

Safety data sheet BIFENTHRIN 0.2%

Revision date : 2004/04/06
Version: 1.1

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(30214088/MDS_MFC_US/EN)

1. Substance/preparation and company identification

Company
MICRO FLO COMPANY
P.O. Box 772099
Memphis, TN 38117

24 Hour Emergency Response Information
CHEMTREC: (800) 424-9300
Micro Flo Company: (800) 451-8461

Molecular formula: C₂₃ H₂₂ Cl F₃ O₂
Molecular weight: 422.9 g/mol
Chemical family: pyrethroid
Synonyms: bifenthrin (active ingredient)

2. Composition/information on ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
82657-04-3	0.2 %	Bifenthrin
14808-60-7	99.8 %	Inert ingredients Quartz (SiO ₂)

3. Hazard identification

Emergency overview

CAUTION: HARMFUL IN CONTACT WITH SKIN.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
Avoid contact with the skin, eyes and clothing.

Potential health effects

See Product Label for additional precautionary statements.

Primary routes of exposure

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact.

Irritation:

The data on toxicology refer to the active ingredient.

Information on: Bifenthrin

May cause moderate irritation to the skin. May cause slight but temporary irritation to the eyes.

Sensitization:

The data on toxicology refer to the active ingredient.

Information on: Bifenthrin

Skin sensitizing effects were not observed in animal studies.

Repeated dose toxicity:

Information on: crystalline silica

This product contains crystalline silica.

Repeated exposure to high concentrations results in silicosis, a lung disease characterized by coughing, difficult breathing, wheezing, scarring of the lungs, and repeated, non-specific chest illnesses.

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The International Agency for Research on Cancer (IARC) has classified crystalline silica in Group 1 (those agents with evidence of carcinogenicity to humans) and National Toxicology Program (NTP) has included it in its Annual Report on Carcinogens.

Potential environmental effects

Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

Terrestrial toxicity:

Acutely harmful to terrestrial organisms.

4. First-aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

Hazards:

Contact with the skin may produce distressing paresthesias that rarely persist more than 24 hours. Severe exposure may cause acute neurotoxicity including seizures, and other signs and symptoms such as muscle fasciculations and those of pulmonary edema.

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote. If large amounts have been ingested and patient is seen within an hour of ingestion, gastrointestinal decontamination should be considered.

5. Fire-fighting measures

Flash point:

No data available.

Suitable extinguishing media:

foam, dry extinguishing media, carbon dioxide, water spray

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, hydrogen fluoride,
If product is heated above decomposition temperature, toxic vapours will be released., The substances/groups of substances mentioned can be released if the product is involved in a fire.

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

NFPA Hazard codes:

Health : 2 Fire: 0 Reactivity: 0 Special:

6. Accidental release measures

Personal precautions:

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Cleanup:

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and storage

Handling

General advice:

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used up as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

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Storage incompatibility:

General: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

8. Exposure controls and personal protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with workplace control parameters

Quartz (SiO ₂)	OSHA	Respirable ; Total dust ;
	ACGIH	TWA value 0.05 mg/m ³ Respirable fraction ;

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and chemical properties

Form:	granules
Odour:	solvent-like, of hydrocarbons
Colour:	beige to light brown
pH value:	7 - 7.5
Density:	139.37 g/cm ³

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10. Stability and reactivity

Hazardous reactions:

No hazardous reactions when stored and handled according to instructions.

Decomposition products:

No hazardous decomposition products known.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, hydrogen fluoride

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. If product is heated above decomposition temperature hazardous fumes may be released.

11. Toxicological information

Acute toxicity

Oral:

LD50/rat: > 5,000 mg/kg

Dermal:

LD50/rat: > 2,000 mg/kg

Skin irritation:

The data on toxicology refer to the active ingredient.

Information on: Bifenthrin

rabbit: Moderately irritating.

The statement for skin irritation was derived from products of similar composition.

Eye irritation :

rabbit:

The data on toxicology refer to the active ingredient.

Information on: Bifenthrin

rabbit: Slightly irritating.

Sensitization:

guinea pig:

The data on toxicology refer to the active ingredient.

Information on: Bifenthrin

Guinea pig maximization test/guinea pig: Non-sensitizing.

Genetic toxicity:

Information on: Bifenthrin

Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity:

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Information on: Bifenthrin

In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

In long term studies in mice in which the substance was given by feed, a carcinogenic effect was observed.

Reproductive toxicity:

Information on: Bifenthrin

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity/teratogenicity:

Information on: Bifenthrin

In animal studies the substance showed a developmental toxic effect in high doses which were maternally toxic.

12. Ecological information

Information on: Bifenthrin

Acute and prolonged toxicity to fish:

Rainbow trout/LC50 (96 h): 0.00015 mg/l

Flow through.

sunfish, bluegill/LC50 (96 h): 0.00035 mg/l

Information on: Bifenthrin

Acute toxicity to aquatic invertebrates:

Daphnia magna/LC50 (48 h): 0.00016 mg/l

Information on: Bifenthrin

Other terrestrial non-mammals:

bobwhite quail/LD50: 1,800 mg/kg

mallard duck/LD50: 2,150 mg/kg

Honey bee/LD50: 0.0146 ug/bee

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated.

Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law.

If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated packaging:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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14. Transport information

Reference Bill of Lading

15. Regulatory information

Federal Regulations

Registration status:

TSCA, US released / exempt

SARA hazard categories (EPCRA 311/312): Acute, Chronic

State regulations

State RTK

CAS Number

14808-60-7

Chemical name

Quartz (SiO₂)

State RTK

MA, NJ, PA

CA Prop. 65:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

16. Other information

Refer to product label for EPA registration number.

Recommended use: crop protection product

Local contact information

Product Stewardship
919 547-2000

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