

TALSTAR(R) PL GRANULAR INSECTICIDE
MATERIAL SAFETY DATA SHEET

This document has been prepared to meet the requirements of the U.S. OSHA Hazardous Communication Standard, 29 CFR 1910.1200; the EU Directive, 91/155/EEC and other regulatory requirements. The information contained herein is for the concentrate as packaged, unless otherwise noted.

1. Company and Product Identification

FMC CORPORATION

Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103 U.S.A.

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC:

(800)424-9300 (U.S.A. & Canada)
(800)483-7616 (All Other Countries)

FMC CORPORATION:

(800)331-3148 (U.S.A. & Canada)
(716)735-3765 (All Other Countries-reverse charges)

General Information: (800) 528-8873

Code Number: 1686

Active Ingredient: Bifenthrin

Chemical Family: Pyrethroid Pesticide

Formula: C₂₃H₂₂ClF₃O₂ (bifenthrin)

Synonyms: FMC 54800; (2-methyl [1,1'-biphenyl]-3-yl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane carboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropane-carboxylate

2. Composition/Information on Ingredients

Ingredient Name	CAS #	EU Number	PEL/TLV	EU Class
Bifenthrin (0.2%)	82657-04-3	None	None	None
Silica, Quartz (>97.5%)	14808-60-7	None	0.1 mg/m ³ (resp)	None

3. Hazards Identification

Emergency Overview:

Tan, solid granules with a slightly musty odor.
Slightly combustible. May support combustion at elevated temperatures.
Thermal decomposition and burning may form toxic by-products.
For large exposures or fire, wear personal protective equipment.
Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.

Potential Health Effects: Effects from overexposure result from absorption through the skin or may result from breathing the dust. Overexposure to this product may cause diarrhea. Contact with bifenthrin may occasionally produce skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

Medical Conditions Aggravated by Exposure: None presently known.

4. First Aid Measures

Eyes: Flush with plenty of water. Get medical attention if irritation occurs and persists.

Skin: Wash with plenty of soap and water.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort

occurs and persists, obtain medical attention.

Ingestion: Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

Note to Medical Doctor: Talstar PL Granular has low oral and dermal toxicity, and is non-irritating to the eyes and skin. This product contains a granular material (sand) that may cause mechanical irritation to the eyes. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

5. Fire Fighting Measures

Extinguishing Media: Foam, CO2 or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Degree of Fire/Explosion Hazard: Slightly combustible. This material may support combustion at elevated temperatures.

Special Fire Fighting Procedures: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

6. Accidental Release Measures

Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area.

Keep material out of streams and sewers. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with an absorbent such as clay, sand or soil. Vacuum, shovel or pump all waste material, including absorbent, into a drum and label contents for disposal.

To clean and neutralize spill area, tools and equipment, wash with suitable solution of caustic or soda ash and an appropriate alcohol (methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

7. Handling and Storage

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. Exposure Controls/Personal Protection

Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated below provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

Ventilation: Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.

Work Clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC rain suit. Leather items - such as shoes, belts and watchbands - that become

contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Eye Protection: For dust exposure, wear chemical protective goggles or a face shield.

Respiratory Protection: For dust exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Gloves: Wear chemical protective gloves made of materials such as rubber or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

9. Physical/Chemical Properties

Appearance: Tan solid granule

Odor: Slightly musty

Bulk Density: 1.39 g/mL (85 - 89 lb/ft³)

Molecular Weight: 422.88 (bifenthrin)

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions/Materials to Avoid (Incompatibility): Excessive heat and fire.

11. Toxicological Information

Rat Acute Oral: LD50 > 5,000 mg/kg

Rabbit Acute Dermal: LD50 > 2,000 mg/kg

Acute Effects From Overexposure: Talstar PL Granular has low oral and dermal toxicity, and is non-irritating to the eyes and skin. Dust generated from granular pulverization during shipping and handling may be harmful if inhaled. Excessive exposure to dust may irritate the respiratory system, skin and eyes. This product caused diarrhea in laboratory animals. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicated that contact with bifenthrin may occasionally produce skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours.

Chronic Effects From Overexposure: No data available for Talstar PL Granular. In studies with laboratory animals, bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound related effect. An overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin. Repeated overexposure to crystalline silica for extended periods has caused acute silicosis. IARC has concluded that there is sufficient evidence of carcinogenicity to crystalline silica to experimental animals and limited evidence of carcinogenicity to humans.

Carcinogenicity:

IARC: Yes (crystalline silica)

NTP: No

Other (OSHA): No

12. Environmental Information

The information presented below is for the active ingredient, bifenthrin.

Physical/Environmental Properties: In soil, bifenthrin is stable over a

wide pH range and degrades at a slow rate which is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore, there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF = 11,750).

Environmental Toxicology: Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 values range from 0.0038 μ g/L to 17.8 μ g/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LD50 values range from 1800 mg/kg to >2,150 mg/kg).

13. Disposal Considerations

Open dumping or burning of this pesticide or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national laws and regulations. However, because acceptable methods of disposal may vary by location, and regulatory requirements may change, the appropriate regulatory agencies should be contacted prior to disposal.

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.

14. Transportation Information

NOTE: This material is not regulated for transport via any mode.

MARPOL Designation: Not listed.

Reportable Quantity: Not listed.

Chemicals, NOI, NMFC 43940, Sub 2. Talstar(R) PL Granular.

15. Regulatory Information

Australian Hazard Code: 3XE

U.S. CERCLA Reportable Quantity (RQ) (40 CFR Table 302.4): Not listed

U.S. EPA Signal Word: CAUTION

U.S. SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355): Not listed

Section 302.4 Reportable Quantity (RQ) (40 CFR 355): Not listed

Section 311 Hazard Categories (40 CFR 370): Immediate, Delayed

Section 312 Threshold Planning Quantity (40 CFR 370): The threshold planning quantity (TPQ) for this product, if treated as a mixture, is 10,000 lb. This product contains the following ingredients with a TPQ of less than 10,000 lb.: None.

Section 313 (40 CFR 372): There are no ingredients in this product which are subject to Section 313 reporting requirements.

MSDS #: 82657-04-3-44

Rev. #: 0

Date: 06-20-96

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