



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION**

May 15, 2017

Dr. Lydia Cox
Director of Regulatory Affairs
Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808

Subject: Label Amendment – Reformatting Master Label into Sublabel A for Crop Use and Sublabel B for Greenhouse Use
Product Name: Tolfenpyrad 15SC Insecticide
EPA Registration Number: 71711-36
Application Date: December 30, 2015
Resubmission Date: April 17, 2017
Decision Number: 513290

Dear Dr. Cox:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

SEE NEXT PAGE

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact me by phone at (703)308-2972, or via email at walsh.michael@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Walsh', with a stylized flourish at the end.

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

Enclosure

NICHINO
AMERICA®

GROUP

21A

INSECTICIDE

TOLFENPYRAD 15SC Insecticide

ACTIVE INGREDIENT:

Tolfenpyrad 1H-Pyrazole-5-carboxamide, 4-chloro-3-ethyl-1-methyl-N-[[4-(4-methylphenoxy)phenyl]methyl]- **15.0%**

OTHER INGREDIENTS: **85.0%**

TOTAL **100.0%**

Contains 1.31 lbs active ingredient per U.S. gallon

EPA Reg. No. 71711-36

EPA Est. No. _____

[Alternate brand names: APTA® Insecticide, BEXAR® Insecticide, HACHI-HACHI® SC 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.)

{Note to Reviewer: This master label is composed of 2 sub-labels. Sub-label A is for food crop uses.
Sub-label B is for greenhouse uses.}

ACCEPTED

05/15/2017

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 71711-36

NICHINO
AMERICA®

GROUP

21A

INSECTICIDE

TOLFENPYRAD 15SC Insecticide

Broad spectrum insecticide that also controls eriophyid mites and certain fungal diseases

ACTIVE INGREDIENT:

Tolfenpyrad 1H-Pyrazole-5-carboxamide, 4-chloro-3-ethyl-1-methyl-N-[[4-(4-methylphenoxy)phenyl]methyl]- **15.0%**

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EPA Est. No. _____

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	
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • 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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-348-5832. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

{Note to Reviewer: This language will be on the front of the booklet:} **See inside booklet for Precautionary Statements and Directions for Use**

{Note to Reviewer: This language will be on the label permanently affixed to the jug:} **See attached booklet for Precautionary Statements and Directions for Use**

Net Contents: _____

[Manufactured in ____], [formulated in ____], [and] [packaged in ____] for:

NICHINO AMERICA, INC.

4550 Linden Hill Road
Wilmington, DE 19808
888-740-7700

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING - AVISO

May be fatal if inhaled. Do not breathe vapor or spray mist. Harmful if swallowed or if absorbed through skin. Avoid contact with skin, eyes, or clothing. 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)
- For handling activities, use a minimum of a half-face NIOSH approved respirator with organic vapor cartridges and any R or P combination filter (TC-84A). Handlers can also use other NIOSH approved respirators for organic vapor and particulates that contain oil that offer more protection such as a full-face respirator with the same cartridges and filter, a gas mask with an organic vapor canister, or powered air purifying respirator with an organic vapor cartridge and HE filter. Protective eyewear is not required for handlers wearing a full-face respirator or a gas mask.

See **Engineering Controls**.

Follow the 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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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) (4–6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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.
- 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.

ENVIRONMENTAL HAZARDS

This pesticide is very highly toxic to fish and aquatic invertebrates.

For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming crops or weeds. **Do not apply this product or allow it to drift to blooming crops or weeds if bees or other pollinating insects are visiting the treatment area.** Application must be made at least 8 hours prior to bees foraging.

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having medium to high potential for reaching both surface water and aquatic sediment via runoff for several weeks after application. A level, well-maintained vegetative filter (buffer) strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.


ENDANGERED SPECIES RESTRICTIONS

This product may pose a hazard to endangered aquatic species. Follow all use directions.

PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When using this product, take steps to:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product onto beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:

<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

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 state or tribal agency responsible for pesticide regulation.



1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met. If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.



2. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset.
- The application is made to the target site when temperatures are below 55°F.
- The application is made in accordance with a government-initiated public health response.
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.

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 such as plants, soil, or water, wear:

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

USE INFORMATION

TOLFENPYRAD 15SC insecticide is a suspension concentrate containing 1.31 lbs of active ingredient tolfenpyrad per gallon. This product is a contact insecticide used for the control of several orders of insects. Complete and thorough spray coverage is necessary for maximum results. TOLFENPYRAD 15SC 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.

Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Adjust water volumes and tractor speed accordingly for crops with dense foliage or excessive growth. Unless otherwise specified under Application Directions, apply when pest populations are beginning to build, before crop damage or injury is observed. Consult your local agricultural advisor or state cooperative extension service for recommendations.

DIRECTIONS FOR USE OF TOLFENPYRAD 15SC INSECTICIDE AS A FUNGICIDE

For crops and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as “control”, this product may be used alone as a contact fungicide or mixed with other registered fungicide products to broaden spectrum of disease control. For crops and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as “suppression”, this product should NOT be substituted for labeled fungicidal products.

APPLICATION DIRECTIONS

- Applications should be made immediately after the spray solution is prepared.
- Thorough spray coverage is critical to obtain control of the target pest(s).
- Applications may be made by air or ground with high or low volume spray equipment that provides thorough spray coverage of the plant.
- For ground applications, use coarse droplet size.
- For aerial applications, use larger droplet size (greater than 200 microns).
- Use sufficient water volume to ensure thorough coverage of foliage.
- **Do not apply TOLFENPYRAD 15SC insecticide through any type of irrigation system except those described in the CHEMIGATION section.**
- **RESTRICTION: Not for sale or use in the state of New York.**

BUFFER ZONES

Vegetative Filter (Buffer) Strip

All crops except Tree Nuts (crop group 14-12): 15-foot vegetative filter (buffer) strip

Tree Nuts (crop group 14-12): 25-foot vegetative filter (buffer) strip

Construct and maintain the vegetative filter (buffer) strip of grass or other permanent vegetation between field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing tolfenpyrad onto fields where a maintained vegetative filter (buffer) strip of at least 15 feet exists between the field edge and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, <http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf>

Buffer Zone for Ground Application

Do not apply within 15 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

Buffer Zone for Aerial Application

Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, and commercial fish ponds).

SPRAY ADJUVANTS

For maximum performance, the use of an agricultural spray adjuvant with TOLFENPYRAD 15SC insecticide is recommended to increase spray coverage of the plants and pests being treated. Select an adjuvant that is labeled for agricultural use and follow its use directions.

CROP ROTATION RESTRICTIONS

Crop/Crop Group	Plantback Timing
All crops on this label	0 days following application
All other crops	14 days following application

RESISTANCE MANAGEMENT

Tolfenpyrad 15SC insecticide contains the active ingredient tolfenpyrad, an IRAC Group 21A insecticide. Use of the same mode of action repeatedly in the same field or area may result in reduced control and/or insect resistance. Unless targeting a single generation of a pest, Tolfenpyrad 15SC insecticide applications should be alternated with other insecticidal modes of action. If targeting a single generation of a pest, do not apply more than two consecutive applications of Tolfenpyrad 15SC insecticide before rotating to an insecticide with a different mode of action.

Resistance management strategies recommend that you DO NOT apply rates lower than recommended on the label. Contact your local extension specialist or certified crop advisor for additional Insecticide Resistance Management (IRM) or IPM recommendations. For more information about IRM, visit the Insecticide Resistance Action Committee (IRAC) website 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 15SC insecticide. This product can be mixed with other registered pesticides for use on labeled crops or sites, in accordance with the most restrictive use directions and precautions. No labeled dose rate should be exceeded.

TOLFENPYRAD 15SC insecticide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing TOLFENPYRAD 15SC 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 remixed, the mixture is considered physically compatible.

TOLFENPYRAD 15SC 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 remaining water volume 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 15SC Insecticide Tank Mixtures: Begin with clean equipment. Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with $\frac{3}{4}$ amount of water.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

- 1) products in water soluble packets
- 2) wettable powders
- 3) water dispersible granulars and/or soluble powders
- 4) flowable liquids (including TOLFENPYRAD 15SC insecticide)
- 5) emulsifiable concentrate
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

COMPATIBILITY STATEMENT REGARDING CERTAIN FUNGICIDE PRODUCTS

Tolfenpyrad 15SC insecticide has been found to be compatible in mixes with several different fungicide products and has been found to be safe to labeled crops under most conditions. However, care should be taken when applying Tolfenpyrad 15SC insecticide in tankmixes with fungicide products in FRAC Group 3 (sterol biosynthesis inhibitors) and FRAC Group 11 (QoI) if environmental conditions are known to be conducive to adverse crop response to those products.

CHEMIGATION

For chemigation use in potato and vegetable crops only. TOLFENPYRAD 15SC insecticide may be applied only through overhead center pivot, solid set, hand move and moving wheel irrigation equipment.

Center Pivot Irrigation Equipment:

Notes: (1) Use only drive systems which provide uniform water distribution. (2) Do not use end guns when chemigating TOLFENPYRAD 15SC insecticide to avoid non-uniform application. (3) Plug the first nozzle closest to the well head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply $\frac{1}{4}$ - $\frac{1}{2}$ inch of water over the area to be treated when the system and injection system area operate at normal pressures as recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of TOLFENPYRAD 15SC insecticide and any tankmix partners required to treat the area covered by the irrigation system.
5. Add to the solution tank the required amount of TOLFENPYRAD 15SC insecticide and tankmix partners, and sufficient water to meet the injection time requirements.
6. Make sure the system is fully charged with water before starting injection of the TOLFENPYRAD 15SC insecticide solution. Time the injection to last at least as long as it takes to bring the system to full pressure.

7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of TOLFENPYRAD 15SC insecticide per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15SC insecticide solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the TOLFENPYRAD 15SC insecticide solution through all nozzles before turning off irrigation water.

Solid Set, Hand Move and Moving Wheel Irrigation Equipment:

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of TOLFENPYRAD 15SC insecticide required to treat the area covered by the irrigation system.
4. Add the required amount of TOLFENPYRAD 15SC insecticide and any other tankmix partners into the same quantity of water used to calibrate the injection period.
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of TOLFENPYRAD 15SC insecticide per acre for: (1) a 20-40 minute period at the end of a regular irrigation set; or (2) as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide on the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the TOLFENPYRAD 15SC insecticide solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Chemigation Monitoring: A person knowledgeable of the chemigation system and equipment responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Follow the appropriate personal protective equipment (PPE) guidelines.

SPRAY DRIFT MANAGEMENT

Avoid spray drift to all other crops and nontarget areas. **Do not apply when weather conditions may cause drift. Do not allow this product to drift onto nontarget areas.** Drift may result in illegal residues or injury to adjacent crops and vegetation. To avoid spray drift, **DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions.** Use of larger droplet size will also reduce spray drift.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

Droplet size, boom height, and wind speed are the primary factors determining drift. The specific application conditions required for the use of this product are described below.

Controlling Droplet Size – General Techniques

Volume

Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure

Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.

Controlling Droplet Size – Aircraft

Number of Nozzles

Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

Nozzle Orientation

Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type

Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Height and Length – Ground and Aircraft

Boom Height (ground): Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

Boom Height (aircraft): Application more than 10 feet above the canopy increases the potential for spray drift.

Boom Length (aircraft): The minimum boom length should not exceed $\frac{3}{4}$ of the wing length; using shorter booms decreases drift potential. For helicopters, the minimum boom length should not exceed $\frac{9}{10}$ of the rotary blade to prevent droplets from entering the rotor vortices.

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. AVOID GUSTY OR WINDLESS CONDITIONS. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. This cloud can move in unpredictable directions due to the light and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Shielded Sprayers

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with the uniform deposition of the product.

Air Assisted (Air Blast) Field Crop Sprayers

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

Air Assisted (Air Blast) Tree and Vine Sprayers

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. In addition to the general drift management practices already described, the following specific practices will further reduce the potential for drift:

- Adjust the deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- **Do not allow spray to go beyond the edge of the cultivated area.** Spray the outside row only from outside the planting.

APPLICATION RATE CHART FOR TOLFENPYRAD 15SC INSECTICIDE**Citrus Fruit (Crop Group 10-10)**

Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; Mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin orange, clementine); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

Pest	Rate/Acre	Use Directions
Asian citrus psyllid Katydid	14.0 to 27.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">• Do not apply by air on citrus fruit.• Apply by ground only, using a minimum of 100 gallons of water per acre.• For high air velocity, low volume or air curtain sprayers, do not use less than 30 gallons of water per acre.• Do not use on nursery stock.• Do not apply more than 27.0 fluid ounces per acre per growing season.• Do not make more than 1 application per growing season.• Do not make more than 2 applications per year.• Preharvest Interval (PHI): 14 days
Aphids	17.0 to 27.0 fl oz/acre	
Citrus bud mite Citrus mealybug Citrus thrips Soft scale insects, including citricola scale, barnacle scale, and brown soft scale	21.0 to 27.0 fl oz/acre	
Citrus peelminer Citrus red mite Citrus rust mite (silver mite) Leafminer (CA: control; FL: suppression) Mealybugs Citrus orangedog* Citrus weevil* Cutworms*	24.0 to 27.0 fl oz/acre	
*suppression only		

Cotton (limited to states of Arizona, California, New Mexico)		
Pest	Rate/Acre	Use Directions
Aphids	14.0 to 21.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">• Apply by air using a minimum of 5 gallons of water per acre.• Apply by ground using a minimum of 10 gallons of water per acre.• Do not apply more than 42.0 fluid ounces per acre per growing season.• Do not make more than 2 applications per growing season.• Allow at least 14 days between applications.• Preharvest Interval (PHI): 14 days
Fleahopper	17.0 to 21.0 fl oz/acre	
Thrips Armyworms* Bollworms* Pink bollworm* Plant bugs* Stink bugs* Tobacco budworm* Whiteflies*	21.0 fl oz/acre	
*suppression only		

Grape - raisin; table; wine (limited to states of California, Oregon, Washington)		
Pest/Disease	Rate/Acre	Use Directions
Leafhoppers	12.0 to 21.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">• Do not apply by air on grape.• Apply by ground only, using a minimum of 50 gallons of water per acre.• Do not apply more than 41.0 fluid ounces per acre per growing season.• Do not make more than 2 applications per growing season.• Allow at least 14 days between applications.• Preharvest Interval (PHI): 7 days
Grape berry moth Leaffolders Leafrollers Mealybugs Thrips	21.0 to 27.0 fl oz/acre	
Japanese beetle, adults (topical application) Grapeleaf skeletonizer* Powdery mildew*	24.0 to 27.0 fl oz/acre	
*suppression only		

Leafy Vegetables (Crop Group 4) - except brassica vegetables

amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celery, Chinese; celtuce; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; corn salad; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fennel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard

Pest/Disease	Rate/Acre	Use Directions
Leafhoppers	14.0 to 21.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">Do not apply until at least fourteen (14) days after emergence or after transplanting to allow time for root establishment. This period of time should be extended if conditions at time of emergence or transplanting are not favorable to crop growth.Do not apply by air on leafy vegetables in Texas or east of the Mississippi River.Apply by air using a minimum of 5 gallons of water per acre.Apply by ground using a minimum of 20 gallons of water per acre.Do not apply more than 42.0 fluid ounces per acre per crop cycle.Do not make more than 2 applications per crop cycle.Do not make more than 4 applications per year.Allow at least 14 days between applications.Preharvest Interval (PHI): 1 day USE RECOMMENDATIONS - DISEASES <ul style="list-style-type: none">Begin applications prior to onset of disease.Use of an agriculturally approved nonionic surfactant at 0.25% v/v may improve disease control.If weather conditions remain conducive to disease development, apply another registered fungicide product with a different mode of action 7 to 10 days later.Consult local extension recommendations or your agricultural consultant for information specific to your area.
Aphids (excluding lettuce aphid) Flea beetle	17.0 to 21.0 fl oz/acre	
Thrips Powdery mildew (<i>Erysiphe cichoracearum</i>) Armyworms* Corn earworm* Cutworm species* European corn borer* Imported cabbageworm* Tobacco budworm* Tomato hornworm* Whiteflies* Downy mildew*	21.0 fl oz/acre	

*suppression only

Potato (limited to states west of the Mississippi River)		
Pest	Rate/Acre	Use Directions
Colorado potato beetle Leafhoppers	14.0 to 21.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none"> • Do not apply by air on potato in Texas. • Apply by air using a minimum of 5 gallons of water per acre. • Apply by ground using a minimum of 20 gallons of water per acre. • See CHEMIGATION statement in Application Directions. • Do not apply more than 42.0 fluid ounces per acre per crop cycle. • Do not make more than 2 applications per crop cycle. • Allow at least 14 days between applications. • Preharvest Interval (PHI): 14 days
Aphids Potato psyllid Thrips	17.0 to 21.0 fl oz/acre	

Stone Fruits (Crop Group 12-12); Persimmon; Pomegranate

apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; persimmon; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; pomegranate; sloe; cultivars, varieties, and/or hybrids of these

Pest/Disease	Rate/Acre	Use Directions
Cherry fruit fly Katydid Leafhoppers	14.0 to 27.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">• Do not apply by air• Apply by ground only, using a minimum of 50 gallons of water per acre.• Do not apply by Alternate Row Middle (ARM) spray method.• Do not apply more than 54.0 fluid ounces per acre per growing season.• Do not make more than 2 applications per growing season.• Allow at least 10 days between applications.• Preharvest Interval (PHI): 14 days
Aphids	17.0 to 27.0 fl oz/acre	
Apple maggot Leafrollers Mealybugs Plum curculio Green fruitworm* Peach twig borer* Powdery mildew* Spotted wing drosophila* Stink bugs* Thrips*	21.0 to 27.0 fl oz/acre	
*suppression only		

Tree Nuts (Crop Group 14-12)

African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these

Pest	Rate/Acre	Use Directions
Aphids	17.0 to 27.0 fl oz/acre	USE RESTRICTIONS <ul style="list-style-type: none">• Maintain a minimum of 25 feet of vegetative filter (buffer) strip.• Do not apply by air on tree nuts.• Apply by ground only, using a minimum of 50 gallons of water per acre.• Do not apply by Alternate Row Middle (ARM) spray method.• Do not apply more than 27.0 fluid ounces per acre per growing season.• Do not make more than 1 application per growing season.• Preharvest Interval (PHI): 14 days
Hickory shuckworm Leafrollers Mealybugs Pecan nut casebearer Navel orangeworm* Peach twig borer* Pecan leaf scorch mite* Pecan weevil* Plant bugs* Stink bugs*	21.0 to 27.0 fl oz/acre	
*suppression only		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, and keep tightly closed when not in use. Store in a cool, dry place.

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

CONTAINER HANDLING:

[Nonrefillable plastic container (Less than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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 for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable plastic container (Greater than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable metal container (Greater than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Refillable plastic container]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale. Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Refillable metal container]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale, or offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

IMPORTANT: READ BEFORE USE

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.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT THE ELECTION OF NICHINO AMERICA, THE REPLACEMENT OF PRODUCT.

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NICHINO
AMERICA®

GROUP

21A

INSECTICIDE

TOLFENPYRAD 15SC Insecticide

{Note to Reviewer: One of the product descriptions below will appear on the final printed product label}

[For Indoor Greenhouse Use on Ornamental Plants]

[For the Control of Aphids, Leafhoppers, Lepidopteran Insects, Mealybugs, Scale, and Thrips on Indoor Greenhouse Ornamental Plants]

ACTIVE INGREDIENT:

Tolfenpyrad 1H-Pyrazole-5-carboxamide, 4-chloro-3-ethyl-1-methyl-N-[[4-(4-methylphenoxy)phenyl]methyl]- **15.0%**

OTHER INGREDIENTS: **85.0%**

TOTAL **100.0%**

Contains 1.31 lbs active ingredient per U.S. gallon

EPA Reg. No. 71711-36

EPA Est. No. _____

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	
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • 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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-348-5832. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

Net Contents: _____

[Manufactured in ____], [formulated in ____], [and] [packaged in ____] for:

NICHINO AMERICA, INC.

4550 Linden Hill Road
Wilmington, DE 19808
888-740-7700

{Note to Reviewer: The two reference statements below will appear on the front panel of the booklet.}

Notice: Read the entire label before using. Use only according to label directions. Before buying or using this product, read Warranty Disclaimer inside label booklet. If terms are unacceptable, return at once unopened.

Refer to inside of label booklet for additional precautionary statements and directions for use, including storage and disposal.

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING - AVISO**

May be fatal if inhaled. Do not breathe vapor or spray mist. Harmful if swallowed or if absorbed through skin. Avoid contact with skin, eyes, or clothing. 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)
- For handling activities, use a minimum of a half-face NIOSH approved respirator with organic vapor cartridges and any R or P combination filter (TC-84A). Handlers can also use other NIOSH approved respirators for organic vapor and particulates that contain oil that offer more protection such as a full-face respirator with the same cartridges and filter, a gas mask with an organic vapor canister, or powered air purifying respirator with an organic vapor cartridge and HE filter. Protective eyewear is not required for handlers wearing a full-face respirator or a gas mask.

See **Engineering Controls**.

Follow the 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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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) (4–6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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.
- 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.

ENVIRONMENTAL HAZARDS

This pesticide is very highly toxic to fish and aquatic invertebrates.

For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming ornamental plants or weeds. **Do not apply this product or allow it to drift to blooming plants or weeds if bees or other pollinating insects are visiting the treatment area.** Application must be made at least 8 hours prior to bees foraging.

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having medium to high potential for reaching both surface water and aquatic sediment via runoff for several weeks after application. A level, well-maintained vegetative filter (buffer) strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

ENDANGERED SPECIES RESTRICTIONS

This product may pose a hazard to endangered aquatic species. Follow all use directions.

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 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 such as plants, soil, or water, wear:

- Coveralls
- Waterproof gloves
- Shoes 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, nurseries, and greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

USE INFORMATION

TOLFENPYRAD 15SC insecticide is a suspension concentrate containing 1.31 lbs of active ingredient tolfenpyrad per gallon. This product is a contact insecticide used for the control of several orders of insects. Complete and thorough spray coverage is necessary for maximum results. TOLFENPYRAD 15SC 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.

Mix with sufficient water and apply as a foliar spray to obtain uniform coverage. Adjust water volumes and tractor speed accordingly for ornamental plants with dense foliage or excessive growth. Unless otherwise specified under **Application Directions**, apply when pest populations are beginning to build, before plant damage or injury is observed. Consult your local agricultural advisor or state cooperative extension service for recommendations.

DIRECTIONS FOR USE OF TOLFENPYRAD 15SC INSECTICIDE AS A FUNGICIDE

For ornamental plants and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as "control", this product may be used alone as a contact fungicide or mixed with other registered fungicide products to broaden spectrum of disease control. For plants and diseases where the level of activity of TOLFENPYRAD 15SC insecticide is listed as "suppression", this product should NOT be substituted for labeled fungicidal products.

APPLICATION DIRECTIONS

- Applications should be made immediately after the spray solution is prepared.
- Thorough spray coverage is critical to obtain control of the target pest(s).
- **Do not spray to the point of runoff.**
- **Do not allow pesticide to enter or run off into public waterways, sewers, or drains.**
- Applications may be made by ground with high or low volume spray equipment that provides thorough spray coverage of the plant.
- Use sufficient water volume to ensure thorough coverage of foliage.
- **Do not apply TOLFENPYRAD 15SC insecticide through any type of irrigation system.**
- **RESTRICTION: Not for sale or use in the state of New York.**

SPRAY ADJUVANTS

For maximum performance, the use of an agricultural spray adjuvant with TOLFENPYRAD 15SC insecticide is recommended to increase spray coverage of the plants and pests being treated. Select an adjuvant that is labeled for agricultural use and follow its use directions.

USE LIMITATIONS AND PRECAUTIONS FOR GREENHOUSE ORNAMENTAL PLANTS

- Do not apply this product as a smoke or aerosol.
- Do not apply to *Salvia* spp., *Impatiens* spp., *Gypsophila* spp. and New Guinea impatiens due to potential plant injury.
- Do not apply to Poinsettias with bracts with color.
- In Florida, do not use on bearing or nonbearing commercial fruit trees and vines.
- Do not use this product through any type of irrigation system.

RESISTANCE MANAGEMENT

Tolfenpyrad 15SC insecticide contains the active ingredient tolfenpyrad, an IRAC Group 21A insecticide. Use of the same mode of action repeatedly in the same field or area may result in reduced control and/or insect resistance. Unless targeting a single generation of a pest, Tolfenpyrad 15SC insecticide applications should be alternated with other insecticidal modes of action. If targeting a single generation of a pest, do not apply more than two consecutive applications of Tolfenpyrad 15SC insecticide before rotating to an insecticide with a different mode of action.

Resistance management strategies recommend that you DO NOT apply rates lower than recommended on the label. Contact your local extension specialist or certified crop advisor for additional Insecticide Resistance Management (IRM) or IPM recommendations. For more information about IRM, visit the Insecticide Resistance Action Committee (IRAC) website 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 15SC insecticide. This product can be mixed with other registered pesticides for use on labeled ornamental plants or sites, in accordance with the most restrictive use directions and precautions. No labeled dose rate should be exceeded.

TOLFENPYRAD 15SC insecticide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing TOLFENPYRAD 15SC 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 remixed, the mixture is considered physically compatible.

TOLFENPYRAD 15SC 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 remaining water volume 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 15SC Insecticide Tank Mixtures: Begin with clean equipment. Fill spray tank with $\frac{3}{4}$ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with $\frac{3}{4}$ amount of water.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

- 1) products in water soluble packets
- 2) wettable powders
- 3) water dispersible granulars and/or soluble powders
- 4) flowable liquids (including TOLFENPYRAD 15SC insecticide)
- 5) emulsifiable concentrate
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

COMPATIBILITY STATEMENT REGARDING CERTAIN FUNGICIDE PRODUCTS

Tolfenpyrad 15SC insecticide has been found to be compatible in mixes with several different fungicide products and has been found to be safe to labeled ornamental plants under most conditions. However, care should be taken when applying Tolfenpyrad 15SC insecticide in tankmixes with fungicide products in FRAC Group 3 (sterol biosynthesis inhibitors) and FRAC Group 11 (QoI) if environmental conditions are known to be conducive to adverse plant response to those products.

INDOOR GREENHOUSE USE ON ORNAMENTAL PLANTS

Tolfenpyrad 15SC insecticide is recommended for use on ornamental plants. The use directions of this product are based on the results of product testing programs on a wide variety of ornamental plants. The phytotoxicity of **Tolfenpyrad 15SC** insecticide has been assessed on a wide variety of common ornamental plants. However, not all plant species, varieties, and cultivars have been tested, including with possible tankmix combinations, sequential pesticide treatments, and adjuvants and surfactants. Local conditions also can influence plant tolerance and may not match those under which testing has

been conducted. **Therefore, before using Tolfenpyrad 15SC insecticide for commercial applications, the user must test the product and its representative use on a sample of the ornamental plant to be treated to ensure that a phytotoxic response will not occur as a result of applications.**

Tolfenpyrad 15SC 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 plant 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 plant may be added to spray solutions according to the manufacturer's use instructions to achieve optimum control.

Though Tolfenpyrad 15SC insecticide has been tested on a wide variety of common finished greenhouse ornamental plants (see Table 1), plant injury is always possible due to the varying environmental conditions under which this product may be applied. Young herbaceous ornamental plants such as bedding plant plugs may be more susceptible than mature plants. **The user MUST test Tolfenpyrad 15SC insecticide on a small area under local conditions and with the representative use (e.g. plant size, tankmixes, with fungicides, etc.) prior to any commercial application.** If any sign of plant damage or phytotoxicity occurs during the small-scale test, do not make commercial applications of Tolfenpyrad 15SC to that plant. **To the extent consistent with applicable law, the user or buyer assumes all risks and liability associated with applying Tolfenpyrad 15SC if commercial applications are made without first evaluating the representative use on the plant at a small scale on any species. To the extent consistent with applicable law, the user or buyer assumes all risks and liability associated with applying Tolfenpyrad 15SC to any ornamental plant not listed in Table 1 (List of Plant Species Tested for Sensitivity to Tolfenpyrad 15SC Insecticide).**

Table 1. List of Plant Species Tested for Sensitivity to Tolfenpyrad 15SC Insecticide¹

Common Name	Scientific Name
Arrowwood	<i>Viburnum</i> spp.
Ash	<i>Fraxinus</i> spp.
Cherry	<i>Prunus</i> spp.
Chrysanthemum	<i>Chrysanthemum</i> spp.
Coleus	<i>Solenostemon</i> spp.
Fanflower	<i>Scaevola aemula</i>
Gerbera (Transvaal Daisy)	<i>Gerbera</i> spp.
Lantana	<i>Lantana</i> spp.
Madwort	<i>Alyssum</i> spp.
Moss Rose	<i>Portulaca</i> spp.
Pentas	<i>Pentas lanceolata</i>
Schefflera	<i>Brassaia actinophylla</i>
Snapdragon	<i>Antirrhinum majus</i>
Yew	<i>Taxus media</i>
Zinnia	<i>Zinnia</i> sp.

¹Local conditions can influence plant tolerance and may not match those under which these species were tested. Before using **Tolfenpyrad 15SC** insecticide for commercial applications, test the product on a small sample of the ornamental plant to be treated with a representative plant to ensure plant injury does not occur.

Temporary phytotoxicity may occur to some species of *Ageratum*, *Begonia*, *Colocasia*, *Geranium*, Ground Orchid (*Spathoglottis plicata*), *Lobelia*, Marigold (*Tagetes* spp.), *Pansy* (flowers), *Verbena*, and *Vinca*.

DO NOT APPLY TOLFENPYRAD 15SC INSECTICIDE TO *SALVIA* SPP., *IMPATIENS* SPP., *Gypsophila* spp., AND NEW GUINEA *IMPATIENS* DUE TO POTENTIAL PLANT INJURY.

APPLICATION RATE CHART FOR TOLFENPYRAD 15SC INSECTICIDE

Greenhouse Ornamental Plants EXCEPT cut flowers		
Pest	Dilution Rate fl oz/100 gallons	Use Directions
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly* Powdery mildew*	21 to 32 fl oz per 100 gal	<ul style="list-style-type: none"> • Do not apply more than 32 fl oz/100 gal (1.36 lbs a.i./acre) per application. • Do not apply more than 100 gallons of spray solution per 10,000 sq. ft. per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse. • Do not apply more than 2 applications per plant cycle. • Do not apply more than 64 fl oz/100 gal (2.72 lbs a.i./acre) per plant cycle. • Allow at least 10 days between applications. • Preharvest Interval (PHI): 0 days • Do not spray to the point of runoff. • Do not allow pesticide to enter or run off into public waterways, sewers, or drains. • 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.
*suppression only		

Greenhouse Ornamental Plants Grown for Cuttings (e.g. cut flowers)		
Pest	Dilution Rate fl oz/100 gallons	Use Directions
Aphids Leafhoppers Lepidopteran insects (early instars) Mealybugs Scale Thrips Whitefly* Powdery mildew*	14 to 32 fl oz per 100 gal	<ul style="list-style-type: none"> • Do not apply more than 32 fl oz/100 gal (1.36 lbs a.i./acre) per application. • Do not apply more than 100 gallons of spray solution per 10,000 square feet per application. • 100 gallons of finished spray solution will typically cover 20,000 square feet of greenhouse. • Do not apply more than 2 applications per plant cycle. • Do not apply more than 64 fl oz/100 gal (2.72 lbs a.i./acre) per plant cycle. • Do not apply more than 4 applications per year. • Allow at least 10 days between applications. • Preharvest Interval (PHI): 0 days • Do not spray to the point of runoff. • Do not allow pesticide to enter or runoff into public waterways, sewers, or drains. • 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.
*suppression only		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, and keep tightly closed when not in use. Store in a cool, dry place.

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

CONTAINER HANDLING:

[Nonrefillable plastic container (Less than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. 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 for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable plastic container (Greater than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Nonrefillable metal container (Greater than 5 gallons)]

Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Refillable plastic container]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale. Then offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[Refillable metal container]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Return to point of sale, or offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

IMPORTANT: READ BEFORE USE

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.

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