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# Nichino America, Inc.

# APPLAUD® 70WP Insect Growth Regulator

FOR Almonds, Bananas, Citrus, Cotton, Cucumbers, Grapes, Lettuce, Melons, Pumpkins, Squash, and Tomatoes

**ACTIVE INGREDIENT:**

Buprofezin: 2-(4t-butylamino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one) ..... 70.00%

**INERT INGREDIENTS:** ..... 30.00%

Contains 0.70 lbs. buprofezin per pound of product TOTAL 100.00%

EPA Reg. No. 71711-15

EPA Est. No. 67545-AZ-1

## KEEP OUT OF REACH OF CHILDREN CAUTION

### FIRST AID

<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-348-6632 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.

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

For product information use internet website [www.nichino.net](http://www.nichino.net)

ACCEPTED

SEP 27 2001

For the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
I hereby certify for this pesticide  
labeling.

71711-15

Nichino America, Inc.  
4680 New Linden Hill Road, Suite 501  
Wilmington, DE 19806

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

Applicators and other handlers must wear:

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

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

#### ENGINEERING CONTROLS STATEMENT

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 hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### ENVIRONMENTAL HAZARDS

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 by cleaning of equipment or disposal of equipment washwaters.

**IMPORTANT** - Read the entire Directions for Use and Disclaimer of Warranties before using this product.

#### 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 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.

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 over long-sleeved shirt and long pants
- Waterproof gloves
- Socks and chemical-resistant footwear

## GENERAL INFORMATION

APPLAUD® 70WP Insect Growth Regulator contains the active ingredient, buprofezin. It is effective against the nymph stages of whitefly, scales, mealybugs, planthoppers and leafhoppers by inhibiting chitin biosynthesis, suppresses oviposition of adults, and reduces viability of eggs. Treated susceptible pests may remain alive on the plant for 3-7 days but feeding damage during this time is typically very low. APPLAUD® 70WP is not disruptive to beneficial insects and mites.

Good coverage is essential. Apply by ground or air in sufficient water volume. Orient nozzles to assure good coverage. Use of higher volume of water will assure better coverage, especially under adverse conditions such as hot, dry weather, and/or a dense canopy. The entire field should be treated.

Apply when economic infestations occur based on local information.

## INSECTS CONTROLLED

**Whiteflies:** Silverleaf whitefly (*Bemisia argentifolii*), Sweet potato whitefly (*Bemisia tabaci*), Greenhouse whitefly (*Trialeurodes vaporariorum*), Ash whitefly (*Siphoninus phillyreae*)

**Mealybugs:** Longtailed mealybug (*Pseudococcus longispinus*), Citrus mealybug (*Pinnacoccus citri*), Mexican mealybug (*Phenacoccus gossypii*), Comstock mealybug (*Pseudococcus comstocki*), Obscure mealybug (*Pseudococcus affinis*)

**Leafhoppers and planthoppers:** Cherry leafhopper (*Fieberella florii*), Potato leafhopper (*Empoasca fabae*), Brown planthopper (*Nilaparvata lugens*)

### Scales:

**Soft Scales:** Black scale (*Saissetia oleae*), Barnacle scale (*Ceroplastes cimpediformis*), Indian wax scale (*Ceroplastes ceriferus*) and other wax scales, Hemispherical scale (*Saissetia coffeae*), Tessellated scale (*Eucalyminatus tessellatus*), Brown Soft scale (*Coccus hesperidum*), White peach scale (*Pseudaulacaspis pentagona*), False oleander scale (*Pseudaulacaspis cockerelli*)

**Armored Scales:** Cactus scale (*Diaspis echinocacti*), Coconut scale (*Aspidiotus destructor*), California red scale (*Aonidiella aurantii*), Florida red scale (*Chrysomphalus sonchidum*), Fern scale (*Pinnaspis aspidistrae*), Boisduval scale (*Diaspis boisduvalii*), Oystershell scale (*Leptoseaphes umii*), San Jose scale (*Quadraspidiotus perniciosus*)

**Margarodid Scale:** Cottony cushion scale (*Icerya purchasi*)

## MIXING, LOADING AND HANDLING INSTRUCTIONS

### USE PRECAUTIONS

DO NOT use APPLAUD® 70WP water-soluble bags in a tank mix with products that contain boron, chromium or other micronutrients.

### GENERAL HANDLING INSTRUCTIONS

APPLAUD® 70WP insect growth regulator is sealed in 1.0 lb. water-soluble bags. Do not open the foil-lined outer box until time of use. Do not use a knife or other sharp object to open the foil lined outer box. Once the outer protective box has been opened, the water-soluble bag inside can be dropped into the spray tank at the appropriate time.

**SPECIFIC MIXING INSTRUCTIONS:** To ensure proper mixing of the soluble bags, follow the instructions below:

- APPLAUD® 70WP ALONE:** Begin by filling the spray tank with clean water to prime the system (about 6 to 8 inches for most sprayers.) Turn off the fill valve and drop the recommended number of soluble bags into the tank, distributing them across the bottom but not covering the circulation and outlet holes. After the bags have soaked for 2 minutes, start the agitation and agitate thoroughly for 2 minutes. With the agitation on, continue to fill the spray tank to the desired level. Agitate during spraying. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load.
- APPLAUD® 70WP TANK MIXTURES:** Follow all use directions as listed above under APPLAUD® 70WP ALONE with the following exception: after the APPLAUD® 70WP bags are thoroughly mixed and the water is added to fill the tank 1/2 full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, while maintaining agitation. If a spray additive is needed, add a liquid fertilizer (except fertilizers containing boron, chromium or other micronutrients, see USE PRECAUTIONS), surfactant, or crop oil concentrate to the spray tank. Then continue adding water to the tank to achieve the desired level, while maintaining agitation.
- APPLAUD® 70WP TANK MIXTURES WITH PRODUCTS IN WATER SOLUBLE PACKAGING:** Follow all use directions as listed above under APPLAUD® 70WP ALONE with the following exception – add the desired number of other water soluble bags to the tank (if allowed by their label instructions) at the same time the APPLAUD® 70WP bags are added to the spray tank.

### HANDLING PRECAUTIONS FOR WATER-SOLUBLE BAGS

- Do not allow the foil lined outer box or portions thereof to fall into spray tank as they are not water-soluble and may clog the sprayer.
- Do not handle the soluble bag with wet gloves, as the bag will begin to dissolve on contact with even a small amount of water.
- Do not open the soluble bag or attempt to remove the APPLAUD® 70WP from it. The product is not designed to be re-measured or subdivided; the entire contents of the water-soluble bag must be used.

Refer to the charts below for the proper application rate of APPLAUD® 70WP Insect Growth Regulator.

**RESISTANCE MANAGEMENT**

APPLAUD 70 WP belongs to a class of chemicals not previously used as pesticides and not known to be cross-resistant to other classes of insecticides. However, insect pests are known to develop resistance to products used repeatedly. 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 with insecticides with different modes of action. Consult your local pest control advisor or extension office for details. If resistance to this product develops in your area, it may not provide adequate control. If you experience difficulty with control, and resistance is a likely cause, consult your local state university horticultural specialist or local agricultural authorities for the best alternative method of control. To preserve the usefulness of APPLAUD 70 WP do not make more than two consecutive applications. Use an alternative chemistry with a different mode of action between applications. If a different crop in an adjacent field has been treated with APPLAUD® 70WP against silverleaf whitefly within the past 28 days, do not apply APPLAUD® 70WP as the first silverleaf whitefly application. Always consult your local crop advisor for the most appropriate control decision for your area. Resistance management strategies advise against applying rates lower than those recommended on the label.

**APPLICATION RATE CHART FOR APPLAUD® 70WP INSECT GROWTH REGULATOR**

Crop	Pest	Rate	DOSAGE RATES	
			Lb. formulated product	
Almonds <sup>1</sup>	San Jose scale	1.5-2.0 lb. ai/A	2.14-2.86	(36 to 46 oz)
Bananas <sup>2</sup>	Whiteflies, leafhoppers, mealybugs, scales	0.31 lb. ai/A	0.44	(7 oz)
Citrus <sup>3</sup>	California red scale	1.5-2.0 lb. ai/A	2.14-2.86	(36 to 46 oz)
Cotton <sup>4</sup>	Whiteflies	0.36 lb. ai/A	0.5	(8 oz)
Cucumbers <sup>5</sup>	Whiteflies	0.25 - 0.38 lb ai/A	0.36 - 0.54	(6 to 9 oz)
Grapes <sup>6</sup>	Leafhoppers	0.38-0.5 lb. ai/A	0.64 - 0.71	(9 to 12 oz)
Lettuce (head and leaf) <sup>7</sup>	Whiteflies	0.25 - 0.38 lb ai/A	0.36 - 0.54	(6 to 9 oz)
Melons (cantaloupe, honeydew melons, watermelons, muskmelons) <sup>8</sup>	Whiteflies	0.25 - 0.38 lb ai/A	0.36 - 0.54	(6 to 9 oz)
Pumpkins <sup>8</sup>	Whiteflies	0.25 - 0.38 lb ai/A	0.36 - 0.54	(6 to 9 oz)
Squash <sup>8</sup>	Whiteflies	0.25 - 0.38 lb ai/A	0.36 - 0.54	(6 to 9 oz)
Tomatoes <sup>9</sup>	Whiteflies	0.25-0.38 lb. ai/A	0.36 - 0.54	(6 to 9 oz)

**1 Almonds**

Treatment should be applied when peak crawler emergence occurs. Consult local or State agricultural authorities for details. Good coverage is essential. Apply by ground application using a minimum of 400 gallons of water per acre. Apply no more than one application per season. Do not apply within 60 days of harvest.

**2 Bananas**

Treatment should be applied when population level reaches economic threshold. Consult local or State agricultural authorities for details. Good coverage is essential. Apply by ground in a minimum of 15 gallons of water per acre. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy. Apply no more than four applications per season. Allow at least 14 days between applications. Do not apply within one day of harvest.

**3 Citrus**

Treatment should be made when peak crawler emergence occurs. Consult local and State agricultural authorities for details. Good coverage is essential. Apply by ground application using 750 to 2000 gallons of water per acre. Apply no more than two applications per season. Allow at least 60 days between applications. Do not apply within 60 days of harvest.

**4 Cotton**

Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details. Good coverage is essential. With ground application, use 10 to 50 gallons of water per acre. For aerial application, use a minimum of 5 gallons per acre. Orient nozzles to assure good coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy. The entire field should be treated. Apply no more than two applications per season. Allow at least 28 days between applications. See the RESISTANCE MANAGEMENT section. Do not apply within 14 days of harvest.

**Cucumbers**

Allow at least 7 days between applications to cucurbits.

Do not apply within 7 days of harvest.

Do not make more than 2 applications per crop cycle. Do not make more than 4 applications per year.

**Grapes**

Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details.

Good coverage is essential. Apply by ground application using 50 to 200 gallons of water per acre, depending on the size of the grapes. Orient nozzles to assure good coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy.

Apply no more than two applications per season. Allow at least 14 days between applications.

Do not apply within 30 days of harvest.

**Lettuce (Head and Leaf)**

Do not apply within 10 days of harvest in California and 7 days outside California.

Allow at least 7 days between applications to lettuce.

Do not make more than 2 applications per crop cycle. Do not make more than 4 applications per year.

**Melons (cantaloupe, honeydew melons, watermelons, muskmelons), Pumpkins, Squash**

Do not apply within 10 days of harvest in California and 7 days outside California.

Allow at least 7 days between applications to cucurbit crops.

Do not make more than 2 applications per crop cycle. Do not make more than 4 applications per year.

**Tomatoes**

Treatment should be applied when population level reaches economic threshold. Consult local and State agricultural authorities for details.

Good coverage is essential. Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground to accommodate for the size of the tomato plants. Orient nozzles to assure better coverage. Use of a higher volume of water will assure better coverage, especially under adverse conditions, such as hot, dry weather and/or a dense canopy. The entire field should be treated.

Apply no more than two applications per season. Allow at least 28 days between applications.

Do not apply within 7 days of harvest.

See the RESISTANCE MANAGEMENT section.

**USE PRECAUTIONS**

Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

Do not plant food crops not listed on this label within 120 days following application.

Do not apply this product through any type of irrigation system.

**Application chart for Determining Dosage Rate of Applaud 70WP  
Using 5 X 1 lb water soluble bags or 1.08 lb boxes**

Rate Lb a/A	Lb Formulated/A	Number of 1 lb water soluble pkgs. (within 5 lb outer bag)	Number of 1.08 lb boxes (containing 3 X 0.36 lb WSP <sup>1</sup> )	Number of Acres treated
0.25	0.36	1		2.8
		3		8.4
		5		14.0
			1	3.0
			3	9.0
			5	15.0
0.31	0.44	1		2.3
		3		6.8
		5		11.4
			1	2.8
			3	7.4
			5	12.3
0.35	0.50	1		2.0
		3		6.0
		5		10.0
			1	2.2
			3	6.5
			5	10.8
0.38	0.54	1		1.8
		3		5.5
		5		9.2
			1	2.0
			3	6.0
			5	10.0
0.50	0.71	1		1.4
		3		4.2
		5		7.0
			1	1.5
			3	4.6
			5	7.6
1.5	2.14	1		0.8
		3		1.4
		5		2.3
			1	0.6
			3	1.5
			5	2.6
2.0	2.86	1	1	0.4
		3	3	1.1
		5	5	1.8

<sup>1</sup> water soluble packages

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in original container, unopened, in a cool, dry place.

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

**CONTAINER DISPOSAL:** Remove inner water-soluble bag from outer packaging and place inner bag into application equipment. Then dispose of empty outer packaging in a sanitary landfill, or by incineration, or, if allowed by State or local authorities, by burning. If burned, stay out of smoke.

**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 should 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. All such risks are assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** 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. NAI disclaims any liability whatsoever for incidental or consequential damages, including, but not limited to, liability arising out of breach of contract, express or implied warranty (including warranties of merchantability and fitness for a particular purpose), tort, negligence, strict liability or otherwise.

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Nichino America, Inc. 2001

Nichino America, Inc.  
4550 New Linden Hill Rd., Suite 501  
Wilmington, DE 19808

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