

TALSTAR® FLOWABLE INSECTICIDE/MITICIDE

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

1. Company and Product Identification

MANUFACTURER

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)

(202)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: 1349

Active Ingredient: Bifenthrin

Chemical Family: Pyrethroid Pesticide

Formula: C₂₃H₂₂ClF₃O₂ (bifenthrin)

Alternate Brand Names: Talstar T&O Flowable

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

2. Composition/Information on Ingredients

Ingredient Name	CAS #	EU Number	PEL/TLV	EU Class
Bifenthrin (7.9%)	82657-04-3	None	None	None
Propylene Glycol (<6.2%)	57-55-6	None	10 mg/m ³ WEEL	None

3. Hazards Identification

Emergency Overview:

- Beige liquid with a bland 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.
- Moderately toxic if inhaled.

Potential Health Effects: Effects from overexposure result from either swallowing, inhaling, or coming into contact with the skin or eyes. Symptoms of overexposure include bleeding from the nose, tremors, and convulsions. Contact with bifenthrin may occasionally produce skin sensations such as numbing, burning, and 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, contact a medical doctor.

Ingestion: Drink one or two glasses of water and induce vomiting by touching back of throat with finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

Note to Medical Doctor: Talstar Flowable has moderate inhalation and low oral and dermal toxicity. It is practically nonirritating to the eyes and nonirritating

to the skin. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled by removal of exposure followed by symptomatic and supportive care.

5. Fire Fighting Measures

Flash Point: >100°C (>212°F) (TCC)

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 vapor generated.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, chlorine, fluorine, 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. Dike to confine spill and absorb with an absorbent such as clay, sand, or soil. Vacuum, shovel, or pump waste into a drum and label contents.

To clean and neutralize spill area, tools, and equipment, wash with a suitable solution of caustic/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 vapor or mist 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 rubber 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 splash, mist, or vapor exposure, wear chemical protective goggles or a face shield.

Respiratory Protection: For splash, mist, or vapor 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, neoprene, or PVC. 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: Beige liquid.

Odor: Bland.

pH: 6.7

Specific Gravity: 1.024 @ 20°C (water=1)

Solubility (H₂O): Disperses.

Molecular Weight: 422.88 (bifenthrin)

Flash Point: >100°C (>212°F)

Weight per Volume: 8.53 lb/gal. (1024 g/L)

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 = 632 mg/kg

Rabbit Acute Dermal: LD₅₀ > 2000 mg/kg

Rat Acute Inhalation: LC₅₀ = 11.58 mg/L/1hr

Acute Effects From Overexposure: Talstar Flowable has moderate inhalation and low oral and dermal toxicity. It is practically nonirritating to the eyes and nonirritating to the skin. Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors, and bloody nasal discharge. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicates that 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.

Chronic Effects From Overexposure: No data available for Talstar Flowable. 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.

Carcinogenicity:

IARC: No

NTP: No

Other (OSHA): No

12. Environmental Information

The information represented 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 P_{ow} (>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 µg/L 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 1800 mg/kg to >2150 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 environmental laws, rules, standards, and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, contact the appropriate regulatory agencies prior to disposal.

Nonreturnable containers which held this material should be cleaned, prior to disposal, by triple-rinsing. Containers which held this material may be cleaned by

being triple-rinsed and recycled, with the rinsate being incinerated. Do not cut or weld containers. Vapors that form may create an explosion hazard.

14. Transportation Information

When shipped by highway, railroad or air, in packages less than 119 gal/450L in volume: Not regulated.

Non-bulk packages by water and bulk packages by highway, railroad or water, the material is Class 9: Environmentally hazardous substances, liquid, N.O.S. (bifenthrin 7.9%), 9, UN3082, III. ERG Guide 31.

MARPOL Designation: Severe Marine Pollutant (bifenthrin 7.9%)

Reportable Quantity: Not listed.

Insecticides, NOI, other than Poison. NMFC Item 102100. Talstar® Flowable.

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 lbs. This product contains the following ingredients with a TPQ of less than 10,000 lbs.: None.

Section 313 (40 CFR 372): This product contains the following ingredients subject to Section 313 reporting requirements: bifenthrin (7.9%) and glycol ethers (<6.2%).

MSDS #: 28657-04-3-16

Rev. #: 4

Date: 05-24-96

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