

74205-3

07/14/2010

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division (7511C)  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

EPA Reg. Number: 74205-3	Date of Issuance: <b>JUL 14 2010</b>
Term of Issuance: Unconditional	
Name of Pesticide Product: <i>Trichoderma hamatum</i> isolate 382	

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):  
Sellew and Associates  
c/o Interregional Research Project Number 4 (IR-4)  
Rutgers University  
500 College Road, East, Suite 201 W  
Princeton, NJ 08540

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This registration does not eliminate the need for continual reassessment of the pesticide. If the EPA determines at any time, that additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA.

This product is unconditionally registered in accordance with FIFRA Sec. 3(c)(5) and is subject to the following terms and conditions:

1. Submit and/or cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) and section 4 when the Agency requires all registrants of similar products to submit such data.
2. Submit acceptable data packages within 1 year of the date of registration for the following Guideline Studies: OCSPP 830.6320 (Corrosion Characteristics) and OCSPP 830.6317 (Storage Stability).
3. Revise the EPA Registration Number to read, "EPA Reg. No. 74205-3."

Signature of Approving Official:  
*W. Michael McDavit*  
W. Michael McDavit, Associate Director  
Biopesticides and Pollution Prevention Division (7511P)

Date:  
**JUL 14 2010**

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4. Submit three (3) copies of the revised final printed labeling before you release the product for shipment.

A stamped copy of the label is enclosed for your records.

**Trichoderma hamatum isolate 382**

**MICROBIAL PESTICIDE**

**FOR USE IN COMPOST AND SOILLESS GROWING MEDIA**

Active Ingredient:

<i>Trichoderma hamatum</i> isolate 382*	0.9%
Other Ingredients	99.1%
Total	100.0%

\*Contains at least  $2.84 \times 10^8$  cfu/ounce ( $1 \times 10^7$  CFU/gram) of *Trichoderma hamatum* isolate 382

EPA Reg. No. 74205

EPA Est. 70002-PA-001  
Batch code:

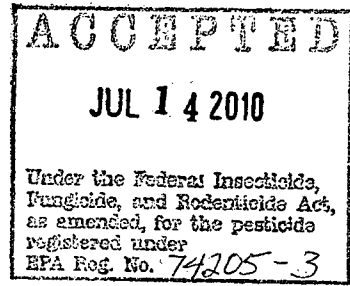
**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

Expiration Date:

Net Contents: 5, 10 100, 130, 150 and 1,300 pounds

Manufactured for:  
Sellew & Associates, L.L.C.  
84 Shadybrook Lane  
Carlisle, MA 01741



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<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Have the product container or label with you when calling doctor, or going for treatment.	
<b>HOTLINE NUMBER</b> For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), <b>Call 1-800-888-8372</b>	

## **PRECAUTIONARY STATEMENTS**

### **HAZARD TO HUMANS AND DOMESTIC ANIMALS**

#### **CAUTION**

Causes moderate eye irritation. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

#### **Applicators and other handlers must wear:**

- Long sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

Mixers, loaders, applicators and handlers must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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### **USER SAFETY RECOMMENDATIONS**

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should 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**

#### **[NPDES statement on labels for packages less than 50 lbs.]**

Do not apply directly to water, or to areas where the surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

#### **[NPDES statement on labels for packages greater than 50 lbs.]**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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. For any requirement specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

### **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 12 hours. For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, wear long sleeved shirt and long pants, shoes, socks and waterproof gloves.

**Exception:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area immediately if there will be no contact with anything that has been treated.

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## GENERAL INFORMATION AND PRECAUTIONS

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*Trichoderma hamatum* isolate 382 is intended for use by commercial greenhouse and nursery growing operations. *Trichoderma hamatum* isolate 382 is to be uniformly mixed into soilless growing media mixes and composts prior to seeding or transplanting of ornamentals and vegetable bedding plants. Soilless growing mixes are typically composed of a combination of one or more of the following: peat, bark, perlite, vermiculite, coir, wood chips, composts and other substrate materials to be used in the greenhouse and nursery growing operation.

*Trichoderma hamatum* isolate 382 is used to prepare a disease suppressive soilless growing media or compost.

*Trichoderma hamatum* isolate 382 can induce systemic acquired resistance to diseases of roots and above ground plant parts. *Trichoderma hamatum* isolate 382 also suppresses the activity of disease causing plant pathogens in soilless growing media. It provides protection against diseases caused by soil borne plant pathogens such as *Pythium*, *Phytophthora* and *Fusarium* spp., *Rhizoctonia solani*, *Sclerotium rolfsii* and *Thielaviopsis basicola*. On some plant species, it also protects the foliage against powdery mildew, *Botrytis* blight, *Phytophthora* blights and dieback diseases and against *Botryosphaeria* dieback. Crops highly susceptible to damping-off diseases or already infected with a pathogen should be treated at planting with chemical fungicides compatible with *Trichoderma hamatum* isolate 382. Do not prepare tank mixes of fungicides with *Trichoderma hamatum* isolate 382.

*Trichoderma hamatum* isolate 382 must be added and mixed uniformly into soilless growing media or mature composts during or immediately after the preparation (i.e., blending and mixing) of the growing media. *Trichoderma hamatum* isolate 382 may also be applied as a drench application to soilless growing media or mature composts. *Trichoderma hamatum* isolate 382 colonizes the compost or soilless growing media before disease causing microorganisms have an opportunity to do so. It is also

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effective in media containing 50% or more light Sphagnum peat by volume, but not media prepared with dark decomposed peat.

### **Temperature**

*Trichoderma hamatum* isolate 382 is sensitive to long term exposure to temperatures above 100°F. Mature composts stored in large piles often are high in temperature (above 100°F). Addition of water to compost-amended soilless growing media during the blending process to reach a moisture content of 45 to 55% (weight basis) decreases the temperature of the final mix under most conditions to below 95°F and allows *Trichoderma hamatum* isolate 382 to colonize the medium. It also is the optimum moisture content for initiation of plant growth. Organic particles in plant growth media with a moisture content of 50% typically begin to stick together. However, the medium is dry enough so that water cannot be squeezed from the mix and wet enough so that it is not dusty. After *Trichoderma hamatum* isolate 382 has established itself in a compost or soilless growing media, it is effective over a wide range of temperatures which include low temperature propagation during winter and high summer temperature conditions.

### **Ammonia Content**

The ammonia content of most types of composts does not pose concerns for *Trichoderma hamatum* isolate 382. However, mature composted manures and sewage sludges stored in high temperature piles often contain high enough concentrations of ammonium N to be toxic to plant roots and to fungi such as *Trichoderma* spp. The quantity of such composted manures incorporated into soilless growing media must be low enough so that the ammonium concentration is below that known to be toxic to plants. Typically, a 5 to 15% content amendment rate (on a volume basis) for these types of composts is optimum for most applications and avoids ammonium toxicity problems for the active ingredient in *Trichoderma hamatum* isolate 382.

### **Moisture Management**

It is essential that the physical properties of the soilless growing medium relative to water retention and drainage are sufficient to grow a particular crop based on typical cultural practices for that crop. *Trichoderma hamatum* isolate 382 does not suppress *Phytophthora* or *Pythium* root rots in poorly drained media.

### **Plant Precautionary Guidelines**

Due to the large number of species and varieties of ornamentals and nursery plants, including those grown in propagation benches, plug-produced seedlings and tissue culture explants, bedding plants and transplants, greenhouse crops, nursery crops and trees produced in containers, it is impossible to test every one for tolerance to *Trichoderma hamatum* isolate 382. The user should determine if *Trichoderma*

*hamatum* isolate 382 can be used without adverse effects prior to commercial use. In a small area, test the rates for a particular group of plants, i.e., foliage plants, bedding plants, etc., for plant tolerance prior to widespread use.

**Chemical Compatibility**

*Trichoderma hamatum* isolate 382 may be applied to soilless growing media and composts and used with many fungicides, insecticides, fertilizers and biological control products used on greenhouse and ornamental plants without interfering with activity of *Trichoderma hamatum* isolate 382. Other pest control products may be applied prior to or after the application of *Trichoderma hamatum* isolate 382. As noted in the Use Restrictions, do not prepare tank mixes of fungicides with *Trichoderma hamatum* isolate 382.

*Trichoderma hamatum* isolate 382 is compatible with fertilizers used for the production of greenhouse and nursery plants.



**APPLICATION TO SOILLESS GROWING MEDIA AND COMPOSTS**

**Mix with compost or soilless growing media**

Growing Medium	Rate of T. hamatum isolate 382 per 1 cu. yd.	Rate of T. hamatum isolate 382 per 5 cu. yd.	Rate of T. hamatum isolate 382 per 10 cu. yd.	Rate of T. hamatum isolate 382 per 25 cu. yd.	Rate of T. hamatum isolate 382 per 100 cu. yd.	Timing	Comments
Potting Mix	3 to 4 oz.	15 to 20 oz.	30 to 40 oz.	75 to 100 oz.	300 to 400 oz.	During the blending process	Add enough water to the potting mix to reach a moisture content of 45 to 55% on a weight basis.  Store the inoculated potting mix below 100°F. If storage temperatures could exceed 100°F, apply as a drench.
Ground Beds or Propagation Benches	3 to 4 oz.	15 to 20 oz.	30 to 40 oz.	75 to 100 oz.	300 to 400 oz.	Immediately after preparation of the growing media	Store the inoculated potting mix below 100°F. If storage temperatures could exceed 100°F, apply as a drench.

**Drench<sup>1</sup> to the surface of soilless growing media**

Growing Medium	Rate of T. hamatum isolate 382	Timing	Comments
Potting Mix	3 to 4 oz. in 100 gallons of water	Prior to or immediately after seeding.	Apply suspension directly to the surface of the soilless growing media: <ul style="list-style-type: none"> <li>• 1 pt. suspension/sq. ft for six-inch tall pots or containers.</li> <li>• ½ pt. suspension/sq. ft for shallow pots, flats or plugs.</li> </ul>
Ground Beds or Propagation Benches	3 to 4 oz. in 100 gallons of water	Prior to or immediately after seeding or transplanting.	Apply suspension directly to the surface of the soilless growing media immediately after seeding or transplanting into freshly prepared growing media: <ul style="list-style-type: none"> <li>• 1 pt. suspension/sq. ft.</li> </ul>

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<sup>1</sup>Prior to making drench applications, test a small batch of the suspension. Verify that your application spray equipment can properly apply the suspension without clogging or fouling the spray equipment.

**Use Restrictions**

- Apply only to growing media or compost or directly to the surface of growing media by drench application. Do not apply directly to plants.
- Chemigation: Do not apply this product through any type of irrigation system.
- Do not prepare tank mixes of fungicides with *Trichoderma hamatum* isolate 382.
- Do not apply after the Expiration Date listed on the product container.

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**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store *Trichoderma hamatum* isolate 382 in a dry, cool location. Do not store above 75°F or below 40°F.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of onsite or at an approved waste disposal facility

**Container Handling**

[Plastic or Bulk Bags greater than 150 lbs.] – Non-refillable container. Do not re-use or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available.

Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[Fiber Drums with Polyliner (plastic bag) equal to or less than 150 lbs.] – Non-refillable container. Do not re-use or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling if available or dispose of liner in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. If drum is contaminated, and cannot be reused, dispose of it in the manner required for its liner.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product; which are beyond the control of SELLEW AND ASSOCIATES, L.L.C., or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SELLEW AND ASSOCIATES, L.L.C., and Seller harmless for any claims relating to such factors.

SELLEW AND ASSOCIATES, L.L.C., warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SELLEW AND ASSOCIATES, L.L.C., and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SELLEW AND ASSOCIATES, L.L.C., MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

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