



MATERIAL SAFETY DATA SHEET

Univar USA, Inc.
11149 Research Boulevard
Suite 260
Austin, Texas 78759

Emergency Response Telephone Numbers
For Spills Call: 1-(800)-424-9300
Other Emergencies Call: 1-(512)-346-6070

I. Material Identification

Product Name: **Masterline Bifenthrin 7.9 Termiticide/Insecticide**
EPA Reg. No: 73748-7

<u>INGREDIENTS:</u>	<u>(% w/w)</u>
Bifenthrin (CAS Reg. No. 82657-04-3) [1 α ,3 α -(Z)]-(\pm)-(2-methyl[1,1'-biphenyl]-3-yl) methyl 3-2(-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate ¹	7.9%
Inert Ingredients	92.1%

¹ *cis/trans* ratio: minimum 97% (\pm) *cis* and maximum 3% *trans*

Chemical Class: Synthetic Pyrethroid Insecticide

EPA Signal Word: Caution

II. Hazardous Ingredients

<u>MATERIAL:</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Active Ingredients: Bifenthrin	Not established	Not established
Inert Ingredients:	Not Established	Not Established

III. Health Hazard Data

EYE: Practically non-irritating to the eyes.

SKIN CONTACT: Practically non-irritating to the skin. May cause slight skin irritation with prolonged or repeated contact. Skin sensations such as rashes, numbing, burning, or tingling may occur in certain individuals. These skin sensations are reversible and usually subside within 12 hours.



SKIN ABSORPTION: The acute dermal toxicity is considered to be low. The dermal LD₅₀ for rabbits is greater than 5050 mg/kg.

INGESTION: The acute oral toxicity is considered to be moderate. The oral LD₅₀ for female rats is 310 mg/kg. Small amounts that might be swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death.

INHALATION: The acute inhalation toxicity is considered to be low. The inhalation LC₅₀ for rats is greater than 2.65 mg/l for 4 hours.

SYMPTOMS: Symptoms of excessive exposure by oral and inhalation routes include bleeding from the nose, tremors, and convulsions.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Excessive exposure may produce effects on the nervous system such as tremors and convulsions, however, this product does not cause delayed neurotoxicity. Other laboratory reports indicate effects on the mucous membranes based on bloody discharge from the nose.

CANCER INFORMATION: Chronic feeding studies with bifenthrin in laboratory animals resulted in a slight increase in the incidence of urinary bladder tumors at the highest dose tested in male mice. These results were considered as equivocal and not a clear compound-related effect. The doses that produced this oncogenic effect in laboratory animals, greatly exceeds human exposure levels for the recommended use of this product. Consequently, the oncogenic potential in humans is extremely weak or non-existent. Bifenthrin is not classified as a carcinogen by IARC, NTP, OSHA, and ACGIH. The EPA has classified bifenthrin as a Group C possible human carcinogen based on the limited evidence of carcinogenicity in animals and in the absence of human data.

TERATOLOGY (BIRTH DEFECTS): The active ingredient in this product did not cause birth defects in laboratory animal studies.

REPRODUCTIVE EFFECTS: Bifenthrin did not interfere with fertility in animal reproduction studies.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Based on a number of *in vivo* and *in vitro* studies, it was concluded that the active ingredient in this product are not mutagenic.

IV. First Aid Procedures

EYES: Hold eye open and rinse slowly and gently with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advise.

SKIN OR CLOTHING: 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 advise.



INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

INHALATION: Remove person 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 advise.

NOTE TO PHYSICIAN: This product has low dermal and inhalation toxicity, and moderate oral toxicity. If swallowed, induce vomiting by giving two glasses of water and touching the back of the throat with a finger or by giving syrup of ipecac. It is practically non-irritating to the eyes and skin. Reversible skin sensations (paresthesia) may occur and skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

V. Physical Hazard Information

CHEMICAL & PHYSICAL PROPERTIES:

Color:	White Opaque
Physical State:	Liquid
Odor:	Mild Chemical
Density:	8.48 lbs/gal (1.016 gm/cm ³)
Solubility:	Disperses in water
Viscosity:	60 cps @ 25°C
pH:	6.45
Stability:	Stable

FIRE AND EXPLOSION HAZARDS:

Flash Point:	Non-flammable (water-based)
Method Used:	N/A
Extinguishing Media:	Foam, CO ₂ , or dry chemical is preferred. Water spray or water fog only if necessary. Contain all runoff.
Fire & Explosion Precautions:	Foam fire-extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not allow fire-fighting water to escape into waterways or sewers. Toxic irritating gases can be formed.
Fire-Fighting Equipment:	Use positive-pressure self-contained breathing apparatus and full protective equipment.

REACTIVITY:

Conditions to Avoid:	Excessive heat and fire.
Stability:	Stable.
Hazardous Decomposition:	Under fire conditions carbon dioxide, carbon monoxide, chlorine, fluorine, hydrogen chloride, and hydrogen fluoride can be formed.
Hazardous Polymerization:	Will not occur.

VI. Environmental Protection

IN CASE OF SPILLS OR LEAKS: Wear protective clothing as described in Section VII (Personal Protection and Precautions) of this MSDS. Absorb liquid with material such as clay, sand, sawdust, or dirt. Sweep up and place in a suitable container for disposal and label the contents. Area can be washed down with a suitable solution of bleach or soda ash and an appropriate alcohol (methanol, ethanol, or isopropanol). Follow this by washing with a strong soap and water solution. Absorb any excess liquid as indicated above, and add to the disposal container. Keep product, contaminated materials and wash water out of streams and sewers. Wash exposed body areas thoroughly after handling.

DISPOSAL METHOD: Do not contaminate food, feed, or water by storage or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on site, if approved waste handling facilities are available, or at an approved waste handling facility.

PHYSICAL ENVIRONMENTAL PROPERTIES: Bifenthrin is moderately stable in soil under aerobic conditions and at a wide range of pH with a half-life ranging from 65 to 125 days depending on the soil type. Bifenthrin has a high Log Pow that is greater than 6, it has an affinity to bind with organic matter, and it is not mobile in soils; consequently, it is not likely to contaminate ground water. There is a potential for bifenthrin to bioaccumulate, with it having a bioaccumulation factor of 11,750.

ENVIRONMENTAL TOXICOLOGY: Bifenthrin is highly toxic to fish and aquatic arthropods, with LC₅₀ values ranging from 0.0038 to 17.8 µg/L. In general, aquatic arthropods are the most sensitive species. Bifenthrin has no effect on mollusks at its limit of water solubility. Exercise extreme care to avoid contamination of aquatic environments. Bifenthrin is only slightly toxic to both water fowl and upland game birds with LD₅₀ values ranging from 1,800 mg/kg to > 2,150 mg/kg.

VII. Personal Protection and Precautions

EXPOSURE GUIDELINE(S):

Bifenthrin	None established.
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VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guideline. Ventilate all transport vehicles prior to unloading.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if the exposure guideline is exceeded, use an air-purifying respirator approved for pesticides (U.S. NIOSH/MSHA, EU CEN, or comparable certification organization).

EYE/FACE PROTECTION: For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

SKIN PROTECTION: Wear coveralls or long-sleeved shirt and long pants, chemical protective gloves (nitrile, neoprene, or Viton[®] brand), head covering and shoes plus socks. For increased exposures, wear a full body cover barrier suit, such as a PVC rain suit. Contaminated leather articles, such as shoes, belts, and watchbands, should be removed and destroyed. Launder all work clothing before reuse. Keep work clothing separated from household laundry.

SPECIAL PRECAUTIONS FOR HANDLING AND STORAGE: See product label. Harmful if swallowed, inhaled, or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating or smoking. Avoid breathing dust vapor, or spray mist. Store in a cool, dry place and away from heat. Keep out of reach of children and animals. Keep away from food, feedstuffs, and water supplies.

VIII. DOT Hazardous Materials Information

U.S. SURFACE FREIGHT CLASS:

This product is not subject to DOT regulations as a hazardous material when shipped in non-bulk packages.

OTHER SHIPPING INFORMATION: This product is not regulated for transport in the USA when shipped via highway or railroad in non-bulk packages. Describe using the “U.S. Surface Freight Class” above, which applies in all cases.

SPECIAL NOTE: The following applies to shipments over water, and shipments in bulk packages:

PROPER SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s. (bifenthrin 7.9%)

HAZARD CLASS OR DIVISION: 9

IDENTIFICATION NUMBER: UN 3082

PACKING GROUP: III

MARINE POLLUTANT: Bifenthrin is a severe marine pollutant



IX. Regulatory Information

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Bifenthrin	82657-04-3	7.9%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA “Hazard Categories” promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD: This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Category	Rating
Health	1
Flammability	0
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name	CAS Number	RQ	% in Product
Bifenthrin	82657-04-3	not listed	7.9%



Issue Date: March 14, 2007

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not “Hazardous” per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer’s responsibility to ensure that its activities comply with federal, state, and local laws and regulations. See MSDS for health and safety information.