



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

71711-48

Date of Issuance:

3/21/18

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

NNF-1681 SC Fungicide

Name and Address of Registrant (include ZIP Code):

Nichino America, Inc.  
4550 Linden Hill Rd.  
Wilmington, DE 19808

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

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

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

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 71711-48."
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Signature of Approving Official:

Shaja B. Joyner, Product Manager 20  
Fungicide-Herbicide Branch  
Registration Division 7505P

Date:

3/21/18

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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 12/4/2017

If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at [mellor.nathan@epa.gov](mailto:mellor.nathan@epa.gov)

Enclosure

03/21/2018

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 71711-48

FLUTOLANIL	GROUP	C2	FUNGICIDE
FLUTRIAFOL	GROUP	G1	FUNGICIDE

**NICHINO**  
AMERICA®

## NNF-1681 SC Fungicide

### ACTIVE INGREDIENTS:

**Flutolanil:** Benzamide, N-[3-(1-methylethoxy)phenyl]-2-(trifluoromethyl)- .....**32.4%**

**Flutriafol:** 1H-1,2,4-Triazole-1-ethanol,  $\alpha$ -(2-fluorophenyl)-  $\alpha$ -(4-fluorophenyl)-.....**4.0%**

**OTHER INGREDIENTS:** .....**63.6%**

**TOTAL** .....**100.0%**

Contains 3.0 lbs Flutolanil and 0.37 lb Flutriafol as active ingredients per U.S. gallon

EPA Reg. No. 71711-XX

EPA EST. NO. \_\_\_\_\_

[Alternate Brand: Umbra™]

## KEEP OUT OF REACH OF CHILDREN CAUTION

### FIRST AID

#### If swallowed

- 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 by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

#### If on skin or clothing

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

### 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, you may call 1-800-348-5832. In case of fire or spills, information may be obtained by calling 1-800-424-9300.

Batch/Lot No. \_\_\_\_\_

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**  
**CAUTION**

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. 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
- Protective eyewear
- Waterproof gloves, including barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride, or Viton®
- Shoes plus socks

**User Safety Requirements**

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.

**User Safety Recommendations**

Users should:

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

**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.

**PHYSICAL CHEMICAL HAZARDS**

Do not mix or allow coming in contact with oxidizing agent. Hazardous Chemical reaction may occur.

**ENVIRONMENTAL HAZARDS**

This product is 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 contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water.

Ground Water Advisory: This product has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory: This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

### **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 restricted entry interval (REI) of 12 hours.

For early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, wear:

- Coveralls
- Protective eyewear
- Waterproof gloves, including barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride, or Viton®
- Shoes plus socks

### **PRODUCT INFORMATION**

NNF-1681 SC Fungicide is a systemic fungicide for control of soil-borne and foliar diseases. NNF-1681 SC Fungicide controls White mold, Southern stem rot, Southern blight (*Sclerotium rolfsii*); the Limb/Pod rot complex caused by *Rhizoctonia solani*; Early leaf spot (*Cercospora arachidicola*), Late leaf spot (*Cercosporidium personatum*), Peanut Rust (*Puccinia arachidis*), and Web Blotch (*Phoma arachidis*) in peanuts\*.

**\*Not for use on peanuts in California**

If other diseases are present in the field, NNF-1681 SC Fungicide can be tank mixed with other fungicides registered for use on those diseases.

**Not for use in greenhouses.**

## ROTATIONAL CROP RESTRICTIONS

Crop/Crop Group	Plantback Timing
Brassica (cole) leafy vegetables (crop group 5) Cotton Peanuts* Soybeans	0 days following application
Wheat	30 days following application
Leafy vegetables (including lettuce, spinach, or celery) Small grain crops, other than wheat (including barley, rye, or oats)	150 days following application
Corn (including field, sweet, or popcorn) Sorghum	240 days following application
All Other Crops	365 days following application

**\*Not for use on peanuts in California**

## RESISTANCE MANAGEMENT

For resistance management, please note, the Flutolanil component of NNF-1681 SC Fungicide belongs to the succinate dehydrogenase inhibitor class ((FRAC Group 7). The Flutriafol component of NNF-1681 SC Fungicide belongs to the sterol biosynthesis inhibitor class (FRAC Group 3). Any fungal population may contain individuals naturally resistant to NNF-1681 SC Fungicide and other Group 7 or Group 3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Nichino America, Inc. encourages responsible product stewardship to ensure effective long-term control of the fungal diseases on this label. Appropriate resistance-management strategies should be followed.

To delay fungicide/bactericide resistance, take one or more of the following steps:

- Rotate the use of NNF-1681 SC Fungicide or other Group (FRAC groups 7 or 3) fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

## MIXING DIRECTIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Shake well before using. 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. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

**NNF-1681 SC Fungicide Alone:** Fill spray tank with  $\frac{3}{4}$  of the amount of water needed for the intended application and then turn on agitation. Pour specified amount of product on the surface of the water in the spray tank. Add the balance of the water to the spray tank with agitation running

**NNF-1681 SC Fungicide 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 directed 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 NNF-1681 SC Fungicide)
- 5) emulsifiable concentrates
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

NNF-1681 SC Fungicide is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing NNF-1681 SC Fungicide with other pesticides, fertilizers, or micronutrients. If you have no experience with the combination you are considering, conduct a test to determine physical compatibility. To determine physical compatibility, add the specified 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.

## **SPRAY DRIFT MANAGEMENT**

Spray equipment and weather affect spray drift. Consider all factors when making application decisions. Where states have more stringent regulations, they must be observed. Avoiding spray drift is the responsibility of the applicator or grower. To reduce the potential for drift, the application equipment must be set to apply medium or larger droplets (i.e. ASABE Standard 572) with corresponding spray pressure. Use high flow rate nozzles to apply the highest practical spray volume, using the appropriate droplet size to ensure adequate canopy distribution, coverage, and penetration. With most nozzle types, narrow spray angles produce larger droplets. Follow the nozzle manufacturer's directions on pressure, orientation, spray volume, etc., in order to minimize drift and optimize coverage and control.

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

The applicator must be familiar with, and take into account, the information covered in the **Aerial Drift Reduction Advisory Information**.

## **Aerial Drift Reduction Advisory Information**

(This section is advisory in nature and does not supersede the mandatory label requirements.)

### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions). Apply as a medium or coarser spray (ASABE Standard 572).



## **Controlling Droplet Size**

**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 specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** – Use the minimum number of nozzles 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 directed 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.

**Maintenance of Nozzles** – Periodically inspect and then replace nozzles to ensure proper chemical application.

## **Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

## **Application Height**

Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. For groundboom application, do not apply with a nozzle height greater than 4 feet above the crop canopy. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

## **Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.).

## **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. Do not apply at wind speeds greater than 15 mph.

**Note:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray 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 must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain 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

Only apply the pesticide 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).

### NNF-1681 SC FUNGICIDE APPLICATION RATE CHART

Peanut [Not for use in CA]		
Disease	Rate/Acre	Directions for Use
White mold – Southern stem rot, Southern blight ( <i>Sclerotium rolfsii</i> )  Limb/Pod rot complex ( <i>Rhizoctonia solani</i> )  Early leaf spot ( <i>Cercospora arachidicola</i> )  Late leaf spot ( <i>Cercosporidium personatum</i> )  Peanut Rust ( <i>Puccinia arachidis</i> )	25.0 to 38.0 fl oz/acre  (0.591 to 0.898 lbs Flutolanil/acre and 0.073 to 0.111 lbs Flutriafol/acre)	<ul style="list-style-type: none"> <li>For ground application, use a minimum of 10 gallons of water per acre.</li> <li>For aerial application, use a minimum of 5 gallons of water per acre.</li> <li>Begin applications approximately 45 to 60 days after planting, depending on disease development. Initial application may be prior to, or at, first sign of disease.</li> <li>Make sequential applications as needed at <b>21 to 30-day intervals</b>, depending on severity of disease.</li> <li>Make an application of a different leaf spot fungicide, other than NNF-1681 SC Fungicide, 14 days after the initial application of NNF-1681 SC Fungicide.</li> <li>Precede and follow the NNF-1681 SC Fungicide applications with a regularly scheduled leaf spot fungicide not from FRAC Groups 3 and 7.</li> <li>Use higher rate in fields where known heavy infestations of white mold or limb/pod rot may have occurred. In such situations, sequential applications will provide more effective control than a single application.</li> </ul>
Web Blotch ( <i>Phoma arachidis</i> )	12.0 to 19.0 fl oz/acre  (0.284 to 0.449 lbs Flutolanil/acre and 0.035 to 0.055 lbs Flutriafol/acre) as a tank mixture with an additional fungicide used to control leaf spot diseases when using lower rates.	<ul style="list-style-type: none"> <li>For ground application, use a minimum of 10 gallons of water per acre.</li> <li>For aerial application, use a minimum of 5 gallons of water per acre.</li> <li>Begin applications approximately 45 to 60 days after planting, depending on disease development. Initial application may be prior to, or at, first sign of disease.</li> <li>Make sequential applications as needed at <b>14-day intervals</b>.</li> <li>Precede and follow the NNF-1681 SC Fungicide applications with a regularly scheduled leaf spot fungicide not from FRAC Groups 3 and 7.</li> <li>Utilize NNF-1681 SC Fungicide plus an additional fungicide used to control leaf spot diseases when using lower rates of NNF-1681 SC Fungicide.</li> <li>Use higher rate in fields where known heavy infestations of white mold or limb/pod rot may have occurred. In such situations, sequential applications will provide more effective control than a single application.</li> </ul>
<b>USE RESTRICTIONS</b> <ul style="list-style-type: none"> <li>Do not apply more than 76.0 fl oz per acre (1.80 lbs. Flutolanil and 0.221 lbs. Flutriafol per acre) of NNF-1681 SC Fungicide per year.</li> <li>Do not apply more than 4 applications per year.</li> <li>Restricted Entry Interval (REI) is 12 hours.</li> <li>Do not apply within 40 days of harvest.</li> </ul>		

## **Directions for Chemigation Application**

1. Determine the size of the area to be treated.
2. Determine the time required to apply  $\frac{1}{4}$  to  $\frac{1}{2}$  inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as directed by the equipment manufacturer.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of NNF-1681 SC Fungicide required to treat the area covered by the irrigation system.
5. Add the required amount of NNF-1681 SC Fungicide to the solution tank with sufficient water to meet the injection time requirements.
6. Make certain the system is fully charged with water before starting injection of the NNF-1681 SC Fungicide solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant solution tank agitation during the entire injection period.
8. Stop injection equipment after treatment is completed. Continue to operate the system until the NNF-1681 SC Fungicide solution has cleared the last sprinkler head. (Also see **Application and Calibration Techniques for Sprinkler Irrigation** section below).

## **Application and Calibration Techniques for Sprinkler Irrigation**

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set, or portable (wheel move, side roll, end tow, or hand move) irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system. 'Public water system' means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments in the event the need arises.

Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, for example, a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

This product may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place; then refer to the appropriate directions provided for each type.

### **A. Center Pivot, Motorized Lateral Move, and Traveling Gun Irrigation Equipment**

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump, of either diaphragm or piston type, constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock and capable of injection at pressures approximately 2-3

times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems. Thoroughly mix specified amount of this product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until this product has been cleared from last sprinkler head.

**B. Solid Set and Portable (Wheel Move, Side Roll, End Tow, or Hand Move) Irrigation Equipment**

With stationary systems, an effectively designed in-line Venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides; however, a positive-displacement pump can also be used. Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a 30 to 45-minute period. Mix specified amount of this product for acreage to be covered with water so that the total mixture of this product plus water in the injection tank is equal to the quantity of water used during calibration, and operate entire system at normal pressures directed by the manufacturer of injection equipment used, for amount of time established during calibration. Mixture in the chemical supply tank must be continuously agitated during the injection run. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until this product has been cleared from last sprinkler head.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in original container, and keep tightly closed when not in use. Store in a cool, dry place inaccessible to children and pets.

**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.

Or, if too large to be tipped, rolled, or turned upside down, 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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.]

**[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.

Or, if too large to be tipped, rolled, or turned upside down, 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 or offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration 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.]

**[Refillable fiber drum with liner**

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, completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment or a mix tank. Return to point of sale or offer for recycling if available or reconditioning if appropriate or dispose of in a sanitary landfill or by incineration, or, if allowed by local and state authorities, by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.]

## 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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