

BRIGHT RESOURCE TECHNOLOGY SDN. BHD
(Co. No. 517165-A)
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SAFETY DATA SHEET

BIFENTHRIN 10% EC

CAS Number: 82657-04-3

Trade Name: TERMITOX 10

Common Name: Bifenthrin

Chemical Name: 2-methylbiphenyl -3-ylmethyl-3-(2-chlor-3,3,3-trifluoropro-1-enyl)-2,2-dimethyl cyclopropanecarboxylate (IUPAC)

Chemical Formula: C₂₃H₂₂ClF₃O₂

Molecular Weight: 422.9

1. Substance/ Preparation and company identification

Distributor: **Bright Resource Technology Sdn. Bhd.**
No.11-2, Jalan Meranti SD 13/4,
Bandar Sri Damansara,
52200 Kuala Lumpur.
Tel: 02-6272 1678 Fax: 03-6272 9528

2. COMPOSITION/ INFORMATION ON INGREDIENTS

S.No	Ingredient	Concentration (%) w/w
i.	Bifenthrin	10.00 Minimum
ii.	Other relevant impurities	90.00 Maximum

3. HAZARDS IDENTIFICATION

GHS Label elements, including precautionary statements:

EMERGENCY OVERVIEW: Danger

Hazard Statement

H301 – Toxic if swallowed

H304 – May be fatal if swallowed and enters airways

H317 – May cause an allergic skin reaction

H332 – Harmful if inhaled

H351 – Suspected of causing cancer

H370 – Causes damage to organs

H372 – Causes damage to organs through prolonged or repeated exposure

Physical Hazards

H226 – Flammable liquid and vapor



Precautionary Statements-Prevention

P201 – Obtain special instructions before use

P202 – Do not handle until all safety precautions have been read and understood

P281 – Use personal protective equipment as required

P264 – Wash face, hands and any exposed skin thoroughly after handling

P270 – Do not eat, drink or smoke when using this product

P271 – Use only outdoors or in a well-ventilated area

P272 – Contaminated work clothing should not be allowed out of the workplace

P280 – Wear protective gloves

P260 – Do not breathe dust/ fumes/ gas/ mists/ vapors/ spray

P210 – Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking

P233 – Keep container closed tightly

P240 – Ground/ bond container and receiving equipment

P241 – Use explosion-proof electrical/ ventilating/ lighting equipment

P242 – Use only non-sparking tools

P243 – Take precautionary measures against static discharge

Precautionary Statements- Response

P308 + P311 – If exposed or concerned: Call a POISON CENTER or doctor

P333 +P313 – If skin irritation or rash occurs: Get medical advice/ attention

P363 – Wash contaminated clothing before reuse

P303 +P361 + P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 – Call a POISON CENTER or doctor if you feel unwell

P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 – DO NOT induce vomiting

P330 – Rinse mouth

P370 + P378 – In case of fire, use foam, CO₂, dry chemical, water spray or fog for extinction.

Precautionary Statements- Storage

P405 – Store locked up

P403 +P235 – Store in a well-ventilated place. Keep cool

Precautionary Statements- Disposal

P501 – Dispose of contents/ container to an approved waste disposal plant

Hazard not otherwise classified (HNOC)

No hazard not otherwise classified were identified

Other Information:

Very toxic to aquatic life with long lasting effects.

4. FIRST AID MEASURES

Ingestion: 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. See a medical doctor immediately.

Skin contact: Wash with plenty of soap and water

Eye contact: flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

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

Note to physician: Bifenthrin 10% EC has moderate oral, and low dermal and inhalation toxicity. It is minimally irritating to the eyes and nonirritating to the skin. This product contains light aromatic hydrocarbons that can produce a severe pneumonitis or fatal pulmonary edema if aspirated. 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.

5. FIRE FIGHTING MEASURES

Flash Point: Not available

Extinguishing media: Foam, CO₂, or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Degree of Fire/ Explosion Hazard: Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or explosive.

Special fire-fighting procedures: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases, or vapor generated.

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

6. ACCIDENTAL RELEASE MEASURES

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 stream and sewers. Dike to confine spill and absorb with a noncombustible absorbent such as clay, sand or soil. Vacuum, shovel, or pump waste into a drum and label contents.

To clean and neutralize spill area, tools, and equipment, wash with a suitable solution of caustic/ soda ash and an appropriate alcohol (methanol/ ethanol/ or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in section 13. "Disposal Considerations".

7. 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 the reach of children and animals. Do not freeze. Do not store below 4 °C. if crystal are observed, warm material to above 15°C by room heating only.

Do not use external source of heat for warming container. Shake container periodically to dissolve crystals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Uses or anyone who has to handling or contacting with this product should firstly read the personal protection. While handling, using and fighting fire of this product, cleaning equipment's, mixing or loading, following personal protective and equipment should be used.

Work 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 rubber rain 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)

Eye 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 half-face or full-face air purifying respirator which is approved for pesticides (U.S.NIOSH/ MSHA, EU CEN, or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Gloves

Wear chemical protective gloves made of materials such as nitrile, neoprene, or Viton® brand. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Personal Hygiene

Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, or using tobacco. Shower at the end of the workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Homogeneous liquid, Brown, Aromatic hydrocarbon
Specific Gravity : 0.92 ± 0.02
pH : 4.0-7.0
Partition Coefficient : Logpow > 6
Flash Point : Not available
Solubility (H2O) : Emulsifies

10. STABILITY AND REACTIVITY

Stability: Stable under normal condition

Hazardous polymerization: Will not occur

Instability Conditions: Extreme heat and fire

11. TOXICOLOGICAL INFORMATION (Technical)

Reproductive Effects: The dose at which no toxic effect of bifenthrin is observed on the mother (maternal toxicity NOEL) is 1 mg/kg/day for rats and 2.67 mg/kg/day for rabbits. At higher doses, test animals had tremors. The dose at which no toxic effect is observed on development (Developmental toxicity NOEL) is 1 mg/kg/day for rats and is greater than 8 mg/kg/day for rabbits.

Teratogenic Effects: Bifenthrin does not demonstrate any teratogenic effects at the highest levels tested (100ppm, approximately 5.5 mg/kg/day) in a two-generational study in rats.

Mutagenic Effects: Evidence of mutagenic effects from exposure to bifenthrin are inconclusive. Studies of mouse white blood cells were positive for gene mutation. However, other test of bifenthrin mutagenic effects, including the Ames test and studies in live rat bone marrow cells, were negative.

Carcinogenic Effects: There was no evidence of cancer in a 2 year study of rats who ate as much as 10 mg/kg/day of bifenthrin. However, an 87 week feeding study of mice with doses of 7, 29, 71, and 86 mg/kg showed a significantly higher, dose related trend of increased tumor incidence in the male urinary bladder. The incidence was significantly increased at 86 mg/kg/day. Also females had higher incidences of lung cancer than the controls at dosed of 7 mg/kg and higher. The EPA has classified bifenthrin as a class C carcinogen, a possible human carcinogen.

Organ Toxicity: Pyrethroids are poisons that affect the electrical impulses in nerves, over stimulating nerve cells causing tremors and eventually causing paralysis.

12. ECOLOGICAL INFORMATION

The information presented below is for the active ingredient, bifenthrin. Physical/ Environmental Properties: Bifenthrin has moderate stability in the soil under aerobic conditions (half-life range from 65-125 days depending on soil type) and is stable at a wide range of pH values. Bifenthrin has a high Logpow (>6.0), 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 bio concentrate (BCF= 11,750).

Environmental Toxicology: Bifenthrin is highly toxic to fish and aquatic arthropods, and LC50 values range from 0.0038 µg/l 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 1800 mg/kg to >2150 mg/kg).

13. DISPOSAL CONSIDERATION

Open dumping or burning of this pesticide 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 increase in accordance with local, state and national laws and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate regulatory agencies should be contacted prior to disposal.

Nonreturnable containers which 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 rinse being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

14. TRANSPORT INFORMATION

Proper shipping name: Not Available
Hazard Class (N.O.S) : Not Available
UN No : Not Available
Packing Group : Not Available

15. REGULATORY INFORMATION

Bifenthrin is restricted use (RUP) insecticide, bifenthrin containing products may be classified by WHO as acute toxicity category II (bearing the signal word 'warning').

16. OTHER INFORMATION

SDS Created Date: January 2019
Revision Date: Original

Use: Bifenthrin has both contact and stomach action. It is used to control a broad range of foliar pests, including Coleoptera, Diptera, Heteroptera, Homoptera, Lepidoptera and Orthoptera: it also controls some species of Acarina. Crops include cereals, citrus, cotton, fruit grapes, ornamentals and vegetables.

Abbreviations

NOEL No observed effect level

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this SDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this SDS to their own SDS.