

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** **Vegetable Garden Soil Insecticide**  
**EPA Reg. No.:** 228-496-54705  
**Synonyms:** (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  
**Product Type:** Insecticide  
**Company Name:** Lawn and Garden Products, Inc.  
 P.O. Box 35000  
 Fresno, CA 93745-5000  
 Phone – 559-499-2100  
**Telephone Numbers:** **For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300**  
**For Medical Emergencies Only, Call 1-877-325-1840**  
**Date of Issue:** June 3, 2010 (NUF-March 13, 2009) **Supersedes:** New  
**Sections Revised:** New

**2. HAZARDS IDENTIFICATION**

**Emergency Overview:**  
**Appearance and Odor:** Brown, tan or gray colored granular mixture with faint odor.  
**Warning Statements:** Caution. Keep out of reach of children. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.  
**Potential Health Effects:**  
**Likely Routes of Exposure:** Ingestion, inhalation, eye and skin contact.  
 Symptoms of overexposure may include tremors, convulsions, incoordination, decreased locomotion and nasal discharge, including bleeding. In addition, contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.  
**Medical Conditions Aggravated by Exposure:** Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.  
 See Section 11: TOXICOLOGICAL INFORMATION for more information.  
**Potential Environmental Effects:**  
 This product is extremely toxic to fish and aquatic invertebrates.  
 See Section 12: ECOLOGICAL INFORMATION for more information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

COMPONENT	CAS NO.	% BY WEIGHT
Bifenthrin	82657-04-3	0.115
Other Ingredients		99.885

**4. FIRST AID MEASURES**

**If on Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If in Eyes:** Hold eye 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 treatment advice.

**If Swallowed:** 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** 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.

**Note to Physician:** This product is a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** Not applicable

**Autoignition Temperature:** Not applicable      **Flammability Limits:** Not applicable

**Extinguishing Media:** Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as hydrogen chloride, hydrogen fluoride, carbon oxides and unidentified organic compounds.

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product: Health: 1      Flammability: 0      Reactivity: 0**

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

**Methods for Cleanup and Disposal:** Avoid creation of dusty conditions. If dry, sweep or scoop up material and place into container for disposal. If wet, pump any free liquid into an appropriate closed container. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

**7. HANDLING AND STORAGE**

**Handling:**

Avoid contact with skin, eye or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

**Storage:**

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. For rigid containers after partial use, replace lids and close tightly. For gabs after partial use, reseal opened bag by folding top down and securing. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

**Personal Protective Equipment:**

**Eye/Face Protection:** Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

**Skin Protection:** Not normally required. To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and gloves. An emergency shower or water supply should be readily accessible to the work area.

**Respiratory Protection:** Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

**Exposure Guidelines:**

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Bifenthrin	NE	NE	NE	NE	

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Brown, tan or gray colored granular mixture with faint odor.

<b>Boiling Point:</b>	Not applicable	<b>Solubility in Water:</b>	Insoluble
<b>Density:</b>	17 - 53 pounds/cubic foot	<b>Specific Gravity:</b>	Not applicable
<b>Evaporation Rate:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Freezing Point:</b>	Not applicable	<b>Vapor Pressure:</b>	Not applicable
<b>pH:</b>	Not applicable	<b>Viscosity:</b>	Not applicable

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Excessive heat. Do not store near heat or flame.

**Incompatible Materials:** Not known.

**Hazardous Decomposition Products:** Under fire conditions may produce gases such as hydrogen chloride, hydrogen fluoride, carbon oxides and unidentified organic compounds.

**Hazardous Reactions:** Hazardous polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION****Toxicological Data:**

Data from laboratory studies conducted on a similar, but not identical, formulation:

**Oral:** Rat LD<sub>50</sub>: >5,000 mg/kg

**Dermal:** Rat LD<sub>50</sub>: >2,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >2 mg/l

**Eye Irritation:** Rabbit: Moderately irritating

**Skin Irritation:** Rabbit: Slightly irritating

**Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.

**Carcinogenicity / Chronic Health Effects:** Bifenthrin has produced an increased incidence of urinary bladder tumors in male mice at the highest dose level tested. This response, however, was considered equivocal and not evidence of a clear compound related effect. The U.S. EPA has classified bifenthrin as a Class C carcinogen (a possible human carcinogen).

**Reproductive Toxicity:** In studies with animals, bifenthrin did not cause reproductive toxicity.

**Developmental Toxicity:** Animal tests with bifenthrin have not demonstrated developmental effects.

**Genotoxicity:** Tests with bifenthrin have shown an absence of genotoxicity.

**Assessment Carcinogenicity:** None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDS IDENTIFICATION for more information.

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Bifenthrin is highly toxic to fish and aquatic arthropods and LC<sub>50</sub> values range from 0.0038 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 (LD<sub>50</sub> values range from 1,800 mg/kg to >2,150 mg/kg).

**Environmental Fate:**

In the soil, bifenthrin is stable over a wide pH range and degrades at a slow rate that is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (>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).

**13. DISPOSAL CONSIDERATIONS**

**If empty:** Nonrefillable container. Do not reuse or refill this container. Place in trash or offer for recycling if available.

**If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**14. TRANSPORTATION INFORMATION**

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

D.O.T.: Not D.O.T. Regulated.  
Other Shipping Information: Insecticides or Fungicides, N.O.I., Other Than Poison  
NMFC Item 102120, LTL Class 60

**15. REGULATORY INFORMATION****U.S. Federal Regulations:**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:****Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):**

Immediate and Delayed

**Section 313 Toxic Chemical(s):**

Bifenthrin (CAS No. 82657-04-3)- 0.115% by weight in product

**Reportable Quantity (RQ) under U.S. CERCLA:**

None

**RCRA Waste Code:**

None

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not listed

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

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