

# MATERIAL SAFETY DATA SHEET

## BIF TERMITICIDE/INSECTICIDE

Date 12.02.08  
Revision No: 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** BIF TERMITICIDE/INSECTICIDE

**ACTIVE INGREDIENT:** Bifenthrin

**CHEMICAL FAMILY:** Pyrethroid Pesticide

**MOLECULAR FORMULA:** C<sub>23</sub>H<sub>22</sub>ClF<sub>3</sub>O<sub>2</sub> (bifenthrin)

**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

**MANUFACTURER**

TAPAZOL CHEMICAL WORKS  
Hasolela 1

Beit Shemesh west Ind. Zone

Israel

**Emergency Telephone Numbers:**

**Tapazol** 02-9926040

Poison Info Center  
04-8541900

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>%</u>	<u>PEL/TLV</u>	<u>EC No.</u>	<u>EC Class</u>
Bifenthrin	82657-04-3	7.9	None	None	R25; R50/53

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**IMMEDIATE CONCERNS:**

- Beige liquid with a bland odor.
- Slightly combustible. May support combustion at elevated temperatures.
- Thermal decomposition and burning may form toxic by-products.
- For large exposures or fire, wear personal protective equipment.
- Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.

**POTENTIAL HEALTH EFFECTS:** Effects from overexposure may result from either swallowing, inhaling or coming into contact with the skin or eyes. Symptoms of overexposure include bleeding from the nose, tremors and convulsions. 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:** None presently known.

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## 4. FIRST AID MEASURES

**EYES:** Flush with plenty of water. Get medical attention if irritation occurs and persists.

**SKIN:** Wash with plenty of soap and water.

**INGESTION:** Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

**INHALATION:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

**NOTES TO MEDICAL DOCTOR:** This product has low oral, dermal and inhalation toxicity. It is practically non-irritating to the eyes and non-irritating to the skin. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

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## 5. FIRE FIGHTING MEASURES

**FLASH POINT AND METHOD:** >100°C (>212°F) (TCC)

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub> or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

**FIRE / EXPLOSION HAZARDS:** Slightly combustible. This material may support combustion at elevated temperatures.

**FIRE FIGHTING PROCEDURES:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, chlorine, fluorine, hydrogen chloride and hydrogen fluoride.

## 6. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area.

Keep material out of lakes, streams, ponds and sewer drains. Dike to confine spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

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## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

**RESPIRATORY:** For splash, mist or spray exposure wear, as a minimum, a properly fitted air-purifying respirator with an organic vapor cartridge (OV) or canister with any R, P or HE prefilter (approved by U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

**PROTECTIVE CLOTHING:** Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For

larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

**WORK HYGIENIC PRACTICES:** Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

**GLOVES:**

Wear chemical protective gloves made of materials such as rubber, neoprene, or PVC. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Bland

**APPEARANCE:** Beige liquid

**pH:** 6.7

**SOLUBILITY IN WATER:** Disperses

**SPECIFIC GRAVITY:** 1.02@ 20°C (water =1)

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## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Excessive heat and fire.

**STABILITY:** Stable

**POLYMERIZATION:** Will not occur

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## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Practically non-irritating (rabbit)

**SKIN EFFECTS:** Non-irritating (rabbit)

**DERMAL LD<sub>50</sub>:** >2000 mg/kg (rabbit)

**ORAL LD<sub>50</sub>:** 632 mg/kg (rat)

**INHALATION LC<sub>50</sub>:** 11.58 mg/L/1 hr (rat)

**ACUTE EFFECTS FROM OVEREXPOSURE:** This product has low oral, dermal and inhalation toxicity. It is practically non-irritating to the eyes and non-irritating to the skin. 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.

**CHRONIC EFFECTS FROM OVEREXPOSURE:** No data available for the formulation. In studies with laboratory animals, bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound-related effect. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin.

#### **CARCINOGENICITY:**

IARC: Not listed

NTP: Not listed

OSHA: Not listed

OTHER: Not Listed (ACGIH)

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## **12. ECOLOGICAL INFORMATION**

Unless otherwise indicated, the data presented below are for the active ingredient.

**ENVIRONMENTAL DATA:** In soil, bifenthrin is stable over a wide pH range and degrades at a slow rate which 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).

**ECOTOXICOLOGICAL INFORMATION:** Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 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 water fowl and upland game birds (LD50 values range from 1,800 mg/kg to >2,150 mg/kg).

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## **13. DISPOSAL CONSIDERATIONS**

**DISPOSAL METHOD:** Open dumping or burning of this material or its packaging is prohibited. Spilled material should be disposed of according to label instructions in accordance with national environmental laws, rules, standards and regulations.

**EMPTY CONTAINER:** Non-returnable containers which held this material should be cleaned, prior to disposal, by triple rinsing.

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## 14. TRANSPORT INFORMATION

### INTERNATIONAL MARITIME DANGEROUS GOODS CODE:

Substance or Article: Environmentally hazardous substance, liquid, n.o.s.  
Technical Name(s): bifenthrin 7.9 %  
Class or Division: 9  
ID Number: UN 3082  
Packing Group: III  
Marine Pollutant(s): bifenthrin 7.9 %  
Label(s): 9  
Placard(s): 9  
Mark(s): Marine Pollutant and Environmentally hazardous substance, liquid, n.o.s. (bifenthrin 7.9 %), UN 3082  
EmS No.: F-A, S-F  
Flash Point: >100°C

### ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD:

UN Number: Un 3082  
Name and Description: Environmentally hazardous substance, liquid, n.o.s.  
Technical Name(s): bifenthrin  
Class or Division: 9  
Classification Code: M6  
Packing Group: III  
Hazard Identification Number: 90  
Marine Pollutant: bifenthrin  
Label(s): 9  
Placard(s): 9  
Marks: 9, 3082  
Road or Rail: ADR  
Notes: Marks in compliance with IMDG Code are accepted.

### INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

Notes: This product is not subject to regulations as a dangerous good when shipped by air in non-bulk packages.

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## 15. REGULATORY INFORMATION

U.S. EPA Signal Word : CAUTION

## 16. OTHER INFORMATION

First edition 6.12.06