



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

EPA Reg.  
Number:  
279-3155

Date of Issuance:  
May 13,  
1996

NOTICE OF PESTICIDE:  
☒ Registration  
☐ Reregistration

(under FIFRA, as amended)

Term of Issuance:  
Conditional

Name of Pesticide Product:  
TalStar<sup>R</sup> Nursery  
Flowable  
Insecticide/Miticide

Name and Address of Registrant (include ZIP Code):

FMC Corporation  
Agricultural Chemical Group  
1735 Market Street  
Philadelphia, PA 19103

16/5505424  
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Notes: 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) and (B) since you have agreed to the conditions in or letter of May 8, 1996.

1. Make the following label changes:

- a. Revise the paragraph under Turf Application Rates beginning with "Maintain a minimum 30-foot buffer, xxx etc., to read:

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

- b. Add the following precaution under Turf grass Application Rates:

" Do not apply when turf grass areas are water-logged or soil is saturated with water (i.e, will not accept irrigation)."

Signature of Approving Official:

*George T. LaRocca*  
George T. LaRocca, Product Manager (13)

Date:

13 MAY 1996

- c. Delete "For Agricultural and Commercial Use Only" and replace with "For Commercial Non-Food Use on Indoor and Outdoor Ornamental, Greenhouses, Nurseries, Turf on Golf Courses and Sod Farms."
- d. Under Application Recommendations qualify Turf by adding golf courses and sod farms i.e. , Turf (Golf Courses and Sod Farms).

2. Submit three copies of the revised final printed label for the record 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 sec. 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.

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

# 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.

Code 1658

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

Net Contents



## NURSERY FLOWABLE INSECTICIDE/MITICIDE

For Agricultural and Commercial Use Only

EPA Reg. No. 279-3155

EPA Est. 279-

Active Ingredient:	By Wt.
Bifenthrin: (2-methyl [1,1'-biphenyl]-3-yl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane carboxylate*	7.9%
Inert Ingredients:	92.1%
	100.0%

\*Cis isomers 97% minimum, trans isomers 3% maximum.

Talstar® Flowable insecticide/miticide contains 1/4 pound active ingredient per gallon.

U.S. Patent No. 4,238,505

## KEEP OUT OF REACH OF CHILDREN CAUTION

See other panels for additional precautionary information.

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get 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:

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

13 MAY 1986

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

279-3155

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans (and Domestic Animals)

##### CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust (vapor or spray mist).

##### Personnel Protective Equipment:

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

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.
- Shoes plus socks

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.
- Shoes plus socks
- Protective eyewear

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. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and run-off 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 to drift to blooming crops if bees are visiting the treatment area.

# FMC

FMC Corporation  
Agricultural Products Group  
Philadelphia PA 19103

5/96 1658 Fed.

## 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 kind of irrigation system.

### AGRICULTURE 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 users 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 butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride or viton.
- Shoes plus socks

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Do not allow people or pets on treated surfaces until the spray has dried.

### STORAGE AND DISPOSAL

**Prohibitions:** Do not contaminate water, food or feed by storage or 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. Carefully open containers. After partial use, place lids and close tightly. Do not put concentrate or dilute material into food or drink container.

**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. Do not contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at 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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Returnable/Refillable Sealed Container:** Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

## General Applications Instructions

Talstar® Flowable insecticide/miticide formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses and outdoor nurseries, and turf on golf courses and sod farms. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Talstar Flowable may be tank-mixed with other products, including insect growth regulators. When tank mixing Talstar Flowable with other products, observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of Talstar Flowable may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. **Note:** If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.

**Maximum rates:** Do not apply more than 0.1 lb ai/acre in a single application, no more than 0.2 lb ai/acre/year for outdoor applications.

### APPLICATION RECOMMENDATIONS

#### Ornamentals In Greenhouses, Lath Houses, Shade Houses and Outdoor Nurseries, Including Non-Bearing Fruit and Nut Trees

For greenhouse applications, dilute 8 to 20 fluid ounces of Talstar® Flowable insecticide/miticide per 100 gallons of water and apply at the rate of 100 gallons per acre. One gallon of finish spray will treat 435 square feet. If a higher volume application is required for adequate coverage of the plant canopy, Talstar Flowable may be diluted in large volumes of water as long as the maximum label rate (20 fluid ounces per acre) is not exceeded. Talstar Flowable may be applied through low volume equipment by dilution with water and providing the maximum label rate (20 fluid ounces per acre) is not exceeded.

## ORNAMENTAL APPLICATION RATES

Pest	Rate lb ai/acre	Rate fl.oz./acre	Comments
Ants Aphids Bagworms Black Vine Weevil (adults) Brown Soft Scales Broad Mites Budworms California Red Scale (crawlers) Centipedes Clover Mites Crickets Cutworms Earwigs Elm Leaf Beetles Fall Webworms Flea Beetles Fungus Gnats (adults) Grasshoppers Lace Bugs Leafhoppers Leaf feeding Caterpillars Mealybugs Millipedes Mole Crickets* Orchid Weevil Pillbugs Pine Needle Scales (crawlers) Plant Bugs (incl. Lygus spp) San Jose Scales (crawlers) Sowbugs Spiders Tent Caterpillars Tip Moths Weevils Whiteflies	0.04 to 0.1	8.0 to 20	Apply the specified rate as a full coverage foliar spray. Repeat as necessary to achieve control using higher rates as pest pressure and foliage area increases.  To control Bagworm: Apply when larvae begin to hatch. Spray larvae directly. Applications made when larvae are young will be most effective.  To control scale crawlers and twig borers: Treat trunks, stems, and twigs in addition to plant foliage.  Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting.  Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.  Use sufficient water to obtain uniform coverage. Typical use rates are 100 gallons of spray per acre.
Citrus Thrips Beet Armyworm Diaprepes (larvae, adult) European Red Mite Leafrollers Spider Mites Thrips Twig Borers	0.06 to 0.1	12 to 20	To control Black Vine Weevil and Fungus Gnat larvae, apply as a drench at the rate of approximately 8 ounces of finished spray per 6 inch pot.
Imported Fire Ants Japanese Beetles (adult) Leafminers Pecan Leaf Scorch Mite Black Vine Weevil (larvae) Fungus Gnats (larvae)	0.1	20	*For control of over-wintered Mole Crickets apply the lower rate in early Spring. For the control of adult Mole Crickets in late-Summer or early Fall, apply the higher rate.

Apply with ground equipment only.

Do not apply when wind direction favors downwind drift towards nearby water bodies.

Do not apply when wind velocity exceeds 10 mph.

Avoid application when wind gusts approach 10 mph.

Do not apply when a temperature inversion exists.

Apply using the largest nozzle size compatible with adequate coverage.

Do not apply if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).

Do not apply by ground equipment within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds. When treating tall trees (>15 feet) from the ground with high pressure sprays or during any application with air assisted equipment (mist blower) do not apply within 150 feet of aquatic areas.

## APPLICATION RECOMMENDATIONS

### Turf

Apply Talstar Flowable as a broadcast treatment. Use higher volumes up to 10 gallons of carrier per 1000 square feet to get uniform coverage when treating dense grass foliage.

For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone based surfactant (0.25% v/v) is recommended, as is immediate irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests such as, but not limited to, mole crickets.

## TURF APPLICATION RATES

Pest	Talstar Flowable	Comments
Ants Armyworms Billbugs Chinch Bugs Crane Flies Crickets Cutworms Earwigs Fall Webworms Fleas (adults, larvae) Grasshoppers Mites Mole Crickets* Sod Webworms Ticks	0.23 - 0.46 fl.ozs. per 1000 square feet  -or-  10 - 20 fl.ozs. per Acre  -or-  0.05 - 0.1 lbs ai per Acre	*For control of over-wintered Mole Crickets apply the lower rate in early Spring. For the control of adult Mole Crickets in late-Summer or early Fall, apply the higher rate.  To enhance control a non-ionic surfactant or a silicone based surfactant (0.25% v/v) may be applied as a tank-mix for the control of late Summer or Fall Adult Mole Crickets. To maximize efficacy against sub-surface pests, Talstar should be applied with a non-ionic or silicone based surfactant (0.25% v/v) in sufficient water to ensure good penetration of spray to soil-thatch matrix. Treated areas should then be irrigated with 0.25 to 0.5 inches of water immediately afterwards paying special attention so that run-off or puddling does not occur.  Delay watering or mowing for 24 hours after application to ensure optimum control of Armyworms, Cutworms and Sod Webworms.
Imported Fire Ants Japanese Beetles (adult)	0.46 fl.ozs. per 1000 square feet  -or-  20 fl.ozs. per Acre  -or-  0.1 lbs. ai per acre	

Apply with ground application equipment only (and apply with nozzles not more than two feet above the turf).

Do not apply when wind conditions favor downwind drift to nearby water bodies.

Do not apply when wind velocity exceeds 10 mph

Avoid application when wind gusts approach 10 mph.

Do not apply when a temperature inversion exists.

Apply using nozzles that provide the largest droplet size compatible with adequate coverage.

Do not apply for surface feeding pests if rain is expected within 12 hours (or whatever time is necessary for the spray to dry).

Maintain a minimum 30-foot buffer between the application site and water bodies. The buffer must consist of established, thick vegetative growth (i.e. grass) and must be maintained to prevent channels from developing.

**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.

**Use of Product:** FMC's recommendations for 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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