

Beneficial Insects

TECHNICAL DATA SHEET



PLANTPRODUCTS®
A member of Biobest Group



These wasps will control whiteflies by parasitization and hostfeeding. Whitefly larvae parasitized by *Encarsia* will turn black whereas those ones attacked by *Eretmocerus* will change to a beige/light brown color. Female wasps will lay their eggs under (*E. eremicus*) or within (*E. formosa*) the whitefly larvae. In the case of *E. eremicus*, when the egg hatches, the larva will enter the host. Eggs can develop from the second to the fourth larval stage of whitefly. If an egg is laid in the first larval stage, a developmental arrest occurs, and will last until the whitefly larva has reached the second larval stage. A new adult emerges through a round exit hole on the back of the pupa. Depending on species, one female can parasitize on average 150-250 whitefly larvae. Both species will kill by hostfeeding on prey. *Eretmocerus eremicus* will parasitize fewer whitefly, but has increased host feeding. At least 98% of the *Encarsia* are females unlike *Eretmocerus* that has a sex ratio of about 50:50.

Product Specifications

50% *Eretmocerus eremicus* and 50% *Encarsia formosa*; for whitefly control.

Commercial name	Specifications
Eretmix-System (100 - 5K)	100 pupae/card; 50 cards: 5,000 pupae
Eretmix-System (100 - 10K)	100 pupae/card; 100 cards: 10,000 pupae

70% *Eretmocerus eremicus* and 30% *Encarsia formosa*; for whitefly control.

Commercial name	Specifications
Poinsettia-Mix-E-System (100 - 10,000)	100 pupae/card; 100 cards: 10,000 pupae

Everything you need to grow

ERETMIX-SYSTEM and POINSETTIA-MIX-E-SYSTEM

Encarsia formosa
Eretmocerus eremicus

Features

- Parasitoids that control whitefly infestations
- Effective against both the tobacco whitefly *Bemisia tabaci* and the greenhouse whitefly *Trialeurodes vaporariorum*
- *E. formosa* is efficient at low temperatures and prefers to parasitize the greenhouse whitefly (3rd and 4th instars)
- *E. eremicus* is efficient at high temperatures and prefers to parasitize the tobacco whitefly (2nd and 4th instar)

Targets

- Greenhouse whitefly (*Encarsia* + *Eretmocerus*)
- Tobacco whitefly (*Eretmocerus*)

Crops

- Vegetables / Herbs
- Ornamentals
- Fruits
- Cannabis / Hemp



ERETMIX-SYSTEM and POINSETTIA-MIX-SYSTEM

Storage

Use immediately upon receipt. If not possible, product can be briefly stored at 43-46°F (6-8°C).

Rates

Mode	Dosage	Area	Repeat
Preventative	1.5-6 ind./m ²	Full Field On leaves or in plants	Weekly
Low curative	6-10 ind./m ²	Hotspots and surroundings	Weekly Min. 3 times
High curative	10-15 ind./m ²	Hotspots and surroundings	Weekly Min. 3 times

Instructions

Timing

Start the introductions of Eretmix-System or Poinsettia-Mix-System preventatively. When whitefly larvae are detected, increase the dosage rate in line with pest density. In severe whitefly infestations, complement its action with Delphastus-System and Swirskii-System or use a compatible biopesticide/pesticide if necessary.

Release method

- Fold the cards back and forth (2-3 times) on the vertical perforation.
- Tear the cards apart carefully to avoid crushing the exposed pupae. The pupae are attached to the circle on the surface of the card.

- Hang cards on plants or from the rim of pots with the pupae facing towards the plant, out of direct sunlight and sprays.
- Distribute the cards evenly throughout the area you wish to treat.

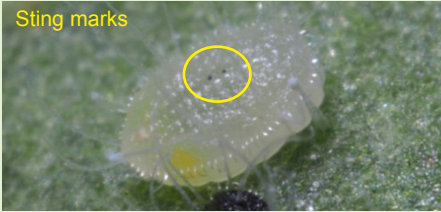
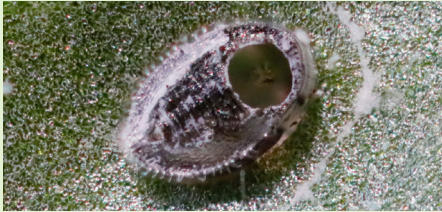

Release conditions

Conditions for optimal activity of Eretmix-System require a minimum average greenhouse temperature of 68°F (20°C). However, successful introduction is possible at lower temperatures. While the lifespan of *E. formosa* is considerably reduced at temperatures above 86°F (30°C), *E. eremicus* remains active at high temperatures. *E. formosa* does not like large whitefly colonies, as excessive honeydew can hamper its mobility. *E. eremicus* is less sensitive to pesticide application than *E. formosa*. Always check our Side effect list for compatibility with chemicals and biopesticides.

Monitoring

- Parasitized whitefly larvae can be observed in the crop 2-3 weeks after the first application
- The presence of a perfect round hole in the pupae indicates that an adult has emerged
- Control is achieved when 80% of the whitefly larvae are parasitized
- The efficacy can be checked by observing the color of the pupae, a reduction in pest population, reduced hotspots, and foliage free of honeydew or sooty mold. Encarsia pupa turns black. Eretmocerus pupa turns beige/light brown.

Life cycle and appearance

Egg	Larva / Pupa	Adult
<ul style="list-style-type: none"> • <i>E. eremicus</i> eggs are not detectable as they are laid under the host's larva • <i>E. formosa</i> oviposition can be evident through observation of sting marks in the dorsum of whitefly hosts. • Duration: 2-4 days* 	<ul style="list-style-type: none"> • Whitefly pupae that have been parasitized by <i>E. eremicus</i> appear beige in color • Whitefly pupae that have been parasitized by <i>E. eremicus</i> appear black in color • Wasp larva passes through three instars inside the host • Larval & pupal stage duration: 12 days* 	<ul style="list-style-type: none"> • <i>E. eremicus</i>: Pale yellow color with green eyes • <i>E. formosa</i>: Black with a pale yellow abdomen, clubbed antennae • 0.5-1 mm long • One female lays 5-35 eggs/day** • Lifespan: 6-12 days* 

*At an average temperature of 77°F (25°C). **Depending on the whitefly and parasitoid species

DISCLAIMER: These are general guidelines. Please read label and product information before use. For questions and/or recommendations, please contact your local advisor.