71711-28

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#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

NOV 1 3 2014

Ms Julie Kozlowski Nichino America, Inc. 4550 New Linden Hill Rd. Wilmington, DE 19808

Subject:

Label Notification per PRN 98-10 – Remove duplicative language and relocate two sentences for clarity in tank missing instructions Product Name: Flutolanil 40 SC Fungicide EPA Registration Number: 71711-28 Application Date: 10/13/14 Decision Number: 496822

Dear Kozlowski:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have questions concerning this letter, please call Banza Djapao at 703-305-7269 or via eemail at <u>djapao.banza@epa.gov</u>.

Sincerely,

Shaja B. Jøyner Product Manager 20 Fungicide and Herbicide Branch Registration Division (7504P) NOTIFIC ION

NOV 13 2014



# Flutolanil 40SC Fungicide

## ACTIVE INGREDIENT:

Flutolanil: Benzamide, N-[3-(1-methylethoxy) phenyl]-2	-(trifluoromethyl) 40.0%
OTHER INGREDIENTS:	
TOTAL	100.0%

Contains 3.8 lbs flutolanil as active ingredient per U.S. gallon

EPA Reg. No. 71711-28 EPA Est. No. 37429-GA-2; 70815-GA-001

Alternate Brand: CONVOY® Fungicide

## KEEP OUT OF REACH OF CHILDREN CAUTION

GROUP 57

FUNGICIDE

	FIRST AID
If swallowed	Call poison control center or doctor immediately for treatment advice.
	<ul> <li>Have person sip a glass of water if able to swallow.</li> </ul>
	<ul> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> </ul>
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If on skin or	Take off contaminated clothing.
clothing	<ul> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> </ul>
	• Call a poison control center or doctor for treatment advice.
	HOT LINE NUMBER
Have the product	container or label with you when calling a poison control center or doctor, or going for
	ay also contact 1-800-348-5832 for emergency medical treatment information. In case of fire on may be obtained by calling 1-800-424-9300.
or spills, informati	

Net Contents:

Formulated and Packaged in U.S.A. for Nichino America Inc. 4550 New Linden Hill Road Wilmington, DE 19808 888-740-7700

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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material such as barrier laminate or polyvinyl chloride.
- Shoes plus socks

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

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:

Wash hands 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.

#### **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.

#### **ENVIRONMENTAL HAZARDS**

This product is toxic to fish and aquatic invertebrates. For terrestrial uses, except when applying over rice crops: 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 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.

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 such as ponds, streams, and springs will reduce the potential loading of ilutolanil 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:

To reduce hazard to birds and other wildlife, cover or collect treated seed spilled during loading and planting. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

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## **DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency in your state responsible for pesticide regulation.

## AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as barrier laminate or polyvinyl chloride
- Shoes plus socks

## **PRODUCT INFORMATION**

FLUTOLANIL 40SC fungicide is a systemic fungicide for control of Brown Patch (*Rhizoctonia solani*), Brown Ring Patch (*Waitea circinata var. circinata*), Fairy Ring, Red Thread (*Laetisaria fuciformis*) Pink Patch (*Limonomyces roseipellis*), Yellow Patch (*Rhizoctonia cerealis*), Gray snow mold (*Typhula spp.*), Large Patch (*Rhizoctonia solani* AG 2-2LP) and Leaf and Sheath spot (*Rhizoctonia zeae, Rhizoctonia oryzeae*), White mold [Southern stem rot, Southern blight] (*Sclerotium rolfsii*) and the Limb/Pod rot complex caused by *Rhizoctonia solani*, in peanuts; Sheath blight (*Rhizoctonia solani*) in rice; Black scurf (*Rhizoctonia solani*) in potatoes; and *Rhizoctonia solani* in seed treatments for cotton, soybeans, and sugar beets.

If other diseases are present in the field, FLUTOLANIL 40SC fungicide can be tank mixed with other fungicides registered for use on those diseases.

#### Do not use FLUTOLANIL 40SC fungicide in Nassau and Suffolk counties of New York State.

## **ROTATIONAL CROP RESTRICTIONS**

Crop/Crop Group	Plantback Timing
Brassica (cole) leafy vegetables (crop group 5)	
Cotton	
Peanuts	
Potatoes	0 days following application
Rice	
Soybeans	Couc
Turnip greens	0000
Wheat	30 days following application
Leafy vegetables (such as lettuce, spinach or celery) Small grain crops other than wheat (such as barley, rye or oats)	150 days following applic ໍ້ຄະດັ່ງ ເຊິ່ງ
Corn (such as field, sweet or popcorn) Sorghum	240 days following application
All other crops	365 days following application

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## **RESISTANCE MANAGEMENT**

The active ingredient in FLUTOLANIL 40SC fungicide is flutolanil and belongs to the succinate dehydrogenase inhibitor class (FRAC Group 7). Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the crop and use area. Such strategies may include rotating and/or tank mixing with products having different modes of action; or limiting the total number of applications per season. Nichino America, Inc. encourages responsible product stewardship to ensure effective long-term control of the fungal diseases on this label.

## MIXING DIRECTIONS

**FLUTOLANIL 40SC Fungicide Alone:** Fill spray tank with ¾ 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. 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.

**FLUTOLANIL 40SC Fungicide in Tank Mixtures:** Begin with clean equipment. Fill spray tank with <sup>3</sup>/<sub>4</sub> 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 <sup>3</sup>/<sub>4</sub> amount of water. Do not use oil as carrier or include other additives in the finished spray. 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 Flutolanil 40SC)
- 5) emulsifiable concentrates
- 6) adjuvants and/or oils
- 7) remaining amount of water to achieve the desired level

Always follow the labeled mixing instructions of any partner products. 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.

#### SPRAY DRIFT

Avoiding spray drift at the application site is the responsibility of the applicator. 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 ¾ 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.

Where states have more stringent regulations, they must be observed.

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

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## Aerial Drift Reduction Advisory Information

د (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).

#### **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 recommended 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 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.

**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 <sup>3</sup>/<sub>4</sub> of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application Height**

Applications should 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. 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 should 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 should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should 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 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 in a concentrated cloud. This cloud can move in unpredictable directions due to the light and variable winds common during a 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 to 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 temperature 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.

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## **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).

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## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR PEANUTS

Disease	Application Type	Rate/Acre	Directions for Use
White mold [Southern stem rot, Southern blight] ( <i>Sclerotium rolfsii</i> ) Limb/Pod rot complex ( <i>Rhizoctonia solani</i> )	Broadcast	20.0 to 32.0 fl oz/acre broadcast	<ul> <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 21 to 30 day intervals, depending on severity of disease.</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> <li>Do not apply more than 64.0 fl oz per acre per crop cycle.</li> <li>Do not apply within 40 days of harvest.</li> </ul>
		10.0 to 16.0 fl oz/acre broadcast	<ul> <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 10 to 14 day intervals.</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> <li>Do not apply more than 64.0 fl oz per acre per crop cycle.</li> </ul>

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### DIRECTIONS FOR IN-FURROW APPLICATION: PEANUTS ONLY Use Rate and Method of Application (to control *Rhizoctonia* spp.)

Prior to covering with soil apply 25 fl oz per acre (see referenced chart) as an in-furrow spray by directing spray uniformly over the seed, bottom and walls of the seed furrow and soil that is used to cover the seed in a 4-8 inch band. Use a minimum of 3 gallons of spray volume per acre.

In-Furrow Application Rates			
25 fl oz rate per acreRow Spacingfl oz product/1000 row			
			40" Row
38" Row	1.76		
36" Row	1.68		
32" Row	1.57		
30" Row	1.48		

## DIRECTIONS FOR CHEMIGATION APPLICATION: PEANUTS ONLY

- 1. Determine the size of the area to be treated.
- 2. Determine the time required to apply ¼ to ½ inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer.
- 3. Using water, determine the injection pump output when operated at normal line pressure.
- 4. Determine the amount of FLUTOLANIL 40SC fungicide required to treat the area covered by the irrigation system.
- 5. Add the required amount of FLUTOLANIL 40SC 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 FLUTOLANIL 40SC 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.
- Stop injection equipment after treatment is completed. Continue to operate the system until the FLUTOLANIL 40SC 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, you should 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 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 should should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system down and make necessary adjustments should be the supervision of the responsible person shall shut the system do

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ູ້ເຮັ້pray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven ແລງplication 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, such as 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.

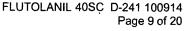
This product may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

## 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 recommended 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.



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## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR RICE

Crop	Disease	Rate/Acre	Directions for Use
		· · · · · · · · · · · · · · · · · · ·	One Application Program:
Rice	Sheath blight	12.0 to 33.0	• For ground application, use a minimum of 10 gallons of
	(Rhizoctonia solani)	fl oz/acre	water per acre.
			For aerial application, use a minimum of 5
			gallons of water per acre.
			Apply 7 to 14 days after panicle differentiation.
			Do not apply more than 33.0 fl oz per acre of
			FLUTOLANIL 40SC fungicide per crop cycle.
			Do not apply within 30 days prior to harvest, or beyond
	· ·		75% heading development stage, whichever occurs
			first.
			Two Application Program:
		12.0 to 16.5 fl oz/acre	• For ground application, use a minimum of 10 gallons of water per acre.
			<ul> <li>For aerial application, use a minimum of 5 gallons of water per acre.</li> </ul>
			<ul> <li>Apply 7 to 14 days after panicle differentiation and</li> </ul>
			follow with a second application 10 to 14 days later
			Do not apply more than 33.0 fl oz per acre of
			FLUTOLANIL 40SC fungicide per crop cycle.
			Do not apply within 30 days prior to harvest, or beyond
			75% heading development stage, whichever occurs
			first.
This pesti	cide is toxic to shrimp. I	Do not apply this	product within three miles of any estuarine/marine

waterways or watershed.

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Flooded fields may be used for aquaculture of crayfish only following rice harvest.

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Crop	Disease	Rate/Acre	Directions for Use
Potatoes (in-furrow use only)	Black scurf ( <i>Rhizoctonia solani</i> ) Powdery scab ( <i>Spongospora</i> <i>subterranea</i> ) <b>Suppression only</b>	- 16.0 to 25.0 fl oz/acre (see reference chart below)	<ul> <li>Apply as an in-furrow spray by directing spray uniformly around and over the seed piece in a 4 to 8 inch band prior to covering with soil.</li> <li>Use a minimum of 3 gallons of spray volume per acre.</li> <li>Use the higher rate where disease pressure is expected to be severe or if field has a history of <i>Rhizoctonia</i> infestation.</li> </ul>

## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR POTATOES

# For in-furrow application only on potatoes. Do not apply FLUTOLANIL 40SC fungicide to potatoes through chemigation.

	16.0 fl oz/acre	25.0 fl oz/acre
	Fluid Ounces Product/ 1000 Row Ft.	Fluid Ounces Product/ 1000 Row Ft.
40" Row	1.19	1.86
38" Row	1.13	1.76
36" Row	1.08	1.68
34" Row	1.00	1.57
32" Row	0.95	1.48

## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR POTATO SEED-PIECE TREATMENT

Сгор	Disease	Rate/Acre Using 0.5 fl oz/100 lb seed		Directions for Use
Seed-Piece	Black scurf	Planting Rate/Acre (Ib cut seed)	Ib/ai/A	<ul> <li>Apply 0.5 fl oz of product per 100 lb of seed pieces using a spray system or spray table equipped with shielding for</li> </ul>
Treatment for	Rhizoctonia	1,600	0.24	this purpose.
Potato	stem canker			• Dilute in a 3:1 ratio, or less, of water to
	(Rhizoctonia solani)	1,800	0.27	the product. Maintain agitation of the spray solution during application.
		2,000	0.30	Dust formulations (with or without fungicides) may be applied to the seed
		2,200	0.33	pieces following application of c FLUTOLANIL 40SC fungic de. Make sure
		2,400	0.36	application area is well-ventilated or made in areas with equipment to remove a
			<u> </u>	airborne particles or mists.

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## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR COTTON, SOYBEAN AND SUGAR BEET SEED TREATMENT

Сгор	Disease	Rate (fl oz/100 lb seed)	Rate (Ib ai/100 Ib seed)	Directions for Use
Seed Treatment for Cotton, Soybean, and Sugar beet	Rhizoctonia spp.	2.0 - 4.0 fl oz/100 lb	0.06 - 0.12 Ib ai/100 lb -	<ul> <li>Apply using a spray system, spray table, or seed treatment equipment for this purpose.</li> <li>If using a spray system, dilute 1 part product to three parts water or less. Maintain agitation of the spray solution during application.</li> </ul>

The purchaser of this product is responsible for ensuring that all seed treated with this product are adequately dyed with a suitable color to prevent accidental use as food for man or feed for animals. As indicated in 40 CFR 153.155 – seed treatment products, any dye added to treated seed must be cleared for use in accordance with 40 CFR 180.910, 180.920, 180.950, 180.2010 or 180.2020.

## Commercially treated seed must be labeled:

"This seed is treated with FLUTOLANIL 40SC fungicide, a flutolanil product. Do not use treated seed for food, feed, oil production or any other purpose except planting. Do not allow children, pets or livestock to have access to treated seeds. Wear long pants, long sleeved shirt and protective gloves when handling treated seed. Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seed spilled during loading and planting. Dispose of all excess treated seed by burying seed away from bodies of water. Do not contaminate bodies of water when disposing of planting equipment wash water. Dispose of seed packaging or containers in accordance with local requirements."

## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR BRASSICA (COLE) LEAFY VEGETABLES (CROP GROUP 5) AND TURNIP GREENS

## BRASSICA (COLE) LEAFY VEGETABLES (Crop Group 5)

Broccoli; broccoli, Chinese (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; cabbage, Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens

Disease	Rate (fl oz/A)	Directions for Use
Wirestem	26.0 fl oz / A	<ul> <li>If transplanted, apply in a narrow band directed at plant bases immediately after transplanting in 30-50 gallons per acre.</li> <li>Apply Flutolanil 40SC to the row at planting, as an in-furrow or directed spray at the base of transplants.</li> <li>Use a minimum of 3 gallons of spray volume per acre.</li> <li>If applied as soil drench at planting, observe 45-day PHI.</li> </ul>

## FLUTOLANIL 40SC FUNGICIDE APPLICATION RATE CHART FOR TURF

## **Use Information**

Flutolanil 40SC Fungicide is a systemic fungicide for control of Basidiomycete diseases on turf. This product has shown excellent safety on Kentucky bluegrass, annual bluegrass, annual and perennial ryegrass, red fescue, tall fescue, bentgrass, bermudagrass, zoysiagrass, and St. Augustine grass.

## **Use Restrictions for Turf Application**

For use rates greater than 4.4 fl oz per 1,000 square feet, do not apply Flutolanil 40SC within 100 feet of any freshwater or marine estuary, ditches, drainage tiles, or other waterway that drains directly (within ½ mile) into estuaries. Do not apply more than 13.25 fl oz per 1,000 square feet as a broadcast application during a single growing season.

#### **Applications**

Apply Flutolanil 40SC Fungicide at the dosage rates in the table below as a broadcast application in 2 to 5 gallons of water per 1,000 square feet. For best results, avoid mowing within 24 hours after application. Do not irrigate until sprays have dried. Flutolanil 40SC Fungicide may be tank mixed with other labeled fungicides if other diseases not listed on this label are present.

Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions
Brown patch ( <i>Rhizoctonia solani</i> ) Preventive	2.2 to 3.25	14 to 21	<ul> <li>Apply 2.2 to 3.25 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water prior to disease development.</li> <li>Repeat application after a 14 to 21 day interval if conditions favor disease development.</li> </ul>
Curative	4.4	14	<ul> <li>Apply 4.4 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water to turf with active brown patch.</li> <li>Repeat application after a 14 day interval if conditions favor disease development.</li> </ul>

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Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions
Large Patch (or Zoysia Patch) ( <i>Rhizoctonia solani</i> )	3.25	30	<ul> <li>Apply 3.25 fl oz of FLUTOLANIL Fungicide per 1,000 sq ft.</li> <li>Apply FLUTOLANIL Fungicide in the fall or spring for control of large brown patch on zoysiagrass.</li> <li>Disease control is more effective if made prior to or after initial symptom development.</li> <li>Apply by broadcast application using 2 to 5 gallons of water.</li> <li>Repeat 30 days later if symptoms persist.</li> <li>A nonionic surfactant is recommended for best results.</li> <li>Fall applications may suppress disease development in the following spring.</li> </ul>

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Disease	Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions
Fairy Ring (caused by <i>Marasmius</i> spp., <i>Agaricus</i> spp., and <i>Lepiota</i> spp.)			<ul> <li>Apply 3.25 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water for suppression of the development of</li> </ul>
Preventive	3.25	21 to 28	<ul> <li>fairy ring.</li> <li>A second application may be made at a 21 to 28 day interval if needed.</li> </ul>
Curative	6.6	30	<ul> <li>Apply 6.6 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water for suppression of existing fairy ring colonies caused by various basidomycete pathogens.</li> <li>Application should be made to the area at the first sign of ring development.</li> <li>Aerification of the treatment area prior to application may assist in preventing further disease development.</li> <li>Use of a nonionic surfactant is recommended to maximize coverage and penetration of existing thatch and the upper soil layer.</li> <li>Treated areas should be irrigated prior to and following application to maintain healthy growth of turf.</li> <li>Repeat application after a 30 day interval if conditions continue to favor disease development.</li> </ul>

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Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions
Red Thread (Laetisaria fuciformis) Pink Patch (Limonomyces roseipellis) Yellow Patch (Rhizoctonia cerealis) Southern Blight (Sclerotium rolfsii)	2.2	21 to 28	<ul> <li>Apply 2.2 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water prior to or at the first sign of disease development.</li> <li>A second application may be made if needed at a 21 to 28 day interval.</li> </ul>

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Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval	Use Directions
Gray Snow Mold ( <i>Typhula</i> spp)	4.4 to 6.6	Before snow cover	<ul> <li>Apply 4.4 to 6.6 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water prior to snow cover.</li> <li>Use of a nonionic surfactant may enhance control.</li> <li>Flutolanil 40SC may be tank mixed with other fungicides if Pink Snow Mold is present.</li> <li>Do not treat more than 10,000 square feet per acre of turf area.</li> </ul>

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Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions
Leaf and Sheath spot ( <i>Rhizoctonia zeae,</i> <i>Rhizoctonia oryzeae</i> ) Preventive	3.25 to 4.4	14 to 21	<ul> <li>Apply 3.25 to 4.4 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water for suppression of leaf and sheath spot.</li> <li>A second application may be made at a 14 to 21 day interval if needed.</li> </ul>
Curative	4.4 to 6.6	14	<ul> <li>Apply 4.4 to 6.6 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water to turf with active leaf and sheath spot.</li> <li>Repeat application after a 14 day interval if conditions continue to favor disease development.</li> </ul>

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Disease	Rate of Flutolanil 40SC (fl oz) per 1000 sq ft	Spray interval (days)	Use Directions	
Brown Ring Patch of zoysiagrass ( <i>Waitea circinata var</i> <i>circinata</i> ) Preventive	3.25 to 4.4	30	<ul> <li>Apply prior to, or at first sign of, disease at a rate of 3.25 to 4.4 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water.</li> <li>A second application may be made 30 days after, the first, if needed.</li> </ul>	
Curative	4.4 to 6.6	30	<ul> <li>Apply 4.4 to 6.6 fl oz per 1,000 square feet.</li> <li>Apply by broadcast application using 2 to 5 gallons of water if Brown Ring Patch is active.<sup>c</sup></li> <li>A second application may be made 30 days after the first, if needed. <sup>c</sup><sub>c</sub><sup>c</sup><sub>c</sub></li> </ul>	

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## 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 ¼ 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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 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 ¼ 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 ¼ 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.

<sup>†</sup> ເວົ້າ, if too ໂລເຜູຂູ້ 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 [cdrip. Hcld 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: Drein 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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Text that may be included on the container label or promotional information supporting this product:

For control of various diseases on brassica (cole) leafy vegetables, cotton, peanut, potato, rice, soybean, sugar beet, turf, turnip greens

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