

MATERIAL SAFETY DATA SHEET

TALSTAR® EZ GRANULAR INSECTICIDE



MSDS Ref. No.: 82657-04-3-104

Date Approved: 03/30/2010

Revision No.: 12

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200. The information contained herein is for the concentrate as packaged, unless otherwise noted.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TALSTAR® EZ GRANULAR INSECTICIDE
PRODUCT CODE: 6156
ACTIVE INGREDIENT(S): Bifenthrin
CHEMICAL FAMILY: Pyrethroid Pesticide
MOLECULAR FORMULA: $C_{23}H_{22}ClF_3O_2$ (bifenthrin)
SYNONYMS: FMC 54800; (2-methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate

U.S. EPA REGISTRATION NUMBER: 279-3168

MANUFACTURER

FMC CORPORATION
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
(800) 321-1362 (General Information)
msdsinfo@fmc.com (Email - General Information)

EMERGENCY TELEPHONE NUMBERS

(800) 331-3148 (Medical - U.S.A. & Canada)
(651) 632-6793 (Medical - Collect - All Other Countries)

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)
(703) 527-3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- Tan, solid granules with a slightly musty odor.
- Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.

- 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.
- Expected to be irritating to the eyes and skin.

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

MEDICAL CONDITIONS AGGRAVATED: None presently known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Bifenthrin	82657-04-3	0.2	None	T, Xn, Xi, N; R25-20-43-50/53
Surfactant Blend		<2	None	Not classified

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor immediately.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: 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 a poison control center or doctor. Do not give anything to an unconscious person.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR: This product is expected to have low oral and dermal toxicity. It is expected to be irritating to the skin and eyes. The dust may be irritating to the nose, throat and respiratory tract. 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.

FIRE / EXPLOSION HAZARDS: Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.

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.

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: 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 lakes, streams, ponds and sewer drains. 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 a non-combustible 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 contaminated area, scrub area with a solution of detergent (e.g. commercial product such as SuperSoap™, Tide®, Spic and Span®, or other high pH detergent) and water. Let solution sit for 5 minutes. Use a stiff brush to scrub affected area. Repeat if necessary to remove visible staining. Additional decontamination can be made by applying bleach (Clorox® or equivalent) to affected area.

Absorb wash-liquid as noted above, remove visibly contaminated soil and place into recovery / disposal container (plastic, open-top steel drum or equivalent). Place all clean-up material in a container, seal and dispose of in accordance with the method outlined in Section 13 "Disposal Considerations" below.

For further information on spill clean-up, waste disposal, or return of salvaged product, call the FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

7. HANDLING AND STORAGE

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

ENGINEERING CONTROLS: No open flames. Prevent deposition of dust; use closed system, consider use of dust explosion-proof electrical equipment and lighting. Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For dust exposure, wear chemical protective goggles or a face shield.

RESPIRATORY: For dust exposures 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.

PROTECTIVE 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 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).

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.

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

COMMENTS:

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

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Slightly musty
APPEARANCE:	Tan solid granule
DENSITY / WEIGHT PER VOLUME:	0.81 g/mL (50.3 lb/cu ft.)
MOLECULAR WEIGHT:	422.9 (bifenthrin)
pH:	6.54

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Excessive heat and fire.
STABILITY:	Stable
POLYMERIZATION:	Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Expected to be irritating to the eyes.

SKIN EFFECTS: Expected to be irritating to the skin.

DERMAL LD₅₀: Bifenthrin: > 2,000 mg/kg (rabbit)

ORAL LD₅₀: Similar formulation: > 5,000 mg/kg (rat)

SENSITIZATION: This product is not expected to produce skin sensitization.

ACUTE EFFECTS FROM OVEREXPOSURE: This product is expected to have low oral and dermal toxicity. It is expected to be irritating to the skin and eyes. The dust may be irritating to the nose, throat and respiratory tract. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicates that contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the formulation. 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 laboratory animals, 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. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin.

CARCINOGENICITY:

NTP:	Not listed
IARC:	See 'Note' below (under 'Comments')
OSHA:	Not listed
OTHER:	Not Listed (ACGIH)

COMMENTS:

NOTE: None of the ingredients in this product are known / listed carcinogens; however, this product may contain trace amounts of wood dust and crystalline silica, both of which are listed by IARC as potential human carcinogens.

12. ECOLOGICAL INFORMATION

Unless otherwise indicated, the data presented below are for the active ingredient(s).

ENVIRONMENTAL DATA: In soil, bifenthrin is stable over a wide pH range and degrades at a slow rate that is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (6.6), 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 <2,000).

ECOTOXICOLOGICAL INFORMATION: Bifenthrin is highly toxic to fish and aquatic arthropods and LC₅₀ values range from 0.0038 to 17.8 µg/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 1,800 mg/kg to >2,150 mg/kg).

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Open dumping or burning of this material 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 environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

EMPTY CONTAINER: Completely empty package into application equipment then dispose of empty package in accordance with all Federal, State and local regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PACKAGING TYPE:	Non-Bulk
PROPER SHIPPING NAME:	Not regulated as a hazardous material
PACKAGING TYPE:	Bulk

PROPER SHIPPING NAME: Environmentally hazardous substance,
solid, n.o.s.

TECHNICAL NAME(S): Bifenthrin

PRIMARY HAZARD CLASS / DIVISION: 9

UN/NA NUMBER: UN 3077

PACKING GROUP: III

MARINE POLLUTANT: Bifenthrin

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

PACKAGING TYPE: Non-Bulk

PROPER SHIPPING NAME: Environmentally hazardous substance,
solid, n.o.s.

TECHNICAL NAME(S): Bifenthrin

PRIMARY HAZARD CLASS / DIVISION: 9

UN/NA NUMBER: UN 3077

PACKING GROUP: III

MARINE POLLUTANT: Bifenthrin

ADDITIONAL INFORMATION: EmS Number: F-A, S-F

ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

PACKAGING TYPE: Non-Bulk

PROPER SHIPPING NAME: Environmentally hazardous substance,
solid, n.o.s.

TECHNICAL NAME(S): Bifenthrin

PRIMARY HAZARD CLASS / DIVISION: 9

CLASSIFICATION CODE: M6

UN/NA NUMBER: UN3077

PACKING GROUP: III

HAZARD IDENTIFICATION NUMBER: 90

ADDITIONAL INFORMATION: Environmentally Hazardous Substance:
Bifenthrin

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) /
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

PACKAGING TYPE:	Non-Bulk
PROPER SHIPPING NAME:	Environmentally hazardous substance, solid, n.o.s.
TECHNICAL NAME(S):	Bifenthrin
PRIMARY HAZARD CLASS / DIVISION:	9
UN/NA NUMBER:	UN3077
PACKING GROUP:	III
ADDITIONAL INFORMATION:	Environmentally Hazardous Substance: Bifenthrin Environmentally Hazardous Substance mark may be required depending on packaging and country of destination. When shipped by air within the USA, this product is not regulated in non-bulk packages and does not require identification as a Marine Pollutant.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):
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 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None

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

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)**CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):**

Not listed

FEDERAL INSECTICIDE FUNGICIDE RODENTICIDE ACT

U.S. EPA Signal Word: CAUTION

U.S. STATES**California Prop 65:**

There are no ingredients in this product which are subject to the reporting requirements of California Proposition 65.

HAZARD AND RISK PHRASE DESCRIPTIONS:

EC Symbols:	T	(Toxic)
	Xn	(Harmful)
	Xi	(Irritant)
	N	(Dangerous for the environment)
EC Risk Phrases:	R25	(Toxic if swallowed.)
	R20	(Harmful by inhalation.)
	R43	(May cause sensitization by skin contact.)
	R50/53	(Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.)

16. OTHER INFORMATION**NFPA**

Health	2
Flammability	1
Reactivity	0
Special	None

No special requirements

NFPA (National Fire Protection Association)

Degree of Hazard Code:

- 4 = Extreme
- 3 = High
- 2 = Moderate
- 1 = Slight
- 0 = Insignificant

REVISION SUMMARY:

This MSDS replaces Revision #11, January 15, 2010.

Changes in information are as follows:

Section 4 (First Aid Measures)

Section 14 (Transport Information)

Section 15 (Regulatory Information)

Section 16 (Other Information)

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