

MATERIAL SAFETY DATA SHEET

Hazardous according to criteria of NOHSC Australia

COMPANY DETAILS

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Date of Issue: September 2003
MSDS No. FMC/BT&I/2

Company: FMC (Chemicals) Pty Ltd.
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IDENTIFICATION

Product Name: **BIFLEX[®] TERMITICIDE & INSECTICIDE**

Physical Description/Properties:

Other Names: Bifenthrin 100 EC
Common Name: Bifenthrin
Use: An emulsifiable concentrate Termiticide & Insecticide for dilution with water before use.
Product Code: FMC 54800
Poisons Schedule: S6
Appearance: Light brown liquid with aromatic hydrocarbon odour.
Boiling point: Not available
Specific Gravity: 0.93 kg/L at 20°C
Flashpoint (°C): 68°C closed cup
Flammability Limits (%): Not available
Solubility in Water: Product emulsifies in water
Corrosive hazard: Non corrosive; compatible with aluminium, glass & steel containers.

Ingredients:

Chemical Entity	CAS Number	Proportion
Bifenthrin	82657-04-3	100 g/L
Paraffinic hydrocarbons	64742-47-8	30 - 60%
Aromatic Hydrocarbons	mixture	10 - 30%
Other ingredients determined to be non-hazardous	-	10 - 30%

HEALTH HAZARD INFORMATION

Health Effects: Studies with laboratory animals have shown this product to be harmful if swallowed. Ingestion of large doses of Bifenthrin by laboratory animals produced signs of toxicity which included clonic convulsions, tremors and bloody nasal discharge. This formulation also contains a low level of aromatic hydrocarbons. Inhalation of aromatic hydrocarbon vapours may cause central nervous system depression, dizziness, disturbances in vision and respiratory irritation. Moderately irritating to the eyes. Contact with the skin may be irritating. Dermal sensitisation may occur.

Risk Phrases: R20 Harmful by inhalation. R22 Harmful if swallowed.
R36 Irritating to eyes. R37 Irritating to respiratory system.
R65 Harmful: May cause lung damage if swallowed

Safety Phrases: S2 Keep out of reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S23 Do not breath vapour or spray.
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.

Acute:

Swallowed: This product is harmful if swallowed; the acute oral LD₅₀ (rat) = 531 mg/kg.

Eye Contact: Moderately irritating to the washed eye and severely irritating to the unwashed eye. Product can be absorbed through the eyes.

Skin Contact: Minimally irritating. Dermal sensitisation may occur. Acute Dermal LD₅₀ (rabbit) = > 2000 mg/kg

Inhaled: This product is harmful if inhaled. Inhalation of aromatic hydrocarbon vapours may cause dizziness, disturbances in vision and irritation to the eyes, skin and mucous membrane of the respiratory and gastrointestinal tracts.
Acute Inhalation LC₅₀ (rat) = 4.9 mg/L/4 hrs.

Chronic: No data available on this formulation. In studies with laboratory animals, Bifenthrin Technical did not cause teratogenicity or reproductive toxicity. Tremors were associated with repeated exposure of dogs, rats, rabbits and mice to Bifenthrin. The overall results from a battery of genotoxicity studies indicate that Bifenthrin is not considered to be genotoxic. Ames test results were negative. Kidney and liver damage is possible from over-exposure to aromatic hydrocarbons over long periods. Additionally, some reversible haematopoietic depression has been observed in animals with extended exposure to aromatic hydrocarbons.

FIRST AID

Swallowed: If poisoning occurs, contact a doctor or Poisons Information Centre. Do not induce vomiting or give anything by mouth to an unconscious person. Get to a doctor or hospital quickly.

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

Skin: If on skin or clothing, remove any contaminated clothing at once, and wash skin thoroughly with soap and water. See a doctor if irritation persists.

Inhaled: Remove to fresh air. If breathing discomfort occurs, contact a medical doctor.

ADVICE TO DOCTOR:

Bifenthrin the active ingredient in this product is a pyrethroid insecticide. The formulation also contains petroleum distillates that can cause severe pneumonitis or fatal pulmonary edema if aspirated. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise symptomatic and supportive.

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**BIFLEX
TERMITICIDE & INSECTICIDE**

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PRECAUTIONS FOR USE

Exposure Standards: No exposure limit has been assigned to this material. However, the following Standard may apply - Aromatic Hydrocarbons: 100 ppm.

Engineering Controls: Thoroughly ventilate all transport vehicles prior to unloading. General air replacement or dilution ventilation is sufficient for material handling and storage, but local exhaust ventilation should be used when filling or emptying this product.

Personal Protection:

Work Clothing: For normal handling wear long sleeve uniform or overalls and head covering. For larger exposures, as in the case of spills, wear full body cover barrier suit, such as rubber rain suit.

Eye Protection: Where potential for splash, spray or mist exists, wear chemical protective goggles or a full face shield. Emergency eye wash facilities would be located nearby. Avoid contact with the eyes.

Respiratory Protection: For splash, vapour or mist exposure wear a half face air purifying respirator which is approved for pesticides (Australian Standards). Respirator selection is based on an airborne concentration.

Gloves: Wear chemical protective gloves made of rubber or neoprene or PVC gauntlet-style gloves when handling this product. Inspect regularly for leaks.

Personal Hygiene: Wash skin before eating, drinking or smoking. Shower at the end of the work day. Wash all clothing after each use.

Flammability: COMBUSTIBLE LIQUID.
Do not use close to ignition sources (Flash point 68°C).

SAFE HANDLING INFORMATION

Road & Rail Transport: Biflex Termiticide & Insecticide is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Marine and Air Transport: Product is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 10% Bifenthrin).

Store in a cool, dry, well ventilated location. Avoid excess heat. No smoking, eating or drinking should be allowed where material is used or stored. Keep out of the reach of children and animals. Store in original containers only. Do not locate near or contaminate food or feed by storage or disposal

Product is combustible and must be stored away from naked lights, heat sources and oxidising agents. Observe procedures detailed in Australian Standard AS1940-1988 for flammable and combustible liquids.

Spills and Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent, bleach or caustic soda) and add the solution to the drums of waste already collected. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities. Do not cut or weld metal containers. Vapours that form inside may create an explosion hazard.

Dangerous to Fish. Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

1, 5 20, & 200 Litre Drum: Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

Returnable and refillable containers: Empty containers fully into application equipment. Close all valves and return to point of supply for refill or storage. Do not burn empty containers or product.

Fire/Explosion Hazard:

Extinguishing Media - Soft stream water fog, Foam, CO₂ or dry chemical. Contain all runoff.

Degree of Hazard - Combustible liquid. Material may support combustion at elevated temperatures. Sealed, overheated containers may present an explosion hazard. Thermal decomposition and burning may produce toxic by-products.

Special Fire Fighting Procedures - Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapours generated. Try to keep containers cool with soft stream water fog.

Hazardous Decomposition Products - Carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride.

OTHER INFORMATION

Environmental Information: No data is available on Biflex Termiticide & Insecticide. The active ingredient, Bifenthrin, degrades at a moderate rate in soils ($t_{1/2}$ = 50 to 205 days), and more rapidly on the surface of bare soils ($t_{1/2}$ = 7 to 62 days). Bifenthrin is tightly bound in most soils and has extremely low water solubility. Bifenthrin is highly toxic to aquatic organisms.

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