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279-3108

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

JUN 30 1999

Dr. Callista O. Chukwunye, Ph.D.
Manager, Product Registrations
FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103

Dear Dr. Chukwunye:

SUBJECT: Addition of Crops/ Globe Artichoke
Brigade WSB Insecticide/Miticide
EPA Registration Number 279-3108
Application Dated May 28, 1999

The amendment referred to above, submitted in connection with registration under Section 3(c)(7)(B) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. Submit and/or cite all data or other material required for registration/reregistration of your product under FIFRA section 3(c)(5) or FIFRA sec. 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling change listed below before you release the product for shipment bearing the amended labeling:
 - a. Revise the current restricted-entry interval (REI) statement to read as follows:

"Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) listed in the chart below:

CROP	REI
Artichokes	5 Days
Other Crops	24 Hours

Note that the REI for crops previously listed on your label, in accordance with Worker Protection Standard (WPS) requirements, has been changed from 12 to 24 hours based on the acute toxicity of the active ingredient (reference meeting with George LaRocca, 6/24/99). We note that, based on preliminary review and available information, other crops/use sites currently listed on your label may require REIs that exceed 24 hours. EPA will evaluate these sites to determine what should be the appropriate REIs. Any information or data you can provide to assist us in calculating appropriate REIs for each crop/use site should be provided to the Agency as soon as possible.

- 3. Submit two copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

George T. LaRocca
Product Manager 13
Insecticide Branch
Registration Division

Enclosure.

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LEAHY
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Code 1197

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RESTRICTED USE PESTICIDE
 Toxic to fish and aquatic organisms
 For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

Net Contents



WSB Insecticide/Miticide

EPA Reg. No. 279-3108

EPA Est. 279-NY-1

Active Ingredient:	By Wt.
Bifenthrin, (2-methyl [1,1'-biphenyl]-3-yl methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2- dimethylcyclopropanecarboxylate	10.0%
Inert Ingredients:	90.0%
	100.0%

* Cis isomers 97% minimum, trans isomers 3% maximum
U.S. Patent No. 4,238,505

KEEP OUT OF REACH OF CHILDREN

WARNING AVISO

This label must be in the possession of the user at the time of application.

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

STATEMENT OF PRACTICAL TREATMENT

If swallowed: Get medical attention. Call a Poison Control Center or physician promptly for advice. Describe Precautionary Statements and Notes to Physician statements on the label. Do not induce vomiting unless advised by a physician or qualified medical advisor. Do not give anything by mouth to an unconscious person.

If inhaled: Remove victim to fresh air. If discomfort persists, obtain medical attention.

If on skin: Wash with plenty of soap and water. Get medical attention.

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

Note to Physician: Pesticide Hotline (800) 858-7378. This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For Emergency Assistance Call (800) 331-3148.

See other panels for additional precautionary information.

PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment:

Applicators and other handlers (other than mixers and loaders) must wear:

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

Mixers and Loaders must wear:

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

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.

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



FMC Corporation
Agricultural Products Group
Philadelphia PA 19103

4/99 Draft

ACCEPTED
with COMMENTS
by EPA Letter Dated

JUN 30 1999

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

279-3108

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

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 intervals. 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; Waterproof gloves; and Shoes plus socks.

See supplemental label for directions for use in California.

STORAGE AND DISPOSAL

Pesticide Storage

Keep out of reach of children and animals. Store in original containers only. Store in a cool dry place and avoid excess heat. Do not store at temperatures below 32°F (0°C). Rough handling may cause breakage, especially at low temperatures. Allow to warm above 50°F (10°C) before use. Do not allow inner bags to become wet during storage. Do not handle inner bag with wet hands or wet gloves. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Disposal

When all water soluble bags are used, the outer package should be clean and may be disposed of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke. If the outer container contacts formulated product in any way, it must be triple rinsed with clean water. Add rinsate to the spray tank and dispose of the outer package as described above.

GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

The product in this outer package is a wettable powder formulation of the insecticide bifenthrin packaged in a translucent water soluble bag. Do not allow the inner bag to become wet before adding it to the spray or nurse tank. Do not handle the inner bag with wet hands or wet gloves. Rough handling may cause breakage. Do not store at temperatures below 32°F (0°C). Allow to warm above 50°F (10°C) before use. Cooler water temperatures increase the time needed for the inner bag to dissolve completely.

Brigade WSB insecticide is to be diluted with water for spray application. Do not use strainers finer than 50 mesh size. Determine the number of water soluble bag(s) to make up necessary spray suspension.

Calculate the number of bags needed for the recommended rate and number of acres to be treated by using the following equation:

$$\frac{\text{Recommended Rate for Pest (Active/Acre)} \times \text{\# Acres to be Treated with Tankload}}{0.05 \text{ (amt. ai in each bag)}} = \text{\# of Brigade Water Soluble Bags to use for acres to be treated.}$$

Do not break bags. When the equation equals less than a whole number of bags, use the next higher whole number of bags.

Fill the spray tank 1/2 full with water. Open the outer wrapper of this product and immediately dump required contents into the spray tank. Allow the water soluble bag(s) to dissolve completely. Start mechanical or hydraulic agitation. Air agitation is not recommended. Mix thoroughly to fully disperse and suspend the wettable powder. Fill the spray tank with the required amount of water. Maintain agitation during storage in nurse or supply tank and during application.

Mix as needed; do not store diluted material.

Tank-Mixture

Brigade WSB Insecticide/Miticide may be applied in tank mixtures with other products approved for use on Hops, but should not be applied in tank mixtures containing clay-based fungicides. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestation; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

Artichoke

Pest	Dosage* oz/A (lb ai/A)	Directions
Cribrate Weevil Artichoke Plume Moth	16.0 (0.10)	Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, but not more often than 15 day intervals. Do not exceed 2 bags (0.10 lb ai/A) between bud formation and harvest of an individual fruit. Application by ground: Apply a full cover spray in a minimum of 75 gallons of finished spray per acre. Application by air: Apply specified dosage in a minimum of 10 gallons per acre. Do not exceed 10 bags (0.5 lb ai) per acre per season. A 5-day preharvest interval must be observed.

*1 bag = 0.05 lb ai

Hops*

Pest	Dosage** oz/A (lb ai/A)	Directions
Aphids Armyworms Cutworms Leafrollers Loopers	9.6 to 16.0 (0.06 to 0.1)	Do not exceed 2 bags (0.1 lb ai) per acre per application. Do not exceed 6 bags (0.3 lb ai) per acre per season.
Root Weevils	8.0 to 16.0 (0.05 to 0.1)	A spray interval of 21 days between applications must be maintained. A 14 day pre-harvest interval must be observed.
Twospotted spider mite	16.0 (0.1)	Application by ground: For best results, full coverage is essential. Early season recommend 100-150 gallons of spray per acre. Late season recommend 200-250 gallons of spray per acre. For Root Weevil control, make a directed spray to the base of the plant. Spray up the vine 3 feet and the soil surface 1.5 to 2 feet on either side of the plant. Application by air for late season control of twospotted spider mites: Apply no less than 16 oz. (0.1 lb ai) per application in a minimum of 10 gallons per acre.

* Not for use in California

** 1 bag = 0.05 lb ai = 8 oz formulated product

Strawberries

Pest	Dosage* oz/A (lb ai/A)	Directions
Aphids Armyworms Fleabeetles Heliothis spp. Leafrollers Lygus spp. Plant Bugs Spittlebugs Stink Bugs Strawberry Clipper Strawberry Sap Beetle	6.4 to 32.0 (0.04 to 0.2)	Apply when pest populations reach damaging thresholds and repeat as necessary at 7-14 day intervals. Do not apply more than 0.5 lb ai per acre per season. No preharvest interval is required. Application by ground: Apply a full cover spray in a minimum of 50 gallons of finished spray per acre. Application by air (Aerial application is prohibited in Florida): Apply specified dosage in a minimum of 5 gallons per acre.
Strawberry Root Weevil	8.0 to 32.0 (0.05 to 0.2)	
Spider mites	16 to 32.0 (0.1 to 0.2)	

*1 bag = 0.05 lb ai = 8 oz formulated product

CALIFORNIA SUPPLEMENTAL LABEL

CALIFORNIA SPECIFIC REQUIREMENTS FOR STRAWBERRY HARVESTERS:

Harvesters and other personnel performing tasks with all-day foliage contact in treated fields within five (5) days of application must wear a long-sleeved shirt, long pants, and shoes plus socks.

Following treatment of strawberry fields at rates of Brigade® WSB greater than 0.1 lb ai/acre, harvesters must wear gloves for five (5) days following application.

PLEASE REFER TO CONTAINER LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS. FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS, AND PRECAUTIONS ON THE CONTAINER LABEL.

THIS SUPPLEMENTAL LABELING MUST BE IN POSSESSION OF ALL USERS OF THE PRODUCT IN CALIFORNIA.

Spray Drift Precautions

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Do not apply by ground equipment within 25 feet, or by air within 150 feet of lakes; reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.

Use of ultra low volume (ULV) application on hops is prohibited.

Do not make aerial or ground applications during temperature inversions or if heavy rainfall is imminent. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. Inclusion of a compatible drift reducing agent is encouraged.

For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.

Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Do not cultivate within 10' of the aquatic area so as to allow growth of a vegetative filter strip.

Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.

Dealers Should Sell in Original Packages Only.

Terms of Sale or Use: On purchase of this product buyer and user agree to the following conditions:

Warranty: FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Directions and Recommendations: Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

Use of Product: FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages: Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

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