

U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (H7505C) 401 "M" St., S.W. Washington, D.C. 20460

EPA Reg. Number: 279-3271

JAN 3 1 2003

Term of Issuance:

Conditional: Registration will expire November 15, 2003

Name of Pesticide Product.

Double Threat<sup>TM</sup> Insecticide

NOTICE OF PESTICIDE:

x Registration \_ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**FMC** Corporation Agricultural Products Group 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

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 <u>conditionally</u> registered in accordance with FIFRA sec. 3(c)(7)(A), subject to the following terms:

- You must submit and/or cite all data required for registration/reregistration of your product 1. 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 you product under FIFRA section 4.
- 2. You will submit production information (pounds or gallons produced) for this product for the fiscal year in which the product is conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1 and ends September 30. The production information will be submitted to the Agency no later than November 15 following the end of the preceding fiscal year.

The information should be submitted to:

U.S. Environmental Protection Agency Office of Pesticide Programs (7504C) Document Processing Desk Ariel Rios Building 1200 Pennsylvania Avenue, NW Washington, DC 20460

Jo Know

Signature of Approving Official

Jan4901 31, 2003

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- 3. This registration is conditioned under the same terms and conditions for data generation as stipulated in our November 15, 1993 letter for use of the bifenthrin product, Capture 2 EC Insecticide/Miticide (EPA Reg. No. 279-3069), on cotton.
- 4. FMC Corporation agreed 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.
- 5. You understand that this registration will expire on November 15, 2003. You further understand that it is EPA's stated intent to, by November 15, 2003, complete its review of all relevant data and other information that are available to the Agency, and to make FIFRA section 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.
- 6. Please submit two (2) copies of your final printed label before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If you fail to satisfy any of the conditions imposed on this registration, e.g., you fail to submit the required information/data by the specified deadlines or the data submitted were not generated in accordance with the applicable test guidelines or you fail to make the required label changes, EPA may issue a notice to cancel this registration under FIFRA section 6(e).

You should note that, regardless of whether you satisfy all applicable conditions, this conditional registration will expire automatically on November 15, 2003. Sale and distribution of the subject product bearing labeling for the subject uses after November 15, 2003 will be illegal.

Finally, once the required data have been submitted and evaluated, EPA will entertain an application to amend the registration of the subject product to allow its unconditional use without any special restrictions on the duration of the registration.

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A stamped copy of the label is enclosed for your records. If you have any questions regarding this action, please contact Susan Stanton of my team at (703) 305-5218.

Sincerely,

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

Enclosures

# 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 the uses covered by the certified applicator's certification.



# COTTON INSECTICIDE/MITICIDE

EPA Reg. No. 279-3271

Double Threat is a broad-spectrum cotton insecticide that utilizes two active ingredients for dual mode-of-action insect control.

Active Ingredients:	By Wt.
Bifenthrin *	
Spinosad (a mixture of spinosyn A and spinosyn D)	.10.7%
Inert Ingredients	77.1%
Total	.100.0%

\*(2 methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate - Cis isomers 97% minimum, trans isomers 3% maximum.

This product contains 1.07 pounds Bifenthrin (active ingredient) and 0.94 pound Spinosad (active ingredient) per gallon. U.S. Patent Nos. 4,238,505, 5,362,634 and 5,496,931

## 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. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

# ACCEPTED with COMMENTS In EPA Letter Dated:

JAN 3 | 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 279-327/



FMC Corporation Agricultural Products Group Philadelphia PA 19103

# **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 insecticide/miticide contains a pyrethroid(bifenthrin) and a mixture of macrocyclic lactones (spinosad). If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment 1s symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For Emergency Assistance Call (800) 331-3148.

# PRECAUTIONARY STATEMENTS Hazards to Humans (and Domestic Animals)

### Warning

May be fatal if swallowed.

### Personal Protective Equipment:

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

Handlers who may be exposed to the dilute through application or other tasks must wear: long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, and shoes plus socks.

Handlers who may be exposed to the concentrate through mixing, loading, application or other tasks must wear: long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate or Nitrile Rubber or Neoprene Rubber or Viton, 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 thoroughly with soap and water after handling and 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.

# **ENVIRONMENTAL HAZARDS**

This product 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. Do not cultivate within 10 feet of aquatic areas so as to allow growth of a vegetative filter strip.

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 Double Threat is prohibited in areas that may result in exposure of endangered species to Double Threat. 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. Read all Directions for Use carefully before applying. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may 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 24 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, Nitrile Rubber,
- Neoprene or Viton
- -Shoes plus socks

# Storage and Disposal

# Pesticide Storage

Store in protective storage above freezing.

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. 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.

# Storage and Disposal (cont.)

### 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

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.

# **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.

Double Threat should be applied continuously for the duration of the water application. Double Threat 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.

# **Rotational Crops**

Leafy vegetables and root crops may be rotated 30 days following the final application of Double Threat. Crops for which both Bifenthrin and Spinosad tolerances exist may be rotated at any time. All other crops may be rotated seven months following the final application of Double Threat.

Maximum Seasonal Usage and PHI (Pre-Harvest Interval) for Double Threat Labeled Crops.

Crop	Maximum Seasonal Total/Acre			PHI (days)
	Bifenthrin lbs ai	Spinosad ibs ai	Double Threat Floz	
Cotton	0.5	0.45	61.3	28

# General Use Precautions

Double Threat should be applied when field scouting indicates that target pest densities have reached the economic threshold and the insect population must be reduced to avoid economic losses. Double Threat will reduce the target pest species and significantly reduce certain beneficial insects.

# Insecticide Resistance Management

Double Threat has two different modes of action which are beneficial in managing the development of insect resistance.

Do not use less than labeled rates of any insecticide product when applied alone or in tank mixtures. Optimum results will be obtained when applications are targeted against small larvae and eggs. Always consult with your local agricultural specialist or FMC representative (1-888-59-FMC\_AG) for guidance and information on how Double Threat will fit into your pest management programs.

# Mixing

# Always shake well before use.

### Mixing Double Threat Alone

Fill the spray tank one-half full of water. Start agitation and add the required amount of Double Threat. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray solution. Do not allow water or spray mixture to back-siphon into any water source.

# Tank Mixing

Double Threat may be applied alone or as a tank mix combination with labeled rates of other insecticide and herbicide products. Insure the tank mix combination is compatible by conducting a "jar test" described in the "Tank Mix Compatibility Testing" section.

Tank Mixing Precautions: Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels. Do not exceed recommended application rates. Do not tank mix products with the same active ingredient unless the label of either tank mix partner specifies the maximum dosage that may be used. For products packaged in water soluble packaging, do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been thoroughly cleaned.

Tank Mix Compatibility Testing: When tank mixing Double Threat with other materials, a compatibility test (jar test) using relative proportions of tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. Vigorous and continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparge pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture. Do not use acidifying buffering agents in tank mixes with Double Threat.

Mixing Order for Tank Mixes: Fill the spray tank with water to 1/2 of the total spray volume required. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Different formulation types MUST BE added in the following order:

- Products in water soluble packaging; (See Premixing below)
   Water dispersible granules; (See Premixing below)
- Wettable powders; (See Premixing below)
- Continue agitation and fill spray tank to 3/4 of total spray volume. Then add:
- 5. Double Threat
- 6. Emulsifiable concentrates and water-based solutions.
- 7. Adjuvants or additives, including surfactants, oils, soluble fertilizers or drift retardants.

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparge agitator is particularly useful for this purpose.

Premixing: Dry and flowable formulations must be premixed with water (slurried) and added to the spray tank through a 20-35 mesh screen. This procedure assures good initial dispersion of these formu-

Use of Adjuvants: In some situations where coverage is difficult to achieve due to a closed canopy, dense foliage, or less than optimum application conditions and/or application equipment, an adjuvant may improve performance. If adjuvants are used, the following guidelines should be followed:

-Use only adjuvant products labeled for agricultural use and follow directions on the manufacturer's label. A nominal concentration of 1 to 2 qt/100 gal (0.25 to 0.5% v/v) is generally sufficient.

-Use only emulsified crop oil, methylated crop oil plus organosilicone combination products or nonionic surfactants.

-When using adjuvants, always conduct a jar test to determine the compatibility of the various components in the spray mixture. Crop safety should be evaluated in a small area of the crop whenever there is a significant change in spray mixture ingredients or source of water for the spray mixture.

-Do not use diesel oil or pure mineral oil.

#### **Application**

Proper application techniques help ensure thorough spray coverage and correct dosage necessary to obtain optimum control of insect pests. The following recommendations are provided for ground and aerial application of Double Threat.

# **Ground Application**

Apply in a minimum spray volume of 5 gallons of water per acre. Use ground spray equipment operated to deliver thorough coverage of the target crop. Follow manufacturer's recommendations for proper nozzle spacing and spray pressure and boom height for optimum spray deposition, and to minimize spray drift. One to two quarts of vegetable oil may be substituted for one to two quarts of water to improve spray deposition.

# **Band Application:**

Band application may be appropriate when the crop is small. Nozzle selection, placement, and proper sprayer operation are critical to ensure adequate coverage.

# **Aerial Application**

Apply in a minimum spray volume of 3 gallons per acre using a nozzle configuration that will provide a median droplet size of 200-300 microns. Use swath markers or flagging to aid in obtaining uniform plant coverage. Under conditions of low humidity and high temperatures, adjust spray volume and droplet size upward to compensate for evaporation of spray droplets. One to two quarts of vegetable oil may be substituted for one to two quarts of water to improve spray deposi-

### **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 pond. 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.

#### Spray Drift Precautions (cont.)

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 fitter 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.

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

# **Double Threat Use Rates for Cotton (28 day PHI)**

PEST	LIGHT TO MODERATE INFESTATION	HEAVY INFESTATION
Soybean (Banded) Thrips Tobacco Thrips	2.4 oz/A	4.8 oz/A
Boll Weevil Bollworm Cabbage Looper Cotton Aphid Cotton Fleahopper Cotton Leafperforator Cutworms European Corn Borer Fall Armyworm Plant Bugs Saftmarsh Caterpillar Southern Garden Leafhopper Soybean Looper Strik Bugs (brown, green) Tobacco Budworm Whitefly Yellow Striped Armyworm	6.0 oz/A	9.6 oz/A
Beet Armworm Carmine Spider Mite Lygus Spp. Pink Bollworm Twospotted Spider Mite	8.0 oz/A	12.0 oz/A

# Acres Treated and Equivalent Component Use Rates per gallon of Double Threat

The chart below shows the amount of active ingredient bifenthrin and spinosad that will be delivered per acre at the various use rates for Double Threat:

Double Threat rate: (oz product per acre)	2.4	4.8	6.0	8.0	9.6	12.0
AcresPer Gallon:	53	27	21	16	13	11
Bifenthrin(lb ai)	0.02	0.04	0.05	0.067	0.08	0.1
Spinosad(lb ai)	0.018	0.035	0.044	0.059	0.07	0.088

# Application Restrictions

Do not reapply within 5 days if using the higher Double Threat use rate of greater than 9.6 oz/A.

Do not apply within 28 days of harvest

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

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

Do not apply more than 0.5 pound bifenthrin and 0.45 pound of spinosad per acre per season (61.3 oz/Acre of Double Threat). 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®, Decis®, Danitol®, Karate®, Fury®, and Scout \*XTRA

In New York State this product may not be applied within 100 feet (using ground equipment) to 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

# Terms and Conditions of Use

Dealers Should Seil 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 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.

FMC and Double Threat are trademarks of FMC Corporation Spinosad is a product of Dow AgroSciences LLC