 packet) covers 3000 m³.

Method of use: once set the total amount of TWIST-TIE MD² inPEST[®] necessary to treat the volume, it is suggested to subdivide the product in more pieces of different size by a pair of scissors in order to obtain a pheromone distribution in the considered volume as homogeneous as possible.

The product can be directly installed on machinery or on present brackets like electrical ducts, uprights, shelves, etc. by knotting or using cable ties without bothering work activities.

Preferable height of installation: 1.8-2 m. The installation height is widely variable in relation to the characteristics of the building and of the outbreaks of infestation.

Examples of installations:



TECHNICAL DATA SHEET

Before the first setting, it's better to check the correct isolation and air movement of the treated volumes.

It's better to start using the product when infestation is low.

In case of considerable infestation, it is suggested to plan an extraordinary cleaning, to remove every infested material and to make an insecticide treatment of the areas.

Indicate with an information sign the installation points.

Results monitoring: in the treated volumes it is suggested to maintain a monitoring network of common pheromones traps. The lack of captures on these traps indicates that an appropriate amount of TWIST-TIE MD² inPEST[®] has been used in the area and that males are so confused that are not capable to find the pheromone trail emitted by these monitoring dispensers.

To check the eradication of the infestation, it's better, if possible, to use other monitoring devices:

- **Glue traps with higher concentration of specific pheromone:** Easy Trap (P-04078) or Trap Test (P-25001INFONE) baited with higher concentration of pheromones for *Plodia* and *Ephestia* (dispenser P-01157). The higher concentration of these pheromone dispensers allows males to perceive the pheromone trail and to be caught by the glue traps. These traps have to be installed at the same time of TWIST-TIE MD² inPEST[®].
- **Biotest MD²:** open plastic containers filled in with rearing substrate in order to check pests' oviposition (P-01158). These devices have to be installed one month after TWIST-TIE MD² inPEST[®] installation.

For further information, please, require GEA's protocol for the control of food moth infestations through mating disruption technique.

Suggested monitoring period: all the yearlong.

Suggested frequency of the controls: change TWIST-TIE MD² inPEST[®] after three months. Check the monitoring network weekly. Replace Biotest MD² every two weeks. Replace the monitoring traps within three months.

Storage conditions: 1 year at refrigerated temperature (+4°C) in its intact packaging. From the pack opening, the product lasts three months.

Handling conditions: wear gloves when TWIST-TIE MD² inPEST[®] is handled as for usual hygiene practice.

6. PACKAGING AND SPARE PARTS:

- 10 meters packed in laminated barrier film PET/ALU/PE.

7. DISPOSAL CONSIDERATIONS:

Waste disposal should be in accordance with existing Community, National and local regulations.