

279-3332

03/19/2008

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

EPA Reg. Number:
279-3332

Date of Issuance:
MAR 19 2008

Term of Issuance:
Conditional

Name of Pesticide Product:
Brigadier 2SC Insecticide

NOTICE OF PESTICIDE:

Registration
 Reregistration

(Under FIFRA as amended)

Name and Address of Registrant (include ZIP Code):

FMC Corporation
1735 Market Street
Philadelphia, PA 19103

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

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

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

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A), provided that:

1. You will submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. You agree that the subject registrations are conditional under the same terms and conditions for data generation as stipulated in the Agency's November 15, 1993 and November 15, 2004 letters for use of these products on cotton.
3. You agree that the current synthetic pyrethroid mitigation measures are interim in nature and may be reconsidered or modified after review and evaluation of the Spray drift Task Force data.
4. FMC understands that it is the US EPA intent to complete the reviews of all relevant data and other information that are available to the agency, and to make FIFRA 3(c)(5) or other appropriate regulatory decisions for cotton- use synthetic pyrethroids and other crops conditionally registered based on the Agency's review of such data/information and considering statutory and regulatory criteria for such decisions.
5. You will make the following label changes before you release the product for shipment:

Signature of Approving Official:

George T. LaRocca
George T. LaRocca, Product Manager (13)
Insecticide Branch/Registration Division (7505C)

Date:

March 19, 2008

Enclosure

- a) Revise the EPA Registration Number to read "EPA Reg. No.279-3332."
- b) Under PPE, page 2, delete the parenthesis "(other than mixers and loaders)" since the requirements for all applicators and handlers are the same. Also delete the "mixers and loaders" section.
- c) Under Environmental hazards add the following ground water advisory:

"The chemical imidacloprid demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination".
- d) On page 3, under NYS statement add "... or 300 feet (using aerial equipment)" to the last sentence (following using ground equipment).
- e) On page 3, under *Rotational Crop*, revise the second, third and 4th sentences to read:

"Crops that have tolerances for both bifenthrin and imidacloprid may be rotated at any time. Crops with tolerances for bifenthrin and not imidacloprid can be rotated 12 months following the final application of Brigadier. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of Brigadier."
- f) On page 3, rotational crop add "head" in parenthesis following lettuce i.e. "lettuce (head)". Also qualify legume vegetables to read "legume vegetables (edible podded)" and qualify root tuberous and corm vegetables by adding in parenthesis "(except sugar beet)". Move soybeans, cilantro and coriander to the immediate plant back group. Change brassica (stem and leafy) to brassica (head & stem).
- g) On page 6, qualify the heading *Artichoke*, to read "Artichoke(Globe)". Also the maximum amount of imidacloprid allowed per season for a foliar spray is 0.5lb ai/a. Revise your label accordingly.
- h) On page 7, under *Brassica (Head & Stem)*, delete the crops leafy Brassica such as. These crops belong under the heading Brassica (Leafy). Also delete the phrase "such as".
- i) On page 7, under *Brassica(Leafy)*, delete "including turnip greens". There are no tolerances for imidacloprid on turnips. Likewise delete the phrase "such as". Add the restriction "Apply Brigadier 2SC up to 5 applications after bloom".
- j) On page 11, under *Head Lettuce*, the maximum amount of each active allowed per season under restrictions are reversed. Please correct.

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- k) On page 12, under *Pears*, add the maximum amount of Brigadier and bifenthrin "after petal fall" i.e., "Maximum amount of imidacloprid allowed per season: 128 oz(1.0 lb/ai); 115 oz(0.9 lb ai/a) applied after petal fall." Maximum amount of bifenthrin allowed per season: 0.50 lb ai/a; 0.45 lb ai/a applied after petal fall.
 - l) On page 14, under *Spinach*, revise the minimum spray application in water to 2.5 gallon by air.
 - m) On page 15, under *Succulent Beans*, delete the phrase "... such as".
 - n) On page 16, under *Tobacco*, change the PHI to 14 days and the maximum ai/a for bifenthrin to 0.3 lbs ai/a. Also add the restriction "Do not apply later than layby" and limit the spray volume to 10 gallons by ground and 5 gallons by air".
 - o) On page 17 under *Tomatoes*, change the PHI to 1 day and the minimum internal between applications to 10 days. Also change the maximum ai/acre/season for bifenthrin to 0.32 lb ai/a".
 - p) On page 18 under *Tuberous and Corm vegetables*, add in parenthesis (except Radish and Sugarbeet) following Tuberous and Corm vegetables. Change the PHI to 21 days.
 - q) Replace "To the extent allowed by law" with "To the extent consistent with applicable law" in the Warranty and Liability statement.
 - r) Add "To the extent consistent with applicable law" to the front of the statement "FMC makes no warranties of merchantability or of fitness etc." in the Warranty and Liability statement.
6. Generate and submit the results of an one year storage stability and corrosion characteristics study to the Agency on completion. It is recommended that the observations be made at 0, 3, 6, 9, and 12 months intervals.
7. Submit a revised formulators' exemption statement deleting the following source products, _____ and _____. These sources product either do not list all the food crops on your proposed label or are not for formulating products for crop use.
8. For the same reasons indicated in comment 7 above, submit a revised confidential statement of formula deleting the following suppliers of active ingredients _____, _____.
9. Please submit three (3) copies of your final printed labeling before releasing 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 bearing amended labeling constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this action, please contact BeWanda Alexander of my team at (703) 305-7460.

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GROUP	3	INSECTICIDE
GROUP	4A	INSECTICIDE

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.

BRIGADIER™

2SC Insecticide

**ACCEPTED
with COMMENTS
In EPA Letter Dated
MAR 19 2008**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 279-3332

EPA Reg. No. 279-

EPA Est. No.

Active Ingredient:

By Wt.

Bifenthrin: (2 methyl [1,1'-biphenyl]-3-yl)	
Methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-	
2, 2-dimethyl-cyclopropanecarboxylate*	11.30%
Imidacloprid*, 1-[(6-Chloro-3-pyridonyl) methyl]-N-nitro -2-Imidazolidinimine.....	11.30%
Other Ingredients:	<u>77.40%</u>
	100.0%

**Cis isomers 97% minimum, trans isomers 3% maximum.
This product contains 2lbs. active ingredient per gallon
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.)

See other panels for additional precautionary information.

FIRST AID	
If Swallowed:	-Call a poison control center or doctor immediately for treatment advice. -Do not give any liquid to the person. -Do not induce vomiting unless told to do so by a poison control center or doctor. -Do not give anything by mouth to an unconscious person.
If in Eyes:	-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. -Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.	
NOTE TO PHYSICIAN	
This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines 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.	

**FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103**

Net Contents:

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PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

Warning

May be fatal if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

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

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

Mixers and Loaders must wear:

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

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.

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 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, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, and Shoes plus socks.

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.

RESISTANCE MANAGEMENT

Some insects are known to develop resistance to products with the same chemical class used repeatedly for control. Brigadier 2SC contains Group 3 and Group 4 insecticides. Although pest resistance can not be predicted, a general rule to reduce the onset of resistance pest species to Brigadier 2SC is do not consecutively and repeatedly apply Group 3 and/or Group 4 insecticides during a growing season for control particular pest target. Consult your local or state agricultural authorities or your FMC representative for more specific details on insect resistance management strategies.

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.

STORAGE AND DISPOSAL

Pesticide Storage

If storing this product below freezing, user should shake or roll the container to ensure proper product consistency. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute 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: 1-(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

Metal or Plastic Container: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Do not cut or weld metal containers. U-Turn® Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

Application Instructions

Rate of application is variable according to pest. Use lower rates under light to moderate infestations; higher rates under heavy insect pressure. Arid climates generally require higher rates.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

In New York State this product may not be applied within 100 feet (using ground equipment) of coastal marshes or streams that drain into coastal marshes.

ROTATIONAL CROPS

Plant back restrictions are determined by the crop. Crops that have tolerances for both bifenthrin and imidacloprid plant back are typically immediate. For crops with tolerances for bifenthrin and not imidacloprid plant back is typically 12 months. Crops that have tolerances for imidacloprid and not bifenthrin plant back is typically 30 days. Below is a list of plant back restrictions:

Immediate plant back:

Crops on this label, as well as, corn (all), tobacco, tomatoes, eggplant, peppers, bell and non-bell, okra, caneberries, citrus, , artichoke, lettuce, grapes, spinach, pears, hops, legume vegetables, root tuberous and corm vegetables, and strawberries.

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30 Day plant back:

Cereals, brassica (stem and leafy), cucurbits, cilantro and coriander, soybeans, safflower

10 Month plant back:

Onion and bulb vegetables

12 Month plant back"

All other crops

MAXIMUM ALLOWABLE USE PER SEASON

Refer to the individual crop sections for maximum allowable Brigadier 2SC usage per acre per season. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 months period. The 12 month period is to begin upon the initial application to the acre.

Tank-Mixture

Brigadier TM Insecticide may be applied in tank mixtures with other products approved for use on registered crops. Observe all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

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. Increase the buffer zone to 450 feet when ultra low volume (ULV) application is made in cotton.

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.

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.

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.

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 feet of the aquatic area so as to allow growth of a vegetative filter strip.

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.

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Do not make aerial or ground applications during temperature inversions. Temperature 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.

CHEMIGATION USE DIRECTIONS

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

For LEPA irrigation a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluent, 1 to 2 pints per acre is recommended.

Results from utilizing chemigation have been variable and depend upon the set up and calibration of equipment. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect pests.

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 the need arise. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

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 backflow.

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. Brigadier2SC insecticide should be applied continuously for the duration of the water application. Brigadier 2SC should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve

a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

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ARTICHOKE

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Leafhopper spp. Cribrate Weevil Artichoke Plume Moth	6.4 – 12.8	0.1 – 0.2

Restrictions:

Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 15 Days

Maximum amount of Brigadier™ allowed per season: 25.6 oz (0.4 lb ai/a)

Maximum amount of Imidacloprid allowed per season: 0.2 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.5 lb ai/a . Examples of other products containing bifenthrin are Capture® and Brigade®.

BRASSICA (Head and Stem)

Head and Stem Brassica Vegetables such as: Broccoli, Chinese, Broccoli (gallon, white flowering broccoli), Brussels Sprouts, Cauliflower, Cavalo broccoli, Kohlrabi, Cabbage, Chinese Cabbage (napa), and Chinese Mustard Cabbage (gai choy); Leafy Brassica such as: Broccoli Raab, Bok Choy, Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens including turnip greens.

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp.	3.8 – 6.1	0.06 – 0.095
Armyworm spp.		
Budworm		
Com Earworm		
Crickets		
Cucumber Beetle		
Cutworm spp.		
Diamondback Moth		
Ground Beetle		
Imported Cabbageworm		
Leafhopper spp.		
Loopers		
Lygus spp.		
Saltmarsh Caterpillar		
Stink bug spp.		
Thrips		
Tobacco Budworm		
Whitefly		
Wireworm (adults)		

Restrictions:

Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of Brigadier 2SC allowed per season: 30.72 oz (0.48 lb ai/a)

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.5 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Apply Brigadier 2SC up to 5 applications after bloom.

BRASSICA (Leafy)

Leafy Brassica Vegetables such as: Broccoli Raab, Bok Choy, Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens including turnip greens.

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PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp.	4.24 – 6.1	0.066 – 0.095
Armyworm spp.		
Budworm		
Com Earworm		
Crickets		
Cucumber Beetle		
Cutworm spp.		
Diamondback Moth		
Ground Beetle		
Imported Cabbageworm		
Leafhopper spp.		
Loopers		
Lygus spp.		
Saltmarsh Caterpillar		
Stink bug spp.		
Thrips		
Tobacco Budworm		
Whitefly		
Wireworm (adults)		

Restrictions:

Preharvest Interval (PHI): 7 Days

Minimum interval between applications: 7 Days

Maximum amount of Brigadier 2SC allowed per season: 30.72 oz (0.48 lb ai/a)

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.5 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

CILANTRO and CORIANDER

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid Spp.	4.24 – 5.5	0.066 – 0.086
Beet Armyworm		
Cabbage Looper		
Cutworm spp.		
Flea beetle		
Grasshopper		
Leafhopper spp.		
Leafminer		
Saltmarsh caterpillar		
Spotted Cucumber Beetle		
Thrips		
Whitefly		

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 16.64 oz (0.26 lb ai/a).

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Maximum amount of Imidacloprid allowed per season: 0.13 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.50 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

COTTON

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Cotton Aphid Cotton Fleahopper Lygus Spp. Southern Garden Leafhopper Stink Bug spp.	3.8 – 7.7	0.06 – 0.12
Beet Armyworm Bollworm Cabbage Looper Cotton Leafperforator Cutworm spp. European Corn Borer Fall Armyworm Pink Bollworm Saltmarsh Caterpillar Tobacco Budworm Thrips Whitefly Yellow Striped Armyworm	5.1 – 7.7	0.08 – 0.12

Restrictions:

Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 39.68 oz (0.62 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.31 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.50 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Do not graze livestock in treated areas or cut treated crops for feed.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang Max®, and Scout X-TRA®.

REMARKS—Cotton

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.

ULV Application: Apply the recommended rate of Brigadier 2SC in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.

EGGPLANT

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Leafhopper spp. Lygus spp. Thrips	3.8 – 9.85	0.06 – 0.15
Armyworm Colorado potato beetle Corn earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetles Leafminers Loopers Whitefly	5.1 – 9.85	0.08 – 0.15

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 25.6 oz (0.4 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.20 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

GRAPES

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Glassywinged sharpshooter Variegated leafhopper Western grape leafhopper Eastern grape leafhopper	3.8 – 6.4	0.06 – 0.10
Black vine weevil Cutworm spp. Grape berry moth Grapeleaf skeletonizer Japanese beetles (adult) Mealybug	5.1 – 6.4	0.08 – 0.10

Restrictions:

Preharvest Interval (PHI): 30 days.

Minimum interval between applications: 14 days.

Maximum amount of Brigadier 2SC allowed per season: 12.8 oz (0.10 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.10 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.10 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

HEAD LETTUCE

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp.	3.8 – 6.1	0.06 – 0.095
Amyworm Corn earworm Cucumber Beetles Cutworm spp. Diamondback Moth Flea Beetle Imported Cabbageworm Loopers Salt Marsh Caterpillar Tobacco Budworm	5.1 – 6.1	0.08 – 0.095

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 30.72 oz (0.48 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.50 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.24 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

ORKA

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Lygus spp. Stink bug spp. Thrips	3.8 – 9.8	0.06 – 0.15
Amyworm Corn earworm Cucumber Beetle Cutworms European Corn Borer Flea Beetles Leafminer Loopers Japanese Beetle (adult) Whitefly	5.1 – 9.8	0.08 – 0.15

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 25.6 oz (0.4 lb ai/a).

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Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.20 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

PEARS

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Leafhopper spp. Lygus spp. Stink Bug spp.	3.8 – 12.8	0.06 – 0.2
Codling Moth Cutworm spp. Green Fruitworm Leafminer Leafroller Plum Curculio	5.1 – 12.8	0.08 – 0.2

Restrictions:

Preharvest Interval (PHI): 14 days.

Minimum interval between applications: 30 days.

Maximum amount of Brigadier 2SC allowed per season: 128 oz (1.0 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.50 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.50 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

PEPPERS

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Leafhopper spp.	3.8 – 9.8	0.06 – 0.15
Cribrate Weevil Artichoke Plum Moth	5.1 – 9.8	0.04 – 0.15

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 25.6 oz (0.4 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.20 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

POTATO

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp.	4.15 – 6.14	0.075 – 0.096
Leafhopper spp.		
Banded Cucumber beetle		
Black flea beetle		
Colorado potato beetle		
Cucumber beetle		
Flea beetles		
June beetle		
Potato psyllid		
Sugarcane beetle		
Sweetpotato flea beetle		
Sweetpotato weevil		
Whitefringed beetle		

Restrictions:

Preharvest Interval (PHI): 21 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 25.6 oz (0.40 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.20 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.50 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Apply a Maximum of 2 applications per season

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang®, and Scout X-TRA®.

REMARKS:

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.

SPINACH

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Lygus spp. Thrips	3.8 – 6.14	0.06 – 0.096
Armyworm Colorado Potato Beetle Corn earworm Cucumber Beetles Cutworm spp. European Corn Borer Fire Ants Flea Beetle Leafminer Loopers Pepper Weevil Tomato Hornworm Tomato Pinworm Whitefly	5.1 – 6.14	0.08 – 0.096

Restrictions:

Preharvest Interval (PHI): 40 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 30.7 oz (0.48 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.40 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Apply a maximum of 4 applications per season.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang®, and Scout X-TRA®.

REMARKS:

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray

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SUCCULENT BEANS

Crops in the Succulent Pea and Bean group, such as, Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea, Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean., Jackbean, Soybean (immature seed), Sword bean

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips	3.8 – 5.5	0.06 – 0.086
Alfalfa Caterpillar Bean Leaf Beetle Beet Armyworm Cloverworm Corn Earworm Corn Rootworm (adult) Cucumber Beetle Cutworm spp. European Corn Borer Fall Armyworm Flea Beetle Japanese beetle (adult) Looper spp. Pea Leaf Weevil Pea Weevil Sap Beetle (adult) Southern Armyworm Webworm Whitefly Yellowstriped Armyworm	5.1 – 5.5	0.08 – 0.086

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 16.6 oz (0.26 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.13 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.20 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danitol®, Karate®, Mustang®, and Scout X-TRA®.

REMARKS:

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray

TOBACCO

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Lygus spp. Aphid spp. Stink Bug spp. Thrips	3.8 – 6.4	0.06 – 0.1
Amyworm spp. Chinch Bugs Cutworm spp. Cutworm spp. Flea Beetle (Adults) Grasshoppers Japanese Beetles Stalkborers Whiteflies	5.1 – 6.4	0.08 – 0.1

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 25.6 oz (0.4 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.28 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.20 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Apply a maximum of 2 applications per season.

Do not make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season. Synthetic pyrethroid products include Ambush®, Ammo®, Asana® XL, Baythroid®, Capture®, Danito®, Karate®, Mustang®, and Scout X-TRA®.

REMARKS:

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray

TOMATO

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp. Flea Hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips	3.8 – 9.85	0.06 – 0.15

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Armyworm spp.	5.1 – 9.85	0.04 – 0.15
Bean Leaf Beetle		
Cabbageworm		
Cloverworm		
Colorado potato beetle		
Corn earworm		
Corn Rootworm		
Cucumber Beetle		
Cutworms		
Diamondback Moth		
European Corn Borer		
Flea Beetle		
Grasshopper		
Japanese Beetle (adult)		
Loopers		
Melonworm		
Pea Leaf Weevil		
Pea Weevil		
Pepper weevil		
Pickleworm		
Rindworm		
Salt Marsh Caterpillar		
Sap Beetle		
Seedpod Weevil		

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 30.72 oz (0.48 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.24 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.40 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

REMARKS:

Brigadier 2SC may be applied in water or refined vegetable oil (soybean/cottonseed).

Application in Water: Apply in a minimum of 15 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray

TUBEROUS and CORM VEGETABLES

Tuberous and Corm vegetables such as: Sweet potato, Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Edible canna, Cassava (bitter and sweet), Chayote (root), Chufa, Dasheen (taro), Ginger, Leren, Tanier, Turmer, Yam bean, True yam

PEST	USE RATES	
	Fluid oz/acre	Pound ai/acre
Aphid spp.	3.8 – 7.7	0.06 – 0.12
Leafhopper spp.		

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Banded Cucumber beetle	5.1 – 7.7	0.08 – 0.12
Black flea beetle		
Colorado potato beetle		
Cucumber beetle		
Flea beetles		
June beetle		
Potato psyllid		
Sugarcane beetle		
Sweetpotato flea beetle		
Sweetpotato weevil		
Whitefly		
Whitefringed beetle		

Restrictions:

Preharvest Interval (PHI): 7 days.

Minimum interval between applications: 7 days.

Maximum amount of Brigadier 2SC allowed per season: 16.64 oz (0.26 lb ai/a).

Maximum amount of Imidacloprid allowed per season: 0.13 lb ai/a. Examples of other products containing imidacloprid are: Admire®, Provado®, and Gaucho®.

Maximum amount of Bifenthrin allowed per season: 0.50 lb ai/a. Examples of other products containing bifenthrin are Capture® and Brigade®.

Dealers Should Sell in Original Packages Only.

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