

71711-20

8.2.2010

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

OFFICE OF
CHEMICAL SAFETY
AND POLLUTION PREVENTION

AUG 2 2010

Marie Maks
Nichino America, LLC
4550 New Linden Hill Rd, Ste 501
Wilmington, DE 19808

Subject: Buprofezin 40SC Insect Growth Regulator, EPA Reg. No. 71711-20
Date of Registrant Submission: May 10, 2010
Decision: 433589

Dear Ms. Maks:

The labeling referred to above, submitted in connection with registration under the Federal insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable

Two (2) copies of the finished labeling must be submitted prior to releasing each product for shipment. If you have any questions regarding this letter, please contact Samantha Hulkower at (703) 603-0683.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Suarez", with a large, sweeping flourish extending to the right.

Mark Suarez
Product Manager 13
Insecticide Branch
Registration Division (7505P)

Enclosure: Copy of Labels Stamped "Accepted"

2/9

NICHINO
AMERICA

ACCEPTED
8/2/10
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 71711-20

GROUP 16 INSECTICIDE

BUPROFEZIN 40SC Insect Growth Regulator

ACTIVE INGREDIENT:

Buprofezin: 2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one40.00%

OTHER INGREDIENTS:.....60.00%

TOTAL:100.00%

Contains 3.6 lbs. buprofezin per U.S. gallon

EPA Reg. No.: 71711-20

EPA Est. No.: 67545-AZ-1

Marketing Brands: Courier® 40SC Insect Growth Regulator, Courier® SC Insect Growth Regulator, Talus® 40SC Insect Growth Regulator

KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

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

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-348-5832 for emergency medical treatment information. In case of fire or spills, information may be obtained by calling 1-800-424-9300.	

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

Active Ingredient Made in China; Formulated and Packaged in USA

Nichino America, Inc.
4550 New Linden Hill Road, Suite 501
Wilmington, DE 19808
888-740-7700

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING - AVISO

Causes substantial but temporary eye injury. Avoid contact with skin or clothing. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant (such as nitrile or butyl) gloves
- Protective eyewear
- 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.

User Safety Recommendations

Users should: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

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.

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.

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
- chemical-resistant (such as nitrile or butyl) gloves
- protective eyewear
- shoes plus socks

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. For other uses, including golf courses and other nonagricultural uses, do not enter treated areas without protective clothing until sprays have dried.

GENERAL INFORMATION

BUPROFEZIN 40SC insect growth regulator is effective against the nymphal stages of whiteflies, scales, mealybugs, planthoppers, and leafhoppers by inhibiting chitin biosynthesis, suppressing oviposition of adults, and reducing viability of eggs. BUPROFEZIN 40SCse insect growth regulator is not an adulticide. Evidence of activity may be slower than typical contact insecticides as treated susceptible pests may remain alive on the plant for 3-7 days; however pests have stopped feeding and any feeding damage during this time is typically very low.

BUPROFEZIN 40SC insect growth regulator is not disruptive to beneficial insects and mites.

BUPROFEZIN 40SC insect growth regulator is a contact insecticide, so good spray coverage is necessary. 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.

BUPROFEZIN 40SC insect growth regulator is not for sale, sale into, distribution, and or use in Nassau and Suffolk counties of New York state.

INSECTS CONTROLLED

Whiteflies: Ash whitefly, Banded wing whitefly, Greenhouse whitefly, Silverleaf whitefly, Sweet potato whitefly
Mealybugs: Citrus mealybug, Comstock mealybug, Gill's mealybug, Grape mealybug, Longtailed mealybug, Mexican mealybug, Obscure mealybug, Striped mealybug, Vine mealybug
Leafhoppers and Planthoppers: Brown planthopper, Cherry leafhopper, Eastern grape leafhopper, Glassy-winged sharpshooter, Potato leafhopper, Variegated leafhopper, Western grape leafhopper, White apple leafhopper

Scales:

Soft Scales: Barnacle scale, Black scale, Brown soft scale, Citricola scale, False oleander scale, Hemispherical scale, Indian wax scale and other wax scales, Tessellated scale, White peach scale
Armored Scales: Boisduval scale, Cactus scale, California red scale, Coconut scale, Fern scale, Florida red scale, Oystershell scale, San Jose scale

Margarodid Scale: Cottony cushion scale

USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Crop Rotational Restrictions:

CROP/CROP GROUP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Leafy vegetables not registered for use with buprofezin, Cereal grains	30 days following application
All other crops	60 days following application

RESISTANCE MANAGEMENT

BUPROFEZIN 40SC insect growth regulator is classified by IRAC in Group 16 – chitin biosynthesis inhibitors, and is 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 BUPROFEZIN 40SC insect growth regulator, do not make more than two consecutive applications. Prior to subsequent applications, use an alternative chemistry with a different mode of action. 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.

For greenhouses: If another insect growth regulator with the mode of action as a chitin biosynthesis inhibitor (i.e. cyromazine, diflubenzuron, and novaluron) has been used in the greenhouse within 28 days, do not apply BUPROFEZIN 40SC insect growth regulator as the first whitefly application.

APPLICATION DIRECTIONS

Applications should be made immediately after the spray solution is prepared. Thorough spray coverage is essential for effective control. Applications may be made with high or low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. For best results, apply when pest populations are beginning to build, before reaching economic thresholds. Consult your local agricultural advisor or state cooperative extension service for recommendations

MIXING DIRECTIONS

Shake well before using. Read and follow all label directions for each tank mix product prior to any tank mixing with BUPROFEZIN 40SC insect growth regulator. This product can be mixed with other registered pesticides for use on labeled crops or sites, in accordance with the most restrictive use directions and precautions. No labeled dose rate should be exceeded. BUPROFEZIN 40SC insect growth regulator cannot be mixed with any product containing a label prohibition against such mixing.

BUPROFEZIN 40SC INSECT GROWTH REGULATOR ALONE: Begin with clean equipment. Fill spray tank with 3/4 of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the balance of the water to the spray tank with agitation running. Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load.

BUPROFEZIN 40SC INSECT GROWTH REGULATOR TANK MIXTURES: Follow all use directions as listed above under **BUPROFEZIN 40SC INSECT GROWTH REGULATOR ALONE** with the following exception: after BUPROFEZIN 40SC insect growth regulator is thoroughly mixed and the tank is 3/4 full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, while maintaining agitation. Then continue adding water to the tank to achieve the desired level, while maintaining agitation.

BUPROFEZIN 40SC INSECT GROWTH REGULATOR TANK MIXTURES WITH PRODUCTS IN WATER-SOLUBLE PACKAGING: Follow all use directions as listed above under **BUPROFEZIN 40SC INSECT GROWTH REGULATOR ALONE** with the following exception: add the desired number of water-soluble bags to the tank (if allowed by their label instructions) at the same time the BUPROFEZIN 40SC insect growth regulator is added. **Note:** If using products in water soluble packaging, do not tank mix with products that contain boron, chromium, or other micronutrients.

BUPROFEZIN 40SC insect growth regulator is physically and biologically compatible with many registered pesticides, fertilizers or micronutrients. Contact your supplier for advice when considering mixing BUPROFEZIN 40SC insect growth regulator with other pesticides, fertilizers or micronutrients. If you have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, add the recommended proportions of each chemical with the same proportion of water, as will be present in the chemical supply tank, into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be readily re-mixed, the mixture is considered physically compatible.

APPLICATION RATE CHART FOR BUPROFEZIN 40SC INSECT GROWTH REGULATOR

Crop	Pest	Formulated Product Rate/Acre (lb ai/Acre)	Directions for Use
HEAD and STEM BRASSICA SUBGROUP 5A Broccoli Brussels sprouts Cabbage Cauliflower Chinese broccoli Chinese cabbage (Napa)	Leafhoppers Planthoppers Whiteflies	9.0 to 13.6 fl oz/acre (0.25 to 0.38 lb ai/acre)	<ul style="list-style-type: none"> • For ground application, use a minimum of 20 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 7 days between applications. • Do not apply more than 27.2 fl oz per acre per crop cycle.

<p>Chinese mustard cabbage Cavalo broccolo Kohlrabi</p>			<ul style="list-style-type: none"> • Do not make more than 4 applications per year • Do not apply within 1 day of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal population level reaches economic threshold. • Good coverage is essential. 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. Use the higher application rate and spray volume when treating a rapidly increasing insect population. The entire field should be treated.
<p>COTTON</p>	<p>Whiteflies</p>	<p>9.0 to 12.5 fl oz/acre (0.25 to 0.35 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use 10 to 50 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 28 days between applications. • Do not apply within 21 days of harvest in California and 14 days outside California. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal population level reaches economic threshold. • Good coverage is essential. 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. Use the higher application rate and spray volume when treating a rapidly increasing insect population. The entire field should be treated.
<p>CUCURBIT CROP GROUP 9 Cucumbers Melons Cantaloupe Honeydew melons Watermelons Muskmelons Pumpkins Squash</p>	<p>Leafhoppers Planthoppers</p>	<p>13.6 fl oz/acre (0.38 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use a minimum of 20 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 7 days between applications to cucurbits. • Do not make more than 4 applications per year. • Do not apply within 10 days of harvest in California and 7 days outside California in melons, pumpkins, and squash. • Do not apply within 7 days of harvest in cucumbers. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal population level reaches economic threshold. • Good coverage is essential. 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. Use the higher application rate and spray volume when treating a rapidly increasing insect population. The entire field should be treated.
	<p>Whiteflies</p>	<p>9.0 to 13.6 fl oz/acre (0.25 to 0.38 lb ai/acre)</p>	

<p>LEAFY VEGETABLE CROP GROUP 4 Celery Endive Head lettuce Leaf lettuce Parsley Spinach</p>	<p>Leafhoppers Planthoppers Whiteflies</p>	<p>9.0 to 13.6 fl oz/acre (0.25 to 0.38 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use a minimum of 20 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 7 days between applications. • Do not make more than 4 applications per year. • Do not apply within 7 days of harvest.
<p>SNAP BEANS</p>	<p>Leafhoppers Planthoppers Whiteflies</p>	<p>9.0 to 13.6 fl oz/acre (0.25 to 0.38 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use a minimum of 20 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Allow at least 14 days between applications. • Do not apply more than 27.2 fl oz per acre per crop cycle. • Do not apply within 14 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal population level reaches economic threshold. • Good coverage is essential. 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. Use the higher application rate and spray volume when treating a rapidly increasing insect population. The entire field should be treated.
<p>LOW-GROWING BERRY SUBGROUP 13-07G: Strawberry Bearberry Bilberry Blueberry, lowbush Cloudberry Cranberry Lingonberry Muntries Partridgeberry</p>	<p>Leafhoppers Mealybugs Planthoppers Whiteflies</p>	<p>9.0 to 12.0 fl oz/acre (0.25 to 0.34 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use a minimum of 100 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 10 days between applications. • Do not apply within 3 days of harvest. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal population level reaches economic threshold. • Good coverage is essential. 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. Use the higher application rate and spray volume when treating a rapidly increasing insect population. The entire field should be treated.
<p>FRUITING VEGETABLE CROP GROUP 8: Bell pepper Chili pepper Cooking pepper Pimento Eggplant Groundcherry Okra Pepino Sweet pepper</p>	<p>Leafhoppers Mealybugs Planthoppers</p>	<p>13.6 fl oz/acre (0.38 lb ai/acre)</p>	<ul style="list-style-type: none"> • For ground application, use a minimum of 20 gallons of water per acre. • For aerial application, use a minimum of 5 gallons of water per acre. • Do not make more than 2 applications per crop cycle. • Allow at least 5 days between applications. • Do not apply within 1 day of harvest. • For Greenhouse tomatoes, apply by ground on 2 acre minimum with 20 gallons of water per acre. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Treatment should be applied when nymphal

Tomatillo Tomato	Whiteflies	9.0 to 13.6 fl oz/acre (0.25 to 0.38 lb ai/acre)	<p>population level reaches economic threshold.</p> <ul style="list-style-type: none"> • Good coverage is essential. 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. • For Greenhouse tomatoes, apply in sufficient water to obtain complete coverage of all plant parts. Applications may be made with high volume, low volume or ultra low volume (thermal and non-thermal foggers, misters, etc.) ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.
ORNAMENTAL PLANTS in greenhouses; lath and shadehouses; nurseries; landscape ornamentals; ground covers; field- and container-grown ornamentals; non-bearing fruit and nut trees in nurseries; Christmas trees	Leafhoppers Mealybugs Planthoppers	18.0 fl oz/100 gal (0.51 lb ai/100 gal)	<ul style="list-style-type: none"> • Do not make more than 2 applications per year. <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • Apply the specified dosage as a foliar spray in sufficient water for complete, uniform coverage, including stems and underside of leaves. Spray to the point of runoff. • Leafhoppers, Planthoppers, Whiteflies: Make first application as soon as adult insects begin to appear. • Mealybugs: Make first application as soon as insect activity is observed. • Scales: Make first application when crawlers are emerging. • If additional insecticide applications are required for control, use another class of chemistry or a different Insect Growth Regulator (IGR) with a different mode of action before making a second application of BUPROFEZIN 40SC insect growth regulator. • Consult local or state agricultural authorities for details concerning economic thresholds for each target pest.
	Scales	21.5 fl oz/100 gal (0.60 lb ai/100 gal)	
	Whiteflies	9.0 fl oz/100 gal (0.25 lb ai/100 gal)	

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container, unopened, 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 DISPOSAL: Nonrefillable container. DO NOT reuse or refill this container. Triple rinse (or equivalent) 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, or puncture and dispose of 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 must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of Nichino America, Inc. (NAI), it is impossible for NAI to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

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

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Label Code 072810