



GROUP 21A INSECTICIDE



LICENSED

PERIOD 2014-2016 LIC. NO.

8282.14

# Tolfenpyrad 15EC Insecticide

Emulsifiable Concentrate

For Indoor Greenhouse Use on Ornamental Plants

### Active Ingredient:

#### Tolfenpyrad

(4-chloro-3-ethyl-1-methyl-N-[4-(p-tolyloxy)benzyl]pyrazole-5-carboxamide).....15.0%

Other Ingredients:.....85.0%

Total 100.0%

Contains 1.25 lbs. active ingredient per U.S. gallon



LICENSED

PERIOD 2011-2013 LIC. NO.

EPA Reg No. 71711-31

EPA Est. No.

[Alternate brand name: Hachi-Hachi™ insecticide, Hachi™ insecticide]

## KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<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. 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>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
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 1-800-348-5832 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

**NOTE TO PHYSICIAN:** There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

Net Contents: \_\_\_\_\_

**NICHINO AMERICA, INC.**  
4550 New Linden Hill Rd., Suite 501  
Wilmington, DE 19808  
888-740-7700

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**WARNING - AVISO**

May be fatal if swallowed. Causes skin irritation. Causes substantial but temporary eye injury. Wear protective eyewear. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Do not get in eyes, skin or clothing.

**Personal Protective Equipment**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of material such as barrier laminate or Viton
- Chemical resistant footwear plus socks
- Protective eyewear (goggles, face-shield or safety glasses)

If you want more options for chemical-resistant materials, follow the instructions for Category F or G on an EPA chemical-resistance category selection chart.

**User Safety Recommendations**

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. 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. Discard clothing and personal protective equipment that cannot be reused, including clothing and other absorbent materials that have been drenched or thoroughly contaminated with this product's concentrate. Otherwise, wash clothing and personal protective equipment (including both the inside and outside of gloves) before each day of reuse according to manufacturer's directions or, if no such directions, in detergent and hot water. Keep and wash PPE separately from other laundry.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

**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 requirements specific to your State or Tribe, consult the agency in your state 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.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard is:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant gloves made of material such as barrier laminate or Viton
- Chemical resistant footwear plus socks
- Protective eyewear (goggles, face-shield or safety glasses)

#### **NONAGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. Keep people out of treated areas without protective clothing until sprays have dried.

#### **GENERAL INFORMATION**

**Tolfenpyrad 15EC** insecticide is an emulsifiable concentrate containing 1.25 lbs. of active ingredient per gallon. This product is a contact insecticide used for the control of various insects. **Tolfenpyrad 15EC** insecticide should be used in a program with other products to provide season long protection. Apply as a spray as directed in the "Application Directions" section of this label.

#### **RESISTANCE MANAGEMENT**

**Tolfenpyrad 15EC** insecticide contains tolfenpyrad which is classified by IRAC in Group 21A-mitochondrial electron transport inhibitors. Repeated use of the same chemistry has been shown to result in the buildup of resistant strains of insects. Rotate the use of **Tolfenpyrad 15EC** insecticide with alternate mode of action insecticides.

Resistance management strategies recommend that you DO NOT apply rates lower than recommended on the label. For best results, do not make more applications of **Tolfenpyrad 15EC** insecticide than permitted on the label in a single crop cycle. Contact your local extension specialist or certified crop advisor for additional resistance management or IPM recommendations. Also, for more information about Insect Resistant Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

#### **MIXING DIRECTIONS**

Shake well before using. Read and follow all label directions for each tank mix product prior to any tank mixing with **Tolfenpyrad 15EC** insecticide. This product can be mixed with other registered pesticides. The most restrictive use directions and precautions must be followed.

**Tolfenpyrad 15EC Insecticide Alone:** Begin with clean equipment. Fill spray tank with  $\frac{3}{4}$  of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the balance of the water to the spray tank with agitation running. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load.

**Tolfenpyrad 15EC Insecticide Tank Mixtures:** Follow all use directions as listed above under **Tolfenpyrad 15EC Insecticide Alone** with the following exception: after the **Tolfenpyrad 15EC** insecticide is thoroughly mixed and the tank is  $\frac{3}{4}$  full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, **while maintaining agitation**. Then continue adding water to the tank to achieve the desired level, while maintaining agitation.

**Tolfenpyrad 15EC Insecticide Tank Mixtures With Products in Water-Soluble Packaging:** Follow all use directions as listed above under **Tolfenpyrad 15EC Insecticide Alone** with the following exception: add the desired number of water-soluble bags to the tank (if allowed by their label instructions) at the same time the **Tolfenpyrad 15EC** insecticide is added. **Note:** If using products in water soluble packaging, do not tank mix with products that contain boron, chromium, or other micronutrients.

**Tolfenpyrad 15EC** insecticide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing **Tolfenpyrad 15EC** insecticide with other pesticides, fertilizers or micronutrients. If you have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, add the recommended proportions of each chemical with the same proportion of water, as will be present in the chemical supply tank, into a suitable container, mix

thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be readily re-mixed, the mixture is considered physically compatible.

## APPLICATION DIRECTIONS

### GENERAL USE LIMITATIONS AND PRECAUTIONS

#### Indoor Greenhouse Use on Ornamental Crops

- Do not apply to *Salvia* spp., *Impatiens* spp., *Gypsophila* spp. and New Guinea impatiens due to potential crop injury.
- In Florida, do not use on bearing or nonbearing commercial fruit trees and vines.
- Do not apply this product through any type of irrigation system.
- Do not apply this product as a smoke or aerosol.
- Do not apply this product to plants used for food or animal feed.
- Do not apply to fruit trees and vines that will bear harvestable fruit within 12 months.

#### Indoor Greenhouse Use on Ornamental Crops

**Tolfenpyrad 15EC** insecticide is recommended for use on indoor greenhouse use on several ornamental plants. The use directions of this product are based on the results of product testing programs on a wide variety of ornamental plants. However, it is impossible to test this product on all species and cultivars. The phytotoxicity of **Tolfenpyrad 15EC** insecticide has been assessed on a wide variety of common ornamental plants with no phytotoxic effects. However, not all plant species and their varieties and cultivars have been tested with possible tankmix combinations, sequential pesticide treatments, and adjuvants and surfactants. Local conditions also can influence crop tolerance and may not match those under which testing has been conducted. Therefore, before using **Tolfenpyrad 15EC** insecticide, test the product on a sample of the crop to be treated to ensure that a phytotoxic response will not occur as a result of applications.

**Tolfenpyrad 15EC** insecticide works primarily through contact action, so good spray coverage is necessary for control of listed insects on the label. Applications should be made immediately after the spray solution is prepared. Under severe insect pressure, use the maximum rates and the shorter spray interval as specified on the label. Dense foliage or excessive growth will often prevent adequate coverage; adjust spray volumes accordingly. Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Treat plants when pests are immature or at a susceptible stage and populations are building, before crop damage occurs.

Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. A wetting agent or other spray adjuvant, approved for use on the crop, may be added to spray solutions according to the manufacturer's use instructions to achieve optimum control.

**Tolfenpyrad 15EC** has been tested on a wide variety of common finished greenhouse crops (listed below). For greenhouse crops not listed below and all young herbaceous crops, such as bedding plant plugs, the user should test the tolerance of **Tolfenpyrad 15EC** on a small area under their local conditions and observe treated crops for 4 to 7 days prior to broad scale use. **Tolfenpyrad 15EC** insecticide is recommended for use on ornamental plantings listed below.

**List of Finished Greenhouse Crops Tested for Tolerance to Tolfenpyrad 15EC Insecticide<sup>1</sup>**

Common Name	Scientific Name
Ash	<i>Fraxinus spp.</i>
Yew	<i>Taxus media</i>
Evening Primrose	<i>Oenothera spp.</i>
Gladiolus	<i>Gladiolus spp.</i>
Cherry	<i>Prunus spp.</i>
Arrowwood	<i>Viburnum spp.</i>
Marigold	<i>Tagetes spp.</i>
Moss Rose	<i>Portulaca spp.</i>
Petunia <sup>2</sup>	<i>Petunia spp.</i>
Gerbera (Transvaal Daisy)	<i>Gerbera spp.</i>
Chrysanthemum	<i>Dendranthema spp.</i>
Coleus	<i>Solenostemon scutellarioides L.</i>
Poinsettia	<i>Euphorbia pulcherrima</i>
Schefflera	<i>Brassaia actinophylla</i>
Lantana (Yellow Sage)	<i>Lantana camera</i>

- 1 Local conditions can influence crop tolerance and may not match those under which these species were tested. Before using **Tolfenpyrad 15EC** insecticide, test the product on a small sample of the crop to be treated.
- 2 Direct sprays of **Tolfenpyrad 15EC** to blooms of some species of Petunia at higher use rates may cause phytotoxicity to existing blooms.

**Temporary phytotoxicity may occur to some species of *Ageratum*, *Colocasia*, *Geranium*, *Lobelia*, *Verbena*, and *Vinca*. Users should test the tolerance of Hachi-Hachi under their local conditions and observe these crops for 4 to 7 days prior to broad scale use.**

**Do not apply Tolfenpyrad 15EC to *Salvia* spp., *Impatiens* spp., *Gypsophila* spp. and New Guinea Impatiens due to potential crop injury.**

**APPLICATION RATE CHART FOR TOLFENPYRAD 15EC INSECTICIDE**

Use	Pest Controlled	Dilution Rate PRODUCT FL OZ/100 Gallons	Use Directions
Greenhouse ornamental plants EXCEPT cut flowers	Aphids Leafhoppers Lepidopteran insects (early instars) Scale Thrips Whitefly	21 - 32 fl oz per 100 gal	<ul style="list-style-type: none"> <li>• The maximum single application rate is 1.36 lb a.i./acre (139 fl oz/A) or 0.31 lb a.i./per 10,000 square feet.</li> <li>• Apply no more than 100 gallons of spray solution per 10,000 square feet per application.</li> <li>• 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse.</li> <li>• Apply no more than 2 applications per crop cycle.</li> <li>• Do not apply more than 4 applications per year.</li> <li>• Apply no more than 64 fluid ounces per 10,000 square feet</li> </ul>

			<p>per crop cycle.</p> <ul style="list-style-type: none"> <li>• Allow at least 10 days between applications.</li> <li>• Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.</li> </ul>
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Use	Pest Controlled	Dilution Rate PRODUCT FL OZ/100 Gallons	Use Directions
Greenhouse ornamental plants grown for cuttings (e.g. cut flowers)		14 - 22 fl oz per 100 gal	<ul style="list-style-type: none"> <li>• The maximum single application rate is 0.94 lb a.i./acre (96 fl oz/A) or 0.22 lb a.i./per 10,000 square feet.</li> <li>• Apply no more than 100 gallons of spray solution per 10,000 square feet per application.</li> <li>• 100 gallons of finished spray solution will typically cover 20,000 square feet.</li> <li>• Apply no more than 2 applications per crop cycle.</li> <li>• Do not apply more than 4 applications per year.</li> <li>• Do not apply more than 44 fluid ounces per crop cycle per 10,000 square feet.</li> <li>• Allow at least 10 days between applications.</li> </ul> <p>Apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume or low volume ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.</p>

### **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer container for recycling, if available, offer for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### **IMPORTANT: READ BEFORE USE WARRANTY STATEMENT**

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

**CONDITIONS:** The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NAI is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability, or otherwise.

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