

Material Safety Data Sheet

TALSTAR® PROFESSIONAL INSECTICIDE

MSDS #: 1349-A

Revision Date: 2013-02-20
Version 1



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

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	TALSTAR® PROFESSIONAL INSECTICIDE
Formula code	1349
Active Ingredient(s)	Bifenthrin
Chemical Family	Pyrethroid Pesticide
Recommended use:	Insecticide
<u>Manufacturer</u>	<u>Emergency telephone number</u>
FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	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: 1 800 / 331-3148 (PROSAR - U.S.A. & Canada) 1 651 / 632-6793 (PROSAR - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

<u>Appearance</u>	Beige liquid
<u>Physical state</u>	Liquid
<u>Odor</u>	Mild
<u>Potential health effects</u>	
Acute effects	
Eyes	May cause slight irritation.
Skin	May cause moderate skin irritation.
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.
<u>Environmental hazard</u>	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*

Notes * The exact percentage composition has been withheld as a trade secret

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 (within the U.S. and Canada) 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 (CO₂). 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 confine spill and absorb with non-combustible absorbent such as clay, sand or soil.
Methods for cleaning up	To clean and neutralize a 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 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 CHEMTREC 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 CONTROL / PERSONAL PROTECTION

Exposure guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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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

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
Vapor pressure	No information available
Vapor density	No information available
Density	8.53 lb/gal
Specific Gravity	1.024 @ 201 °C
Water solubility	Dispersible in water
Percent volatile	No information available
Partition coefficient:	Not applicable
Viscosity	No information available

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**Acute effects**

Eye contact	Slightly or non-irritating (rabbit)
Skin contact	May cause moderate skin irritation based on the components in this product.
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.
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Chronic effects

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

Ecotoxicity effects

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
Bifenthrin		LC50 0.0001 - 0.00019 mg/L Oncorhynchus mykiss 96 h LC50 0.0003 - 0.00038 mg/L Lepomis macrochirus 96 h		EC50 0.00135 - 0.00195 mg/L 48 h
Propylene glycol	19000 mg/L EC50 96 h (Pseudokirchneriella subcapitata)	LC50= 51600 mg/L Oncorhynchus mykiss 96 h LC50 41 - 47 mL/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

Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

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

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

UN/ID No UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Hazard Class 9
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: 2013-02-20
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet