

Material Safety Data Sheet

ActiShield™ Liquid Insecticide



Preparation Date No data available

Revision Date

Revision Number 0

NFPA	Personal Protective Equipment	Transport Symbol
		Hazard Class 9 for Bulk only.

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	ActiShield™ Liquid Insecticide
Product Code	690170
Active Ingredient	Bifenthrin
Chemical Family	Pyrethroid Pesticide
Molecular Formula	C23 H22 Cl F3 O2 (Bifenthrin)
Synonyms	FMC 54800; (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
Recommended Use	Insecticide
US EPA Registration Number: 279-3206-346	

Contact Manufacturer FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103	Supplier Alpharma Inc. 400 Crossing Blvd. Bridgewater, NJ 08807 Phone: 908-429-6000
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Emergency Telephone Numbers

(800) 331-3148 (Medical - U.S.A. & Canada) (651) 632-6793 (Medical - Collect - All Other Countries)	For leak, fire, spill, or accidental emergencies, call: (800) 424-9300 (CHEMTREC - U.S.A. & Canada) (703) 527-3887 (CHEMTREC - Collect - All Other Countries)
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2. HAZARDS IDENTIFICATION

Emergency Overview:

- 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Component(s)	CAS-No	Weight %	EINECS/ELINCS No.	Classification
Bifenthrin	82657-04-3	7.9	-	R20 R25 R43 R50/53 T-Xn-Xi-N
Propylene Glycol	57-55-6	<6.2	EEC No. 200-338-0	Not classified

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 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 to an unconscious person.

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 is 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.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Foam, CO2 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.

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 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 wash-liquid as noted above, remove visibly contaminated soil and place into recovery / disposal container (plastic, open-top steel drum or equivalent). Place all clean-up material in a container, seal and dispose of in accordance with the method outlined in Section 13 "Disposal Considerations" below.

7. HANDLING AND STORAGE

Handling and Storage: 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

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

Eye/Face Protection: For splash, mist, or spray exposure, wear chemical protective goggles or a face shield.

Respiratory Protection: 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).

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.

Work Hygienic Practices: 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 at the end of the workday.

Comments: Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated above provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor:	Bland
Appearance:	Beige Liquid
Density:	8.53 lb/gal. (1024 g/L)
Physical State:	Liquid
pH:	6.7
Flash Point:	> 212°F / > 100°C (TCC)
Molecular Weight:	422.9 (Bifenthrin)
Water Solubility:	Dispersible
Specific Gravity:	1.024 @ 20°C (water =1)

10. STABILITY AND REACTIVITY

Conditions to Avoid:	Excessive heat and fire.
Stability:	Stable.
Polymerization:	Will not occur.
Hazardous Decomposition Products:	Carbon monoxide (CO), Carbon dioxide (CO ₂), fluorine, chlorine, hydrogen chloride, hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Eye Effects:	Practically non-irritating
Skin Effects:	Non-irritating
Dermal LD50:	>2000 mg/kg (rabbit)
Oral LD50:	632 mg/kg (rat)
Inhalation LC50:	11.58 mg/l (1h) (rat)

Acute Effects from Overexposure: This product has low oral, dermal and inhalation toxicity. It is practically non-irritating to the eyes and is 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. In humans, ingestion of large amounts of propylene glycol has resulted in symptoms of reversible central nervous system depression including stupor, rapid breathing and heartbeat, profuse sweating and seizures.

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 laboratory animals, 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. Repeated overexposure to propylene glycol can produce central nervous system depression, hemolysis and minimal kidney damage.

Carcinogenicity

NTP:	Not listed
IARC:	Not listed
OSHA:	Not listed
Other:	Not listed (ACGIH)

12. ECOLOGICAL INFORMATION

Ecotoxicity

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 that is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (6.6), 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 <2,000).

Ecotoxicological Data: 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 waterfowl and upland game birds (LD50 values range from 1,800 mg/kg to >2,150 mg/kg).

13. DISPOSAL CONSIDERATIONS

Disposal Method: Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

Empty Containers: Non-returnable containers that held this material should be cleaned, prior to disposal, by triple rinsing. Containers which held this material may be cleaned by being triple-rinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

14. TRANSPORT INFORMATION

DOT	Hazard Class 9 for Bulk only
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name(s):	Bifenthrin
Hazard Class	9
UN-No	UN3082
Packing Group	III
Special Provisions:	This material is not a hazardous material as defined by US Department of Transportation at 49 CFR parts 100 through 185 when shipped as Non-Bulk Packages.
Marine Pollutant:	Bifenthrin
Label(s):	9
Placard(s):	9
Marking(s):	3082
ICAO	
Packaging Type:	Non-bulk
Proper Shipping Name	Environmentally hazardous substances, liquid n.o.s.
Technical Name(s):	Bifenthrin
Hazard Class	9
UN-No	UN3082
Packing Group	III
Label(s):	9
Limited Quantity:	Y914/30 kg
Limited Quantity:	914/No limit
Passenger/Cargo:	
Limited Quantity: Cargo:	914/No limit
Special Provisions	When shipped by air within the USA, this product is Not Regulated as a marine pollutant in non-bulk packages and does not require identification as a marine pollutant; however, when shipped by air within, to and/or from ADR signatory countries, identification as Marine Pollutant is required.
	Marks: Environmentally hazardous substance, liquid, n.o.s. (bifenthrin), UN3082 + Marine Pollutant.
IATA	
Packaging Type:	Non-bulk

14. TRANSPORT INFORMATION

Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s.
Technical Name(s):	Bifenthrin
Hazard Class	9
UN-No	UN3082
Packing Group	III
Label(s):	9
Limited Quantity:	Y914/30 kg
Limited Quantity:	914/No limit
Passenger/Cargo:	
Limited Quantity: Cargo:	914/No limit
Special Provisions	When shipped by air within the USA, this product is Not Regulated as a marine pollutant in non-bulk packages and does not require identification as a marine pollutant; however, when shipped by air within, to and/or from ADR signatory countries, identification as Marine Pollutant is required.

Marks: Environmentally hazardous substance, liquid, n.o.s. (bifenthrin), UN3082 + Marine Pollutant.

IMDG/IMO

Packaging Type:	Non-bulk
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name(s):	Bifenthrin
Hazard Class	9
UN-No	UN3082
Packing Group	III
Marine Pollutant	Bifenthrin
Label(s):	9
Placard(s):	9
Marking(s):	Environmentally hazardous substance, liquid, n.o.s. (bifenthrin), UN3082 + Marine Pollutant
Additional Information:	EmS Number: F-A, S-F

ADR

Packaging Type:	Non-bulk
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Name(s):	Bifenthrin
Hazard Class:	9
Classification Code:	M6
UN-No:	UN3082
Packing Group:	III
Hazard Identification Number:	90
Special Provisions:	Marine Pollutant - Bifenthrin
ADR/RID - Label(s):	UN3082 + Marine Pollutant - 9
Placard(s):	9

Other Information: HARMONIZED SYSTEM NUMBERS:
 Import to the U.S.A.: 3808.91.2500
 Export from the U.S.A.: 3808.91.0000

15. REGULATORY INFORMATION

USA - Federal Regulations

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):
Not listed

Section 311 Hazard Categories (40 CFR 370):
Immediate, Delayed

Section 312 Threshold Planning Quantity (40 CFR 370):
The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None

Section 313 Reportable Ingredients (40 CFR 372):
This product contains the following ingredients subject to Section 313 reporting requirements:
Bifenthrin

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):
None listed

FEDERAL INSECTICIDE FUNGICIDE RODENTICIDE ACT

US EPA Signal Word: CAUTION

International Listings

Australian Hazard Code: 3Z

HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

Bifenthrin

Symbol(s)

T - Toxic
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

R - phrase(s)

R25 - Toxic if swallowed
R20 - Harmful by inhalation
R43 - May cause sensitization by skin contact

Risk Combination Phrases

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S - phrase(s)	S23 - Do not breathe gas/fumes/vapor/spray
	S24 - Avoid contact with skin
	S37 - Wear suitable gloves
	S38 - In case of insufficient ventilation, wear suitable respiratory equipment
	S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
Safety Combination Phrases	S29 - Do not empty into drains
	S 1/2 - Keep locked up and out of the reach of children

Notes for Preparation:

CLASSIFICATION: Mandatory labeling (self-classification) of hazardous substances: applicable

16. OTHER INFORMATION

NFPA

Health Hazard	1
Flammability	1
Reactivity Hazard	0
Special Provisions	None

No special requirements

NFPA (National Fire Protection Association)

Degree of Hazard Code:	4 = Extreme
	3 = High
	2 = Moderate
	1 = Slight
	0 = Insignificant

Revision Summary: New MSDS

ActiShield - Trademark of Alpharma Inc.

FMC - Trademark of FMC Corporation.

SuperSoap - Trademark of Weba Technologies, Inc.; Tide - Trademark of Proctor and Gamble; Spic and Span: Trademark of The Spic and Span Company; Clorox - Trademark of The Clorox Company.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS