

Material Safety Data Sheet

Effective Date: 13-APR-2004

Product: HELENA BIFENTHRIN 2EC-CAL

I. IDENTIFICATION

Chemical Name: Bifenthrin  
Chemical Family: Pyrethroid Pesticide  
Formula: C23-H22-Cl-F3-O2 (bifenthrin)  
Synonyms: None  
CAS Number: 82657-04-3 (bifenthrin)  
EPA Number: 279-3114-5905

II. PHYSICAL DATA

Boiling Point: Not determined  
Freezing Point: Not determined  
Spec Gravity: 0.95 gms/cc  
Vapor Pressure: Not determined  
Vapor Density: Not determined  
Solubility: Emulsifies  
Volatiles: Not determined  
Evaporation: Not determined  
Melting Point: Not applicable  
Appearance: Amber liquid with aromatic hydrocarbon odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Bifenthrin	82657-04-3	25.10	N/E	Toxic, skin irritant
Aromatic hydrocarbons	64742-95-6	<21.22	100 ppm	Respiratory irritant; combustible
1,2,4-trimethylbenzene	95-63-6	<11.51	25 ppm	Respiratory irritant; combustible
Xylene	1330-20-7	<1.08	100 ppm	Respiratory irritant; combustible
Surfactant Blend		<7.00	N/E	Skin irritant
Ethylbenzene	100-41-4	<0.04	100 ppm	Respiratory irritant; combustible
Cumene	98-82-8	<0.54	50 ppm	Skin irritant
1-butanol	71-36-3	<0.60	50 ppm	Skin irritant

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IV. FIRE AND EXPLOSION HAZARD  
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Flash Point: 108 Degrees F. (CC)  
Autoignition Temp: Not determined  
Flammable Limit: Not determined  
Extinguishing Media: Foam, carbon dioxide or dry chemical. Soft stream water fog only if necessary. Contain all runoff.  
Special Fire Fight Proc: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.  
Fire and Expl Hazard: Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or be explosive.

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V. HEALTH HAZARD  
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Carcinogen Information: Ethylbenzene (NTP, IARC) - 2B

ACUTE EFFECTS OF OVER EXPOSURE  
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Swallowing: Moderately toxic. Acute Oral LD50=262 mg/kg (rat). Signs of toxicity in lab animals included tremors, clonic convulsions, ataxia, decreased locomotion, bloody tears and bloody nasal discharge.  
Skin Absorption: Low dermal toxicity. Acute Dermal LD50>2000 mg/kg (rabbit). This product produces skin sensitization in lab animals and may produce similar effects in humans.  
Inhalation: Low inhalation toxicity. Acute Inhalation LC50=1.86 mg/L/4 hr. Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.  
Skin contact: Contact with bifenthrin may cause skin sensations such as rashes, numbing or tingling. These sensations are usually reversible within 12 hours.  
Eye Contact: Minimally irritating to the eyes.  
Chronic Effects: No data available for this formulation.  
Other Hazard: None currently known.

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EMERGENCY AND FIRST AID PROCEDURES  
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Swallowing: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

Skin: Wash affected area with plenty of soap and water.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, seek medical attention.

Eyes: Flush eyes with water for at least 15 minutes. If irritation occurs and persists, seek medical attention.

Notes to Physician: This product has moderate oral and low dermal/inhalation toxicity. It is minimally irritating to the eyes and non-irritating to the skin. This product contains light aromatic hydrocarbons that can produce severe pneumonitis or fatal pulmonary edema if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. 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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VI. REACTIVITY  
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Stability: Stable

Conditions to Avoid: Excessive heat and fire.

Polymerization: Will Not Occur

Conditions to Avoid: Excessive heat and fire.

Incompatibility material: None currently known.

Hazardous Combustion: Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

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VII. SPILL OR LEAK PROCEDURES  
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Spill or Leak Proc: Isolate spill 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

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contents for disposal. Use a solution of caustic or soda ash and an appropriate alcohol (e.g., methanol, ethanol or isopropanol). Follow by washing with a strong soap and water solution. Absorb excess liquid and add to drums with other waste material.

Waste Disposal Method: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: Use NIOSH-approved air-purifying respirator for pesticides.

Ventilation: Local exhaust where vapor or mist may be emitted.

Gloves: Chemical-resistant (nitrile, neoprene, Viton)

Eyes: Chemical goggles or face shield

Other: Coveralls or long sleeved shirt and long pants, footwear, eyewash station, emergency shower.

IX. SPECIAL PRECAUTIONS

Special precaution: Keep out of reach of children. Do not store with food, feed or other material to be used or consumed by humans or animals. Highly toxic to fish and aquatic organisms. Keep out of drains and water courses. Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flames or hot surfaces. Store in original containers only.

Other precaution: Do not store below 40 Degrees F. If crystals are observed, warm material to above 60 Degrees F. by room heating only. Do not use external heat sources for container warming. Shake container periodically to redissolve crystals.

X. SHIPPING INFORMATION

Shipping name: Pyrethroid Pesticide, Liquid, Toxic, Flammable, (Bifenthrin), 6.1, (3), UN3351, PG III "ERG # 131"

Hazard Class: Poison (6)

Identification No: UN3351

Labels Required: Poison (6); Flammable (3)

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Placarding: Poison

Freight Class: Insecticides, N.O.I., Other than Class A Poison  
(NMFC Item 102100, Class 60)

Chemical Name	Equivalent R.Q.
Xylene (CAS No. 1330-20-7)	100 lbs
Ethylbenzene (CAS No. 100-41-4)	1000 lbs
Cumene (CAS No. 98-82-8)	5000 lbs
1-butanol (CAS No. 71-36-3)	5000 lbs.

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:

(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

Health: 2

Fire: 2

Reactivity: 1

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: Y  
Sudden Release of pressure: N  
Reactive: N

Delayed (Chronic) Health: Y  
Fire: Y

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017  
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