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SPECIMEN

Nemasys®

Advanced Biocontrol for Fungus Gnats and Western Flower Thrips in Greenhouse Growing Operations

STORE IN REFRIGERATOR 41°F (5°C)
DO NOT FREEZE
DO NOT LEAVE IN BRIGHT SUNLIGHT
USE BEFORE EXPIRATION DATE
READ INSTRUCTIONS BEFORE USE
Keep Out of Reach of Children

This product does not require a hazard warning in accordance with GHS criteria.

Contents:

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

Nemasys[®] is a naturally occurring, insect parasitic nematode (*Steinernema feltiae*) that seeks out soil-dwelling stages of fungus gnats (*Bradysia* spp.), and the soil- and foliar-dwelling stages of western flower thrips (*Frankliniella occidentalis*).

Packaging – **Nemasys** is available in trays of 50 million, 150 million, or 250 million nematodes.

Precautions

This product contains living organisms that require special handling and application procedures.

- **DO NOT SUBDIVIDE.** Once opened, use the entire tray immediately.
- Use cool water for mixing and keep tank out of direct sunlight.
- **DO NOT STORE MIXED SUSPENSIONS.** Use nematode suspensions immediately after they have been mixed.
- Remove filters that are 50 mesh or finer from application equipment and nozzles.
- **Do not** exceed 300 PSI pump pressure.
- **Do not** use in application systems where nozzle aperture is smaller than 0.5 mm.
- Agitate nematodes constantly during agitation.
- **DO NOT SPOT TREAT.** Treat the entire greenhouse crop at the appropriate rate.

Directions For Use

Nemasys can be applied by using common application equipment, including tank sprayers, backpack sprayers, and irrigation injection systems.

- Fill spray vessel or stock tank with half of the required amount of cool, clean water.
- Start agitation and add the required number of **Nemasys** trays.
- Continue agitation while mixing and filling spray tank to the required spray volume.
- Maintain sufficient agitation during application to ensure uniform dispersion of nematodes in the spray mix.

Nemasys can be used in a tank mix or rotational program with many conventional insecticides to reduce pest resistance. For more information on chemical compatibility or to learn more about targeted pests, visit www.basf.us. If used in a tank mix, confirm plant safety in a small area before using on a commercial scale.

Western Flower Thrips Application

Control of western flower thrips (WFT) is best accomplished with a program approach. The initial application of **Nemasys** should occur early in the crop

growth cycle and be directed to the soil or growing media for control of soil-dwelling WFT, whereas subsequent applications of **Nemasys** should be made as foliar sprays to target foliage-dwelling WFT.

Initial soil application

For initial soil-directed application, create a mixture by adding a minimum of 100 million nematodes per 100 gallons (379 L) of water. Constant agitation is required to maintain **Nemasys** in suspension. Apply sufficient volume of mixture to thoroughly soak the soil or growing media, but not beyond the point where water overflows or leaches from the pot. If product is applied over foliage, irrigate immediately with plain water to wash nematodes into soil or growing media. Maximum area treated per 100 gallons (379 L) of mixture is 2,000 ft² (186 m²). Recommended application volumes and approximate number of pots treated per 100 gallons (379 L) of mixture are listed in the table below.

Pot Size	Application Volume (fl oz [mL])	Approximate containers treated (number)
4 inch round pot	0.5 [15]	25,600
6 inch round pot	1.5 [45]	8,535
8 inch round pot	2.0 [60]	6,400
10.5x21 inch flat	10 [295]	1,200

NOTE: If applying by using an irrigation injection system, create a stock suspension by mixing 100 million nematodes to 1 gallon (3.79 L) of water and set injector ratio to 1:100. Maximum area treated per 1 gallon (3.79 L) of stock suspension is 2,000 ft² (186 m²).

Foliar applications

Foliar applications to target western flower thrips should be made within 7 days of initial soil application. Mix 500 million to 1 billion nematodes in 100 gallons (379 L) of water. Use the higher rate when environmental conditions are favorable for pest growth. Constant agitation is required to maintain **Nemasys** in suspension. Apply evenly with conventional application equipment to uniformly wet leaves, but not to point of run-off. Maximum area treated per 100 gallons (379 L) of mixture is 40,000 ft² (3,716 m²). **Nemasys** should be applied once or twice per week for best results.

NOTE: If applying by using an irrigation injection system, create a stock suspension by mixing 500 million to 1 billion nematodes to 1 gallon (3.79 L) of water and set injector ratio to 1:100. Maximum area treated per 1 gallon (3.79 L) of stock suspension is 40,000 ft² (3,716 m²).

For best results with foliar sprays to target WFT:

- Apply **Nemasys**® in the evening when pest activity is low.
- Use of an approved spray adjuvant will promote improved application uniformity and allow nematodes to reach the pest more effectively.
- Ensure that the crops remains wet for at least 2 hours following application by closing windows and ventilation.
- Do not apply in direct sunlight. Use blackout curtains and switch off artificial lighting during and for at least 2 hours after application.

Fungus gnat application

For control of fungus gnat larvae, create a mixture by adding 100 million nematodes per 100 gallons (379 L) of water. Constant agitation is required to maintain **Nemasys** in suspension. Apply sufficient volume of mixture to thoroughly soak the soil or growing media, but not beyond the point where water overflows or leaches from the pot. If product is applied over foliage, irrigate immediately with plain water to wash nematodes into soil or growing media. Maximum area treated per 100 gallons (379 L) of mixture is 2,000 ft² (186 m²). Reapply **Nemasys** every 2 to 3 weeks. Recommended application volumes and approximate number of pots treated per 100 gallons (379 L) of mixture are listed in the table below.

Pot Size	Application Volume (fl oz [mL])	Approximate containers treated (number)
4 inch round pot	0.5 [15]	25,600
6 inch round pot	1.5 [45]	8,535
8 inch round pot	2.0 [60]	6,400
10.5x21 inch flat	10 [295]	1,200

NOTE: If applying by using an irrigation injection system, create a stock suspension by mixing 100 million nematodes to 1 gallon (3.79 L) of water and set injector ratio to 1:100. Maximum area treated per 1 gallon (3.79 L) of stock suspension is 2,000 ft² (186 m²).

Storage and Disposal

Storage: Remove from shipping package and use immediately or store in refrigerator. Ensure good air circulation around each tray. Keep away from heat. Protect from direct sunlight. Store protected against freezing. Storage temperature: 5°C (41°F).

Waste Disposal of Substance: Must be disposed of or incinerated in accordance with local regulations.

Container Disposal: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Accidental Release Measures: Segregate from foods and animal feeds. Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. For small amounts: Contain with dust binding material and dispose of. For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

**EMERGENCY CONTACT: CHEMTREC 1-800-424-9300
BASF Corporation 1-800-832-HELP (4357)**

State Right To Know Description and CAS # / TRSN
Proprietary acrylic polymer / TRSN 161090809-5126

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer. BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above. **BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT. BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.** BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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