

**SAFETY DATA SHEET**  
**AVALON GOLF AND NURSERY INSECTICIDE**

**SDS # :** 1349-7-A  
**Revision date:** 2019-03-19  
**Format:** NA  
**Version** 1.08



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** AVALON GOLF AND NURSERY INSECTICIDE

**Other means of identification**

**Product Code(s)** 1349-7-A

**Synonyms** BIFENTHRIN: (2-methyl[1,1'-biphenyl]-3-yl)methyl (1R,3R)-rel-3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-2,2-dimethylcyclopropanecarboxylate (CAS name); 2-methyl-3-phenylbenzyl (1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name)

**Active Ingredient(s)** Bifenthrin

**Chemical Family** Pyrethroid Pesticide

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** Insecticide

**Restrictions on Use:** Use as recommended by the label.

**Supplier Address**

FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104  
(215) 299-6000 (General Information)  
msdsinfo@fmc.com (E-Mail General Information)

**Emergency telephone number** For leak, fire, spill or accident emergencies, call:  
1 (800) 424-9300 (CHEMTREC - U.S.A.) 1 (703) 741-5970  
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical Emergencies:  
1 800 / 331-3148 (U.S.A. & Canada)  
1 651 / 632-6793 (All Other Countries - Collect)

**2. HAZARDS IDENTIFICATION**

**Classification**

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 1


Specific target organ toxicity (repeated exposure)	Category 1
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**GHS Label elements, including precautionary statements**

**EMERGENCY OVERVIEW**

**Danger**

**Hazard Statements**  
 H302 - Harmful if swallowed  
 H332 - Harmful if inhaled  
 H351 - Suspected of causing cancer  
 H370 - Causes damage to organs  
 H372 - Causes damage to organs through prolonged or repeated exposure



**Precautionary Statements - Prevention**

- P202 - Do not handle until all safety precautions have been read and understood
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

- P308 + P311 - If exposed or concerned: Call a POISON CENTER or doctor
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P312 - Call a POISON CENTER or doctor if you feel unwell
- P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
- P330 - Rinse mouth

**Precautionary Statements - Storage**

- P405 - Store locked up

**Precautionary Statements - Disposal**

- P501 - Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

**Other Information**

Very toxic to aquatic life with long lasting effects.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family** Pyrethroid Pesticide.

Chemical name	CAS-No	Weight %
Bifenthrin	82657-04-3	7.9
Propylene glycol	57-55-6	= or <20

Synonyms are provided in Section 1.

**4. FIRST AID MEASURES**

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	Central nervous system effects.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically. 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**

<b>Suitable Extinguishing Media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry powder. Water spray.
<b>Unsuitable extinguishing media</b>	Avoid heavy hose streams.
<b>Specific Hazards Arising from the Chemical</b>	None known
<b><u>Explosion data</u></b>	
<b>Sensitivity to Mechanical Impact</b>	No information available.
<b>Sensitivity to Static Discharge</b>	No information available.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
<b>Methods for Containment</b>	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	Clean and neutralize spill area, tools and equipment by washing with 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.

**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.

**Incompatible products** None known

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Propylene glycol (57-55-6)	-	-	TWA: 10 mg/m <sup>3</sup> aerosol only  TWA: 50 ppm aerosol and vapor  TWA: 155 mg/m <sup>3</sup> aerosol and vapor	-

Appropriate engineering 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.

Individual protection measures, such as personal protective equipment

**Eye/Face Protection** This product does not cause significant eye irritation or eye toxicity requiring special protection. Where there is significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

**Skin and Body Protection** Wear long-sleeved shirt, long pants, socks, and shoes.

**Hand Protection** Protective gloves

**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**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.

**General information** If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

**Appearance** Beige Liquid  
**Physical State** Liquid  
**Color** Beige  
**Odor** Mild  
**Odor threshold** No information available  
**pH** 6.7

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Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	Does not flash
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	8.53 lb/gal
Specific gravity	1.024 @ 20°C
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	8.53 lb/gal

## 10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known.
Hazardous Decomposition Products	Carbon oxides (COx), Hydrogen chloride, Hydrogen fluoride, Chlorine, fluorine.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

LD50 Oral	632 mg/kg (rat)
LD50 Dermal	> 2000 mg/kg (rabbit)
LC50 Inhalation	1.60 mg/L 4 hr (rat)

Serious eye damage/eye irritation	Practically non-irritating.
Skin corrosion/irritation	Non-irritating.
Sensitization	Non-sensitizing.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Bifenthrin (82657-04-3)	55 mg/kg ( rat )	> 2000 mg/kg ( rat )	0.8 mg/L ( female, rat ) 4 h
Propylene glycol (57-55-6)	20000 mg/kg ( Rat )	20800 mg/kg ( Rabbit )	

### Information on toxicological effects

Symptoms	Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	Bifenthrin: Long-term exposure caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure.
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<b>Mutagenicity</b>	Bifenthrin: Not genotoxic in laboratory studies.
<b>Carcinogenicity</b>	Bifenthrin: Weak treatment-related response for liver adenocarcinomas and benign bladder tumors (lesion) in male mice.
<b>Neurological effects</b>	Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure.
<b>Reproductive toxicity</b>	Bifenthrin: No toxicity to reproduction in animal studies.
<b>Developmental toxicity</b>	Bifenthrin: Not teratogenic in animal studies.
<b>STOT - single exposure</b>	Causes damage to organs. See listed target organs below.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure. See listed target organs below.
<b>Target organ effects</b>	Bifenthrin: Central Nervous System.
<b>Neurological effects</b>	Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure.
<b>Aspiration hazard</b>	No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

<b>Bifenthrin (82657-04-3)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Bifenthrin	96 h LC50	Fish	0.1	µg/L
	72 h EC50	Algae	0.822	mg/L
	48 h EC50	Crustacea	0.11	µg/L
	21 d NOEC	Fish	0.012	µg/L
	21 d NOEC	Crustacea	0.0013	µg/L

<b>Persistence and degradability</b>	Bifenthrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.
<b>Bioaccumulation</b>	Bifenthrin: The substance has a potential for bioconcentration.
<b>Mobility</b>	Bifenthrin: Immobile. Not expected to reach groundwater.

**13. DISPOSAL CONSIDERATIONS**

<b>Waste disposal methods</b>	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. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.
<b>Contaminated Packaging</b>	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.

**TDG** Classification below is only applicable when shipped by vessel and is not applicable when

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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, III

**ICAO/IATA**

**UN/ID no** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class** 9  
**Packing Group** III  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bifenthrin), 9, 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, 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	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

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium Hydroxide 1310-73-2	1000 lb			X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Sodium Hydroxide 1310-73-2	1000 lb 454 kg	

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## FIFRA INFORMATION

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

### CAUTION

Harmful if swallowed, inhaled or absorbed through skin.  
This pesticide is extremely toxic to fish and aquatic invertebrates.

## US State Regulations

### California Proposition 65

This product contains the following Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin 82657-04-3	X		
Propylene glycol 57-55-6	X		X

## International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Bifenthrin 82657-04-3				X	X	X		
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X

### Mexico - Grade

Serious risk, Grade 3

Chemical name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
Bifenthrin	100 2500 kg/yr	100 kg/yr

## WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

### WHMIS Hazard Class

D2A - Very toxic materials



## 16. OTHER INFORMATION



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<b>NFPA</b>	<b>Health Hazards</b> 2	<b>Flammability</b> 2	<b>Instability</b> 0	<b>Special Hazards</b> -
<b>HMIS</b>	<b>Health Hazards</b> 2*	<b>Flammability</b> 2	<b>Physical hazard</b> 0	<b>Personal Protection</b> X

\*Indicates a chronic health hazard.

**NFPA/HMIS Ratings Legend**                      Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

**Revision date:**                                      2019-03-19  
**Reason for revision:**                              SDS sections updated

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**Prepared By:**

FMC Corporation

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**End of Safety Data Sheet**