Biological Insecticide for Greenhouse
Thrips/Whitefly/Two-Spotted Spider Mite

Active Ingredient: GS-omega/kappa-Hxtx-Hv1a .................................................... 20.00%
Other Ingredients: ................................................................................................ 80.00%
Total: ................................................................................................................... 100.00%

NOTICE: Read the entire label. Use only according to label instructions. Before using the product, read TERMS AND CONDITIONS OF USE, WARRANTY DISCLAIMER, INHERENT RISKS OF USE and LIMITATION OF REMEDIES at the end of the label instructions. If such terms are unacceptable, return the unopened package at once to Vestaron Corporation.

KEEP OUT OF REACH OF CHILDREN

CAUTION

If in eyes
• Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.
• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
• Call a poison control center or doctor for treatment advice.

If on skin or clothing
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15 – 20 minutes.
• Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.

EPA Reg. No.: 88847-2
EPA Est. No.: 33967-NJ-001
Net Weight: 5 lbs
Lot No: XXXX
Date of Manufacture: MADE IN

Vestaron Corporation
4717 Campus Drive, Ste. 1200
Kalamazoo, MI 49008
DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

PRODUCT INFORMATION
SPEAR O is a biological insecticide containing the active ingredient GS-omega/kappa-Hxtx-Hv1a for use on ornamental plants and edible crops against thrips, two-spotted spider mites, and whiteflies. SPEAR O functions primarily as a central nervous system inhibitor of target pests infesting labeled crops. SPEAR O is mixed with water and applied as a foliar spray. SPEAR O is designed for greenhouse use.

USE INSTRUCTIONS
SPEAR O is a highly selective insecticide for use against the listed insect pest. Close scouting and early attention to infestations is highly recommended. Proper timing of application targeting newly hatched larvae is important for optimal results. SPEAR O is not effective on the egg stage. Thorough coverage of infested plant parts is necessary. SPEAR O does not have systemic activity. Under heavy pest populations shorten the spray interval, and/or increase the spray volume to improve coverage. Repeat applications at 3-10 day intervals depending upon plant growth rate, insect activity, and other factors. Tank mix with contact insecticides/miticides, to enhance performance. Refer to tank mix section. For hard-to-wet crops, consider using a spreader/sticker or an adjuvant that has been approved for targeted crop use to enhance the adhesion of SPEAR O to the crop. Examples of appropriate spreader/stickers or adjuvants are: (1) alkoxylated surfactants, 2) organic silicates, 3) vegetable oils, 4) methylated vegetable oils, 5) mineral oils, and/or 6) phospholipids (crop oils and non-ionic surfactants). SPEAR O has been evaluated for phytotoxicity on a variety of crops under various normal growing conditions. However, testing all crop varieties, in all mixtures and combinations is not feasible. Prior to treating entire crop, test a small portion of the crop for sensitivity.

Integrated Pest Management (IPM):
SPEAR O is an important tool in sound insect management whenever insecticide use is necessary. Apply SPEAR O alone or in combination and/or rotation with chemical insecticides. This will result in reduced susceptibility to insect damage and overall reduction in the use of chemical insecticides. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

Mixing directions:
Important – Do not add SPEAR O to the mix tank before introducing the desired amount of water. Add water to the mix tank. Start the mechanical or hydraulic agitation to provide moderate circulation before adding SPEAR O. Add the desired volume of SPEAR O to the mix tank and continue circulation.

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours. PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water), is:
- Coveralls
- Waterproof gloves
- Shoes plus socks
Maintain circulation while loading and spraying. Do not mix more SPEAR O than can be used in 24 hours.

**Tank mixing:**
Do not combine SPEAR O in the spray tank with other pesticides, surfactants, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, or non-injurious under your use conditions. Follow the most restrictive of the labeling limitations and precautions of all products used in mixtures. SPEAR O is not compatible with strong oxidizers, such as chlorine, which can degrade the product.

To ensure compatibility of tank-mix combinations they must be evaluated prior to use. To determine the physical compatibility of this product with other products use a jar test. Using a quart jar, add the proportionate amounts of the products to one quart of water with agitation. Add dry formulations first, then flowables, then emulsifiable concentrates last. After thoroughly mixing, let this mixture stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

**GREENHOUSE USE DIRECTIONS**
Make applications with high pressure, low volume or ultralow volume (thermal and non-thermal foggers) misters, aerosol generators or hydraulic boom sprayers. Mix 0.9 ounce (25 g) of SPEAR O per 1 quart (1 liter) of water. Apply 1 quart (1 liter) of spray solution per 1,000 square feet of greenhouse bench space. Mix product well and agitate thoroughly to ensure product is completely dissolved. Turn off exhaust fans and close vents during application. Begin applications when pests reach threshold levels.

**APPLICATION RATES FOR SPEAR O ON THE FOLLOWING CROPS:**
Pre-harvest Interval (PHI) = 0 days

1. **Vegetable and Cole Crops (Groups 1, 3, 4, 5, 6, 8 and 9) (Greenhouse Vegetables):**

<table>
<thead>
<tr>
<th>Crops</th>
<th>Insect Pest</th>
<th>Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrachacha, Arrowroot, Artichokes, Arugula, Asparagus, Beans (-including garden, dried, succulent, adzuki, fava, field, garbanzo, pinto, kidney, lentil, lima, moonbeam, navy, runner, snap, teary, wax, yard long) (all varieties), Beets - including garden, Bok Choy, Broccoli, Broccoli Raab, Brussels Sprouts, Burdock, Cabbage, Canna, Cardoni, Carrots, Cassava, Cauliflower, Cavalo, Celeriac, Celery, Chayote root, Chervil, Chick peas, Chicony, China greens, Chinese artichoke, Chinese broccoli, Chinese cabbage (Napa), Chinese mustard cabbage, Chinese waxgourd, Chufa, Cocona, Collards, Corn salad, Cress, Cucumber (all varieties), Cucurbits including cantaloupe and watermelon, Dandelion dock, Dasheen, Dry</td>
<td>Thrips, Two-spotted spider mites, Whiteflies</td>
<td>0.9 ounce (25 g) SPEAR O in 1 quart (1 liter) water per 1,000 square feet of bench space</td>
</tr>
</tbody>
</table>
Crops (cont’d)  | Insect Pest (cont’d)  | Application Rate (cont’d)
--- | --- | ---
bulb onions, Edible burdock, Edible chrysanthemum, Edible gourds, Eggplant, Escarole, Endive, Garlic, Ginger, Ginseng, Green onions, Greens: Beets, China, Dandelion, Mustard, Turnip, Rape, Ground cherry, Horseradish, Jerusalem artichoke, Kale, Kohlrabi, Leeks, Lentils, Lettuce: Head, Leaf, Romaine, Lupine, Malanga, Melons: Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon, etc., Mizuna, Mustard spinach, Napa, Okra, Olives, Onions, Parsley, Parsnips, Peas-including garden, dried, succulent, black-eyed, chickpea, cowpea, crowder, edible-pod, English, field, green, pigeon, snow, sugar snap, Pepino, Peppers (-including bell, chili, cooking, pimento, sweet) (all varieties), Potatoes, Pumpkins, Purslane, Radicchio, Radishes, Rhubarb, Rutabaga, Salsify, Shallots, Skirret, Soybean foliage, Soybean, Spinach, Squash, Sugar beets, Sweet potatoes, Swiss chard, Tanier, Tomatillo, Tomatoes (all varieties), Turmeric, Turnips, Turnip-rooted chervil, Turnip-rooted parsley, Watercress, Yam bean, Yams

II. Commercial Flowers and Ornamental Plants

<table>
<thead>
<tr>
<th>Crop</th>
<th>Insect Pest</th>
<th>Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowers: greenhouse, Bedding Plants, Cut Flowers, Ornamentals: greenhouse, Container Stock</td>
<td>Thrips, Two-spotted spider mites, Whiteflies</td>
<td>0.9 ounce (25 g) SPEAR O in 1 quart (1 liter) water per 1,000 square feet of bench space</td>
</tr>
</tbody>
</table>
III. Herbs (Group 19)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Insect Pest</th>
<th>Application Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basil, Chive, Cilantro, Dill, Mint, Parsley, Rosemary, Sage, Thyme</td>
<td>Thrips, Two-spotted spider mites, Whiteflies</td>
<td>0.9 ounce (25 g) SPEAR O in 1 quart (1 liter) water per 1,000 square feet of bench space</td>
</tr>
</tbody>
</table>

TERMS AND CONDITIONS OF USE

If the terms of the following WARRANTY DISCLAIMER, INHERENT RISKS OF USE, and LIMITATION OF REMEDIES are not acceptable, return the unopened package at once to Vestaron Corporation. Otherwise, use of the product will constitute acceptance of the terms under WARRANTY DISCLAIMER, INHERENT RISKS OF USE and LIMITATION OF REMEDIES.

WARRANTY DISCLAIMER

TO THE EXTENT PERMITTED BY APPLICABLE LAW, VESTARON CORPORATION MAKES NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE CONCERNING USE OF THE PRODUCT.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of the product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use, storage or handling of the product not in strict accordance with the accompanying label instructions, abnormal conditions, presence of other materials, or other factors, all of which are beyond the control of Vestaron Corporation. All such risks shall be assumed by the user.

LIMITATION OF REMEDIES

To the extent permitted by law, the exclusive remedy for losses or damages resulting from the product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to replacement of the amount of product used.

To the extent permitted by law, Vestaron Corporation disclaims any liability for incidental, consequential, exemplary, special or indirect damages resulting from the use, storage or handling of the product.

The terms of the WARRANTY DISCLAIMER, INHERENT RISKS OF USE, and LIMITATION OF REMEDIES cannot be varied by any written or verbal statements or agreements. No employee or other agent of Vestaron Corporation is authorized to vary or exceed the terms of the WARRANTY DISCLAIMER, INHERENT RISKS OF USE, and LIMITATION OF REMEDIES in any manner/may be varied only by agreement in writing signed by a duly authorized representative of Vestaron Corporation.
PRECAUTIONARY STATEMENTS

Hazards to humans and domestic animals - CAUTION. Causes moderate eye and skin irritation. Avoid contact with eyes, skin or clothing. Wear protective eyewear and gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE):
Applicators and other handlers must wear:
• long-sleeved shirt and long pants
• waterproof gloves
• shoes plus socks

Follow the manufacturer’s instructions for cleaning / maintaining PPE. If no instructions are available, use detergent and hot water for washables. Keep and wash PPE separately from other laundry.

Engineering Controls: When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(406)], the handler PPE requirements may be reduced or modified as specified in the WPS.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container at less than 40°F for up to 6 months after date of manufacture. Do not allow product to freeze. Keep container closed and away from moisture when not in use.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances. If burned, stay out of smoke.

USER SAFETY RECOMMENDATIONS

Users should:
• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
• Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards: For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

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