

Material Safety Data Sheet

TALSTAR® INSECTICIDE

SDS # : 6691

Revision Date: 2011-02-18

Version 1



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	TALSTAR® INSECTICIDE
Active Ingredient(s)	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.
Chemical Family	Pyrethroid Pesticide
Recommended use	Insecticide
Manufacturer FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	Emergency telephone number For leak, fire, spill or accident emergencies, call: (800) 424-9300 (CHEMTREC - U.S.A.) (703) 527-3887 (CHEMTREC - Collect - All Other Countries) Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) (651) 632-6793 (All Other Countries - Collect)

2. Hazards identification

Appearance	Aerosolized liquid
Physical State	No information available
Odor	odorless
Physical hazards	Non-flammable aerosol.
Potential health effects Principle Routes of Exposure Acute effects Eyes Skin Inhalation Ingestion	Skin contact, Eye contact, Inhalation. May cause irritation. Non-irritating during normal use. Prolonged or repeated contact may dry skin and cause irritation. May cause irritation of respiratory tract. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic effects Aggravated Medical Conditions	Asthma.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Dimethyl ether	115-10-6	10-20
Petroleum distillates, hydrotreated light	64742-47-8	1-5
Bifenthrin	82657-04-3	0.053
Prallethrin	23031-36-9	0.03

4. First aid measures

Eye contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have a 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 by mouth to an unconscious person.
Notes to physician	This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

5. Fire-fighting measures

Flammable properties Non-flammable aerosol.

Flash Point Does not flash

Special hazards arising from the substance or mixture

Sensitivity to Mechanical Impact not applicable
Sensitivity to Static Discharge not applicable

Extinguishing media

Suitable extinguishing media Use CO2, dry chemical, or foam..

Hazardous combustion products Toxic fumes may be produced.

Specific hazards arising from the chemical Closed containers may rupture violently under fire conditions.

Advice for fire-fighters

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus and full protective gear.

NFPA

Health Hazard 1

Flammability 1
Stability 0
Special Hazards -

6. Accidental release measures

Personal precautions	Isolate and post spill area. Remove all sources of ignition. Ventilate the area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8. If ventilation is not possible wear full protection suit and chemical protective equipment.
Environmental precautions	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
Methods for cleaning up	Transfer damaged cartridges or cans to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13. Rinsate may be disposed at a waste water treatment plant.
OTHER INFORMATION	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

7. Handling and storage

Handling	Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

8. Exposure controls/personal protection

Exposure guidelines

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Dimethyl ether 115-10-6	TWA: 1000 ppm			
Petroleum distillates, hydrotreated light 64742-47-8	TWA: 200 mg/m ³ Skin			

Occupational exposure controls

Engineering measures	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
Personal protective equipment	
General Information	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.
Respiratory protection	For dust, splash, mist or spray exposures wear a filtering mask.
Eye/face protection	For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.
Skin and body protection	Wear long-sleeved shirt, long pants, socks, shoes, and gloves.
Hand protection	Protective gloves

Hygiene measures

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 or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

9. Physical and chemical properties

Appearance	Aerosolized liquid
Color	clear
Physical State	No information available
Odor	odorless
pH	6.0-6.6
Melting Point/Range	No information available
Freezing point	No information available
Boiling Point/Range	not applicable
Flash Point	Does not flash
Evaporation rate	not applicable
Autoignition Temperature	not applicable
Flammable properties	Non-flammable aerosol.
Vapor pressure	not applicable
Vapor density	No information available
Density	0.975 g/mL
Specific Gravity	No information available
Bulk density	No information available
Water solubility	Soluble in water
Percent volatile	No information available
Partition coefficient:	not applicable
Autoignition Temperature	not applicable
Viscosity	No information available
Oxidizing properties	not applicable

10. Stability and reactivity

Stability	Stable
Conditions to avoid	Heat, flames and sparks
Hazardous decomposition products	May emit toxic fumes under fire conditions.
Hazardous polymerization	Hazardous polymerization does not occur.

11. Toxicological information**Acute toxicity**

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 rashes, numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours.

Eye contact	Mild Irritant
Skin contact	Mild Irritant
Ingestion	Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Inhalation	May cause irritation of respiratory tract.

LD50 Dermal > 5000 mg/kg (rat)
 LD50 Oral > 5000 mg/kg (rat)
 LC50 Inhalation: > 5.12 mg/L (rat) (4-hr)

Sensitization Non-sensitizing

Chronic Toxicity - Active Ingredient(s)

Carcinogenicity Bifenthrin: Did not show carcinogenic effects in animal experiments.

Mutagenicity Bifenthrin: Not genotoxic.

Reproductive toxicity Bifenthrin: No toxicity to reproduction.

Neurological Effects Tremors were associated with chronic exposure of laboratory animals to bifenthrin, which may disappear with continued exposure.

Developmental Toxicity Bifenthrin: Not teratogenic in animal studies
Target Organ Effects Bifenthrin: A slight increase in male mouse urinary bladder tumors at the highest dose was probably not of toxicological concern.

12. Ecological information

Ecotoxicity

Bifenthrin (82657-04-3)

Active Ingredient	Duration	Species	Value	Units
Bifenthrin	EC50	Aquatic organisms	0.11 - 0.57	µg/L
Bifenthrin	96 h LC50	Fish	0.1 - 2.0	µg/L
Bifenthrin	LD50 Oral	Bobwhite quail	>1800	mg/kg
Bifenthrin	LD50 Oral	Mallard duck	>2150	mg/kg
Bifenthrin	LD50	Bee	0.1	µg/bee

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Petroleum distillates, hydrotreated light		LC50= 45 mg/L Pimephales promelas 96 h LC50= 2.2 mg/L Lepomis macrochirus 96 h LC50= 2.4 mg/L Oncorhynchus mykiss 96 h		LC50 = 4720 mg/L 96 h

Environmental Fate

Bifenthrin (82657-04-3)		
Active Ingredient	Type of Test	Result
Bifenthrin	Bioconcentration factor (BCF)	1709
Bifenthrin	Half-life in soil	~85 days
Bifenthrin	log Pow	6.6
Bifenthrin	Mobility in soil	Not expected to reach groundwater
Bifenthrin	Stability in water	Stable to hydrolysis over a wide range of pH values.

Chemical Name	log Pow
Dimethyl ether	-0.18

Persistence and degradability Inherently biodegradable.

13. Disposal considerations

Waste disposal methods	Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.
Contaminated packaging	Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. Transport information

Packaging Type	Non-Bulk
DOT	
Proper shipping name	Consumer Commodity, ORM-D
TDG	
Proper shipping name	Aerosols
Hazard Class	2
UN/ID No	UN1950
ICAO/IATA	
UN/ID No	UN1950
Proper shipping name	Aerosols, non-flammable
Hazard Class	2
IMDG/IMO	
Proper shipping name	Aerosols
UN/ID No	UN1950

15. Regulatory information**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Petroleum distillates, hydrotreated light	Partially exempt chemical substance termed Petroleum Process Stream

International Regulations**Mexico - Grade**

No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

not determined

16. Other information**Revision Date:**

2011-02-18

Reason for revision:

No information available

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Prepared By

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End of Material Safety Data Sheet