

# Talstar<sup>®</sup>

## PL Granular

### Insecticide

Only for sale to, use, and storage by commercial applicators for use to control Ants (including Imported Fire Ants), Mole Crickets and other Insect pests on lawns in landscaped areas and perimeters around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

#### USE SITES

[Icon] LANDSCAPED AREA	[Icon] PERIMETER	[Icon] LAWN
EPA Reg. No. 279-3168		EPA Est. 279-
<b>Active Ingredient:</b>		<b>By Wt.</b>
Bifenthrin* .....		0.2%
<b>Inert Ingredients</b> .....		99.8%
		100.0%

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

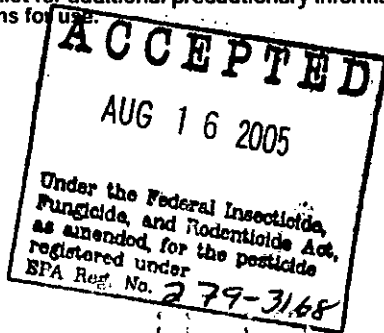
**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

See other panels for additional precautionary information.

or

See back panel pamphlet for additional precautionary information and complete directions for use.



FMC Corporation  
Agricultural Products Group  
Philadelphia PA 19103

3/05 Scorpions Dft 3

FIRST AID	
If on skin or clothing	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
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 Assistance.	
NOTE TO PHYSICIAN	
This product is a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.	
For Information Regarding the Use of this Product Call 1-800-321-1FMC (1362).	

[Insert photo of house with beautiful lawn]

#### PRECAUTIONARY STATEMENTS

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

**Caution**  
Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

##### Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. 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 or rinsate.

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Not for use on plants being grown for sale of other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climate modification and being grown in interior plantscapes, ornamental gardens or parks, or lawns or grounds.

Do not apply more than 0.2 lb. active ingredient (a.i.) per acre per application on residential use sites (i.e., around private homes, apartment buildings, condominiums, non-agricultural outbuildings, non-commercial greenhouses, pre-schools or day care facilities). May be applied at up to 0.4 lb. a.i. per acre per application on non-residential use sites (i.e., around institutional, public, commercial or industrial buildings; parks; recreational areas or athletic fields).

Do not broadcast apply more than 0.4 lbs. A.I. (200 lbs. Talstar PL Granular) per Acre per year.

Not for use on golf courses, sod farms, nurseries, in commercial greenhouses or on grass grown for seed.

## 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 close tightly.

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: Cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

### Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### Container Disposal

Paper and plastic bags: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## LAWN AND PERIMETER APPLICATIONS

**Lawn Application:** Broadcast Talstar® PL granular insecticide with suitable application equipment to ensure uniform coverage over the treatment area.

### APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, Talstar PL may be applied at up to 0.4 lb A/A to control each of the pests listed in this Table. However, for residential lawn use, do not apply more than 0.2 lbs. A.I. per Acre per application.

Pest	Active ingredient lbs. per acre	Application Rate Talstar PL	
Amyworms <sup>1</sup> Cutworms <sup>1</sup> Sod Webworm <sup>1</sup>	0.1 lbs. A/A	50 lbs. per acre	1.15 lbs. per 1000 sq. ft.
Annual Bluegrass Weevil ( <i>Hyperodes</i> ) (Adult) <sup>2</sup> Chinch Bugs (Adult) <sup>3</sup> Black Turfgrass Ataenius (Adult) <sup>4</sup> Leafhoppers Mealybugs	0.1 - 0.2 lbs. A/A	50 - 100 lbs. per acre	1.15 - 2.3 lbs. per 1000 sq. ft.
Ants Centipedes Chinch Bugs <sup>5</sup> Fleas (Larvae) <sup>6</sup> Fleas (Adult) Imported Fire Ants (Adult) <sup>7</sup> Imported Fire Ants (Mounds) <sup>7</sup> Millipedes Mole Cricket (Adult) <sup>8</sup> Mole Cricket (Nymph) <sup>9</sup> Scorpions <sup>10</sup> Ticks <sup>11</sup>	0.2 - 0.4 lbs. A/A	100 - 200 lbs. per acre	2.3 - 4.6 lbs. per 1000 sq. ft.
European Crane Flies Pillbugs Sowbugs	0.4 lbs. A/A	200 lbs. per acre	4.6 lbs. per 1000 sq. ft.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do make a single repeat application of Talstar PL Granular if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

### Comments

<sup>1</sup>Armyworms, Cutworms, and Sod Webworms: To ensure optimum control, irrigate the treated area with up to 0.1 inches of water immediately after application to activate (release from the granule) the insecticide.

<sup>2</sup>Annual Bluegrass Weevil (*Hyperodes*) adults: Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when *Forsythia* is in full bloom and concludes when flowering dogwood is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

<sup>3</sup>Chinch bug adults: Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

<sup>4</sup>Black Turfgrass Ataenius adults: Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of *Vanhouttea spiraea* (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

<sup>5</sup>Chinch Bugs: Chinch bugs infest the base of grass plants and are often found in the thatch layer. Irrigate the treated area with up to 0.25 inches of water immediately after application to activate (release from the granule) the insecticide. Chinch bugs can be one of the most difficult pests to control in grasses and the higher applications rates may be required to control populations that contain both nymphs and adults during the summer.

<sup>6</sup>Flea larvae: Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Irrigate the treated area with up to 0.5 inches of water immediately after application to activate (release from the granule) the insecticide.

<sup>7</sup>Imported Fire ants: Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound treatments that will eliminate existing colonies. If the soil is not moist, then it is important to irrigate before application. Broadcast treatments should apply up to 0.4 lb A/A. Mounds should be treated either by diluting 1 teaspoon of Talstar Lawn & Tree Flowable (EPA Reg. No. 279-3162) formulation per gallon of water and applying 1 to 2 gallons of finished spray per mound or by applying 1 cup of Talstar PL Granular per mound and then drenching the mound with 1 to 2 gallons of water. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65 - 80° F) or in early morning or late evening hours. This treatment will kill the queen within 24 hours of application. Note: a spray rig that is calibrated to apply 0.1 lb A/A (20 ozs.) of Talstar Flowable in 2.5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank. Application of 125 lbs./acre of Talstar PL granular insecticide will provide six months residual activity for control of foraging Imported Fire Ants and newly mated Fly-In Queens.

<sup>8</sup>Mole Cricket adults: Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

<sup>9</sup>Mole Cricket nymphs: Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

<sup>10</sup>Scorpions: To ensure optimum control, treat the building perimeter at dusk to prevent outdoor scorpions from entering the building. Scorpions reside hidden in cracks and voids during the day and are active at night at temperatures above 77°F/25°C. Resting areas can be identified at night using a blacklight (UV bulb) as scorpions will fluoresce. These areas should also be treated. Prior to treatment, to increase treatment efficacy, remove trash, debris, or firewood that scorpions may use as resting sites.

<sup>11</sup>Ticks (including ticks that transmit Lyme Disease and Rocky Mountain Spotted fever): Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher application rates when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Do not allow public use of treated areas during application.

Deer ticks (*Ixodes sp.*) have a complicated life cycle that ranges over a two year period and involves four life stages. Applications should be made in mid to late-spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

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**Perimeter Application:** Apply to ground area 5 to 10 feet wide around and adjacent to the structure.

**Boundary Applications:** Apply to soil areas, ornamental gardens, pavement crevices, fencelines, planter areas, vegetation areas and mulch areas

Applic. Rate: Pounds Per 1,000 sq. ft.	Band Width	Pounds of Talstar PL Granular for Perimeter Applications Linear Distance (Feet) Around Structure							
		100	150	200	250	300	400	500	1,000
2.3	5 feet	1.3	1.9	2.5	3.0	3.6	4.8	5.9	11.7
2.3	10 feet	3.0	4.2	5.3	6.5	7.6	9.9	12.2	23.7
3.0	5 feet	1.7	2.5	3.3	3.9	4.7	6.3	7.7	15.2
3.0	10 feet	3.9	5.4	6.9	8.5	9.9	12.9	15.9	30.9
3.5	5 feet	2.0	2.9	3.8	4.5	5.4	7.2	8.9	17.5
3.5	10 feet	4.5	6.3	8.0	9.8	11.4	14.9	18.3	35.5
4.6	5 feet	2.6	3.8	5.0	6.0	7.2	9.6	11.8	23.4
4.6	10 feet	6.0	8.4	10.6	13.0	15.2	19.8	24.4	47.4

Note: The amounts of Talstar PL Granular listed in the above table are based on the total area being treated. This area is determined by multiplying the linear distance by the band width and then adding to that value the area of a circle whose radius is equal to the band width (to account for the area treated at the four corners of a rectangular structure).

**Fire ant mound treatment:** Apply 1/2 cup of Talstar® PL Granular insecticide per mound and then drench the mound with 1 to 2 gallons of water. The mound should be drenched with sufficient force to break its apex and allow the insecticide to flow into the ant tunnels. For best results, apply in cool weather (65 to 80°F) or in early morning or late evening hours. Treat new mounds as they appear. Food utensils such as teaspoons and measuring cups should not be used for food purposes after use with insecticide

### INDUSTRIAL NON-AGRICULTURAL APPLICATIONS

(Including Industrial Sites, Parks, Ball Fields and Cemeteries)

**Broadcast Spot Applications:** For the control of actively foraging ants (including Imported Fire Ants) broadcast uniformly 2.3 to 4.6 lbs. Talstar PL granular insecticide per 1000 sq. ft. (0.2 to 0.4 lbs. a.i./Acre). See comments section under Lawn Applications for additional rate recommendations.

**Pad Mounted Electrical Sites:** To reduce or prevent ant mound building activity on electrical pads, uniformly distribute 1.0 to 1.5 Tablespoons (0.06 to 0.09 lbs.) of Talstar PL granular insecticide per 4 sq. ft. of mounting pad. Where existing transformers are completely or partially filled with soil excavated by resident ants, remove any excess fill and level the remaining soil prior to application. Food utensils such as tablespoons must not be used for food purposes after use in measuring pesticides.

Note: Electrical transformers appear to be more attractive to ants during the cooler months. For best results treat in the Fall or early Spring.

## Talstar PL Granular Insecticide

### Recommended Spreader Settings for Broadcast Applications

Equipment	Spreader Setting Ground Speed (MPH)	100 Pounds per Acre		200 Pounds per Acre	
		Once Over	Twice Over	Once Over	Twice Over
<b>Hand-Pushed</b>					
LESCO Rotary	3	B + 1/4	A + 1/2	C + 1/2	B + 1/4
Scotts R-8A-1 Rotary	3	G	E	Not Rec.	G
Gandy Models (42, 36, 30, 24")	3	12	10.5	16	12
Spyker (all Models)	3	2.6	2	3.1	2.6
<b>Equipment Drawn (PTO=540 RPM)</b>					
Gandy Models (42, 36, 30, 24")	4.5	14	11.5	19	14
Gandy 6500 Series	4.5	15	11	20	15
Gandy 10T Series	5.0	16.5	12	24	16.5
Herd GT-77	4.0	--	--	8-H	--
Herd GT-77	8.0	8-H	--	--	8-H
Lely 2.3202.000.1	4.5	2	1	3.5	2
Lely Model L-400	4.5	Not Rec.	Not Rec.	2	Not Rec.
Vicon PS402	4.5	10	7	16	10
Vicon PS1002T	4.5	13	9	21	13

Note: These recommended settings should be used as starting points when calibrating a spreader to achieve the desired application rate of Talstar PL Granular. After calibration, the technician should regularly observe the amount of Talstar PL Granular that is applied to a known area and make further setting adjustments, as necessary, to maintain the appropriate application rate. Spreaders should be calibrated periodically to ensure that equipment wear or other factors have not altered the flow rate of Talstar PL Granular. Calibration instructions are included in the Owner's Manual that was provided by the equipment manufacturer at the time of purchase.

### RECOMMENDED SPREADER SETTINGS (Optional Text)

Note: Following will be a list of application spreaders and appropriate settings. This list will vary depending on the alternate carrier used. (This note will not appear on final printed label).

Note: These spreader settings were established using standard equipment available from the spreader manufacturer at swath widths and speeds typically used within the industry. It is recommended that all spreader equipment be calibrated at the time of application to achieve the desired application rate.

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

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

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**Conditions of Sale and Limitation of Warranty and Liability:**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

To the extent allowed by law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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