

Material Safety Data Sheet

TalstarOne™ Multi-Insecticide

SDS #: 6217-A
Revision Date: 2011-12-08
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	TalstarOne™ Multi-Insecticide
Formula code	6217-A
Active Ingredient(s)	Bifenthrin
Alternate Commercial Name	Talstar® Select
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: +1 800.424.9300 (CHEMTREC - U.S.A.) +1 703.527.3887 (CHEMTREC - Collect - All Other Countries), Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) +1 (651) 632-6793 (All Other Countries - Collect)

2. Hazards identification

Appearance	Beige liquid
Physical state	liquid
Odor	mild
Potential health effects	
Acute effects	
Eyes	May cause slight irritation.
Skin	May cause sensitization by skin contact.
Inhalation	May cause irritation of respiratory tract. May cause additional effects as listed under "Ingestion".
Ingestion	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause drowsiness and dizziness.
Chronic effects	Repeated or prolonged exposure may cause central nervous system effects.
Environmental hazard	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Bifenthrin	82657-04-3	7.9
Propylene glycol	57-55-6	5-10

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 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

Flash Point	> 100 °C / > 212 °F
Method	Tag Closed Cup
Sensitivity to Mechanical Impact	not applicable
Sensitivity to Static Discharge	not applicable
Suitable extinguishing media	Foam. Carbon dioxide (CO ₂). Dry chemical. Soft stream or water fog only if necessary.
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. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
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 containment	Dike to prevent runoff.

Methods for cleaning up Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

Other 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
Propylene glycol 57-55-6			TWA: 10 mg/m ³ TWA: 50 ppm TWA: 155 mg/m ³	

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

9.1 Information on basic physical and chemical properties

Appearance	Beige liquid
Color	Beige
Physical state	liquid
Odor	mild
pH	6.7

Melting Point/Range	No information available
Freezing point	No information available
Boiling Point/Range	not applicable
Flash Point	> 100 °C / > 212 °F Tag Closed Cup
Evaporation rate	not applicable
Autoignition Temperature	not applicable
Vapor pressure	not applicable
Vapor density	No information available
Density	8.53 lb/gal
Specific Gravity	1.024 @ 20 °C
Water solubility	Dispersible in water
Percent volatile	No information available
Partition coefficient:	not applicable
Viscosity	No information available
Oxidizing properties	not applicable

9.2 Other information

10. Stability and reactivity

Stability	Stable under recommended storage conditions.
Conditions to avoid	Heat, flames and sparks
Hazardous decomposition products	Carbon oxides, Hydrogen chloride, Hydrogen fluoride, Chlorine, Fluorine
Hazardous polymerization	Hazardous polymerization does not occur

11. Toxicological information

Eye contact	Expected to be practically non-irritating, (rabbit)
Skin contact	Non-irritating during normal use, (rabbit)
Ingestion	Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
LD50 Dermal	> 2,000 mg/kg (rabbit)
LD50 Oral	632 mg/kg (rat)
LC50 Inhalation:	11.58 mg/L 1 hr (rat)
Sensitization	Bifenthrin: May cause sensitization by skin contact.
<u>Chronic Toxicity - Other Ingredient(s)</u>	
Chronic Toxicity	Repeated or prolonged exposure may cause central nervous system effects.
Carcinogenicity	Bifenthrin: Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH). Did not show carcinogenic effects in animal experiments.
Mutagenicity	Bifenthrin: Not genotoxic
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.

Chronic Toxicity - Other Ingredient(s)

Repeated overexposure to propylene glycol can produce central nervous system depression, hemolysis and minimal kidney damage.

12. Ecological information

Ecotoxicity**Bifenthrin (82657-04-3)**

Active Ingredient(s)	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
Propylene glycol	19000 mg/L EC50 96 h (Pseudokirchneriella subcapitata)	LC50 51600 mg/L Oncorhynchus mykiss 96 h LC50 41 - 47 mg/L Oncorhynchus mykiss 96 h LC50 51400 mg/L Pimephales promelas 96 h LC50 710 mg/L Pimephales promelas 96 h		EC50 > >10000 mg/L 24 h EC50 > >1000 mg/L 48 h

Environmental Fate**Bifenthrin (82657-04-3)**

Active Ingredient(s)	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.

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

DOT

This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

Packaging Type Bulk, Non-Bulk

TDG

Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
UN/ID No UN3082
Packing group III
Marine pollutant Bifenthrin.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bifenthrin), 9 PG III

ICAO/IATA

UN/ID No UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
Packing group III
Marine pollutant Bifenthrin
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bifenthrin) 9 PG III
Limited quantity 30 kg G

IMDG/IMO

Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
UN/ID No UN3082
Packing group III
EmS No. F-A, S-F
Marine pollutant Bifenthrin
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bifenthrin), 9 PG III

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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Bifenthrin	82657-04-3	7.9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
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.

International Regulations

Mexico - Grade

Slight risk, Grade 1

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

D2B Toxic materials



16. Other information

Revision Date: 2011-12-08
Reason for revision: (M)SDS sections updated.

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Use of this product is regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared By

FMC Corporation
FMC Logo - Trademark of FMC Corporation

© 2011 FMC Corporation. All Rights Reserved

End of Material Safety Data Sheet