

MATERIAL SAFETY DATA SHEET

BIFORCE 100SC Termiticide and Insecticide

Section 1: Identification of the Product and Company

Product name:	BIFORCE 100SC Termiticide and Insecticide
Other names:	Bifenthrin 100 g/lit Suspension concentrate
Use:	Termiticide and Insecticide for the use by pest control operators.
Company name & Contact details	Company: Sherwood Chemicals Australasia Pty Ltd Address: Level 3, 1060 Hay Street, WEST PERTH 6005 AUSTRALIA Emergency Telephone number: All hours +61 421 667972
Other information:	All reasonable care has been taken to ensure the information and advice contained in this data sheet is accurate at the time of printing. However, Sherwood Chemicals accepts no liability for any loss or damages suffered as a consequence of reliance upon the information contained herein.

Section 2: Hazards Identification

Hazard classification:	This product is classified as Hazardous according to the criteria of NOHSC Australia. See below for Risk and Safety Phrases.
Risk Phrases:	R22 Harmful if swallowed R36 Harmful if inhaled
Safety Phrases:	S2 Keep out of reach of children S7 Keep container tightly closed S13 When using, do not eat or drink. S23 Do not breath vapour or spray and avoid contact with eyes. S25 Avoid Contact with the eyes.

Section 3: Composition / Information on Ingredients

Chemical entity	CAS N°	Proportion
Bifenthrin	82657-04-3	100g/L
Other non hazardous ingredients		< 20%
Water	7732-18-5	>60%

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Section 4: First Aid Measures

FIRST AID:

You should call the Poisons Information Centre if you feel you may have been poisoned, burned or irritated by this product. The number is 13 11 26 from anywhere in Australia and is available at all times. Have this MSDS with you when you call.

Eye:

Quickly and gently blot or brush away product. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water until the product is removed or until a few minutes after irritation has ceased, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion:

If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Inhalation:

No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin:

Blot or brush away excess chemical. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 10 minutes or until chemical is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts). If irritation persists, repeat flushing and obtain medical advice.

ADVICE TO DOCTOR -

Treat symptomatically

Section 5: Fire Fighting Measures

Fire/Explosion Hazard:

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

Degree of Hazard - Slightly combustible. Avoid excess heat and fire. 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 or contact 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

Section 6: Accidental Release Measures

In the event of a major spill, prevent spillage from entering drains or water courses and 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. Immediately call the fire brigade. Wear full protective clothing including face mask, face shield and gauntlets. All skin areas should be covered. Suitable materials for protective clothing include rubber, PVC, Viton. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7: Handling and Storage

Safe handling practices:

Exercise safe handling practices at all times

Storage:

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. Wash all exposed skin surfaces prior to smoking drinking or eating. All workers should shower at the end

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of each work day after handling this product. Wash all clothing after each use.

Other information: Nil

Section 8: Exposure Controls and Personal Protection

Engineering controls: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

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: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product.

Respirator: Usually, no respirator is necessary when using this product. Eyebaths or eyewash stations should be provided near to where this product is being used.

Section 9: Physical and Chemical Properties

Chemical: Bifenthrin
Appearance: Beige to white, slight odour.
Flashpoint: >100 Deg C Not Flammable
Solubility In Water: Insoluble. Active suspended in water
Corrosive Hazard: Non corrosive; compatible with aluminum, HDPE, glass and phenolic lined steel containers.
Specific Gravity: 1.03 approx at 20°C
Flammability: Not flammable - Combustible
Poisons Schedule: S6

Section 10: Chemical Stability and Reactivity Information

Chemical stability: Stable at normal temperature and pressure
Conditions to avoid: Excess heat, ignition sources
Incompatibility: Should not be stored or transported with flammable gases, explosives, spontaneously combustible substances, oxidizing agents or food stuffs.
Hazardous decomposition products: Carbon monoxide, carbon dioxide and nitrogen oxides, may be produced during combustion.
Hazardous polymerisation: Will not occur.

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Section 11: Toxicological Information

TOXICITY:

Bifenthrin is moderately toxic to mammals when ingested. Large doses may cause incoordination, tremor, salivation, vomiting, diarrhoea, and irritability to sound and touch. LD50 for Bifenthrin is about 54mg/kg in female rats and 70mg/kg in male rats. The LD50 for rabbits whose skin is exposed to Bifenthrin is greater than 2,000mg/kg. Bifenthrin does not sensitize the skin of guinea pigs. Although it does not cause inflammation or irritation on human skin, it can cause a tingling sensation which lasts about 12 hours. It is virtually non-irritating to rabbit eyes.

Reproductive effects:

The dose at which no toxic effect of Bifenthrin is observed on the mother (maternal toxicity NOEL) is 1mg/kg/day for rats and 2.67mg/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 1mg/kg/day for rats and is greater than 8mg/kg/day for rabbits.

Teratogenic effects:

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

Mutagenic effects:

Evidence of mutagenic effects from exposure to Bifenthrin is inconclusive. Studies of mouse white blood cells were positive for gene mutation. However, other tests of Bifenthrin's 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 10mg/kg/day of Bifenthrin. However, an 87 week feeding study of mice with doses of 7, 29, 71 and 86mg/kg showed a significantly higher, dose related trend of increased tumour incidence in the male urinary bladder. The incidence was significantly increased at 86mg/kg/day. Also, females had higher incidences of lung cancer than the controls at doses of 7mg/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.

Fate in humans and animals:

Bifenthrin is absorbed through intact skin when applied topically. It undergoes similar modes of breakdown within animal systems as other pyrethroid insecticides. In mammals, Bifenthrin is rapidly broken down and promptly excreted. Rats treated with 4 to 5mg/kg, excreted 70% in the urine and 20% in the faeces within 7 days. After 7 days, the remaining Bifenthrin was found accumulated in tissues with high fat content such as the skin and fat in males and females and the ovaries of females. Bifenthrin is less toxic to warm-blooded animals, such as mammals, than to cold-blooded animals.

Section 12: Ecological Information

Breakdown of chemical in soil and groundwater: Bifenthrin does not move in soils with large amounts of organic matter, clay and silt. It also has a low mobility in sandy soils that are low in organic matter. Bifenthrin is relatively insoluble in water, so there are no concerns about groundwater contamination through leaching. It's half-life in soil, the amount of time it takes to degrade to half of its original concentration, is 7 days to 8 months depending on the soil type and the amount of air in the soil.

Breakdown of chemical in vegetation: Bifenthrin is not absorbed by plant foliage, nor does it translocate in the plant

Section 13: Disposal Considerations

Drum Disposal: 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 clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Do not re-use empty containers.

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Section 14: Transport Information

Road or Rail Transportation

This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Marine and Air Transportation

Biforce 100SC Termiticide & Insecticide 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).

Section 15: Regulatory Information

Poison Schedule S6

Agricultural or veterinary chemicals legislation

This product is registered for use by the APVMA.
AUSTRALIA APVMA Registration No. 62837

Section 16: Other Information

Emergency Telephone number: All hours Tel: +61 421 667972
Sherwood Chemicals Australasia Pty Ltd
Address: Level 3, 1060 Hay Street, WEST PERTH 6005 AUSTRALIA

MSDS creation date: 6th April 2009

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END OF MSDS