



Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE		

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Revision Number: 8

1. PRODUCT AND COMPANY IDENTIFICATION

UPI
 630 Freedom Business Center
 Suite 402
 King of Prussia, PA 19406

Emergency Telephone Number
 Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
 Medical: Rocky Mountain Poison Control Center
 (866) 673-6671 (24hrs)

<u>Company Information</u>	<u>Contact Information</u>	<u>Phone Number</u>	<u>Available Hrs</u>
UPI	Customer Service R&D Technical Service	1-800-438-6071 610-878-6100	8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST)

Product Name Bifenture EC Insecticide/ Bifenture EC-CA Insecticide
EPA Reg # 70506-57/ 70506-58
Recommended Use Insecticide
Product Code 12U-135

2. HAZARDS IDENTIFICATION

Emergency Overview Aspiration hazard Harmful if swallowed Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.		
Appearance Clear, Yellow.	Physical State Liquid.	Odor Aromatic. Hydrocarbon.

Potential Health Effects

Acute Effects Effects from overexposure result from either swallowing, inhaling, or coming into contact with the skin. Symptoms of overexposure include bleeding from the nose, tremors and convulsions. Contact with this product may occasionally produce skin sensations such as rashes, numbing, burning and tingling. These sensations are reversible and usually subside within 12 hours.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Aromatic 100	64742-95-6	>35	N/A
mixture of methylesters of C16-C18 fatty acids and C18 unsaturated fatty acids	67762-38-3	25	N/A
Bifenithrin technical	82657-04-3	25.1	N/A

4. FIRST AID MEASURES

Eye Contact	Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin Contact	Take off contaminated clothing. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Call poison control center or doctor for treatment advice.
Inhalation	If breathing is irregular or stopped, administer artificial respiration. May cause allergic respiratory reaction. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a physician or poison control center immediately. May produce an allergic reaction. Never give anything by mouth to an unconscious person. Do not induce vomiting unless told to do so by a poison control center or doctor.
Notes to Physician	This product is a pyrethroid and contains petroleum distillates. Treatment is symptomatic and supportive. Do not induce vomiting. Vomiting may cause aspiration pneumonia. Digestible fats, oils, or alcohol may increase absorption and should be avoided.

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

Flash Point
54 C / 129 F

Autoignition Temperature

Not available

Flammability Limits in Air

Not available

Extngushing Media

Foam, Carbon dioxide (CO2) Dry chemical.

Fire/Explosion Hazard

Keep product and empty container away from heat and sources of ignition

Hazardous Combustion Products

Carbon monoxide, Carbon dioxide (CO₂), Hydrogen chloride, hydrogen fluoride.

NFPA

Health 2

Flammability 1

Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with the skin and the eyes. Use personal protective equipment.

Environmental Precautions

Keep material out of lakes, streams, ponds and sewer drains. Dike to confine spill and absorb with an absorbant such as clay, sand or soil. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods for Clean-up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling

Keep out of reach of children. Keep from freezing. Wear personal protective equipment. Keep away from heat, sparks and open flame. - No smoking. Remove and wash contaminated clothing before re-use.

Storage

Store at temperatures above 40 F (5 C). If crystals form, warm to room temperature 70 F(21 C) by room heating only for 24-48 hours, and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Engineering Controls

Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. PESTICIDE APPLICATORS & WORKERS. THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Personal Protective Equipment

Eye/face Protection

Where there is potential for eye contact have eye flushing equipment available. Use eye protection to avoid eye contact.

Skin Protection

Wear protective gloves/clothing. Coveralls. Chemical resistant gloves. Socks and footwear.

Respiratory Protection

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear Yellow	Odor	Aromatic Hydrocarbon
Physical State	Liquid	pH	no data available
Boiling Point/Range	Not available	Melting Point/Range	Not available
Specific Gravity	Not available	Solubility	Emulsifies
Evaporation Rate	Not available	Vapor pressure	Not available
Vapor Density	Not available	VOC Content	Not available
Viscosity	Not available	Molecular Weight	2.0 lb/gal
Bulk Density	no data available	Percent Solids	Not available
Percent Volatiles	Not available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Conditions to Avoid	Heat, flames and sparks
Incompatible Materials	No materials to be especially mentioned
Hazardous Decomposition Products	None under normal use
Possibility of Hazardous Polymerization	None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Bifenthrin EC

Acute oral LD50 = 262 mg/kg

Acute dermal LD50 = >2,000 mg/kg

Acute inhalation LC50 = 1.86 mg/L/4 hr (rat)

Sensitization = This product produces skin sensitization (allergic reaction) in laboratory animals and may produce similar effects in humans.

This product has moderate oral and low inhalation and dermal toxicity. It is slightly irritating to the eyes and skin. Signs of toxicity in laboratory animals included tremors, convulsions, ataxia, decreased locomotion and nasal discharge. Contact with Bifenthrin products may occasionally produce skin sensations, such as rashes, numbing, burning or tingling, which are reversible and usually subside in 12 hours. Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin, and mucous membrane irritation. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs which may result in fatal pulmonary edema.

Chronic Toxicity

Carcinogenicity

BIFEN

In studies with laboratory animals, Bifenthrin technical did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to Bifenthrin technical. 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. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings and liver and kidney damage. There is no sufficient evidence to suggest that aromatic hydrocarbons are reproductive toxicants, mutagens or developmental toxicants.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 values range from 0.0038 to 17.8 ug/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). Bifenthrin has moderate stability in the soil under aerobic conditions with a half-life ranging from 65 to 125 days depending on soil type. It is stable at a wide range of pH values. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil which indicate little potential for movement into ground water. There is potential for bifenthrin to bioconcentrate (BCF = 11,750).

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated Packaging Non refillable container. Do not reuse this container. Clean container promptly after emptying. [For containers smaller than 5 gallons] Triple rinse as follows: Empty the contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 3/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. [For containers larger than 5 gallons] Triple rinse or pressure rinse as follows:
Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.
Pressure rinse: Empty remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after flow begins to drip.
The offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.
For refillable containers:
Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.
To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin) (aromatic hydrocarbon)
Hazard Class 6.1
Subsidiary Class 3
UN-No UN3351
Packing Group PG III
Marine pollutant Yes. Yes - when shipped in bulk.

ICAO
UN-No UN3351
Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin) (aromatic hydrocarbon)

12U-135
Bifenture EC Insecticide/ Bifenture EC-CA Insecticide

Hazard Class 6.1
Subsidiary Class 3
Packing Group PG III
Description Marine pollutant

IATA

UN-No UN3351
Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin) (aromatic hydrocarbon)
Hazard Class 6.1
Subsidiary Class 3
Packing Group PG III
ERG Code 6L
Description Marine pollutant

IMDG/IMO

Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin) (aromatic hydrocarbon)
Hazard Class 6.1
Subsidiary Class 3
UN-No UN3351
Packing Group PG III
EmS No. F-E,S-D
Special Provisions 994, 274, 223, 61
Marine pollutant yes

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS/ ELINCS	ENCS	CHINA	KECL	AICS
Aromatic 100	Present	X		X	(9)-1698	X	KE-31662	X
mixture of methylesters of C16-C18 fatty acids and C18 unsaturated fatty acids	Present	X		X	(7)-670	X	KE-14358	X
Bifenthrin technical					(4)-1701	X	KE-05935	

USA

Federal Regulations

SARA 313

Y

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values
Bifenthrin technical	82657-04-3	25.1	1.0

SARA 311/312 Hazardous Categorization

Chronic Health Hazard No
Acute Health Hazard Yes
Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

12U-135
Bifenture EC Insecticide/ Bifenture EC-CA Insecticide

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

CERCLA

RCRA

Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Aromatic 100 64742-95-6 (>35)			X	
Bifenthrin technical 82657-04-3 (25.1)			X	

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Bifenthrin technical		X			

International Regulations

Mexico - Grade Not available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Not determined

Chemical Name	NPRI
Aromatic 100	X

16. OTHER INFORMATION

Revision Date 18-Dec-2012

Revision Summary

Update section 5

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End of MSDS