

SAFETY DATA SHEET



Page 1 of Total 6
Date of Issue: August 2016
SDS No. FMC/ AQUAMAX /1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: BIFLEX[®] AQUAMAX INSECTICIDE

Other Names: Bifenthrin. Biflex.
Use: Termiticide and insecticide for use in buildings and other structures.
Company: FMC Australasia Pty Ltd.
Address: 12 Julius Avenue, North Ryde NSW 2113
Telephone Number: 02 9887 0900 **Fax number:** 02 9887 0911
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

Globally Harmonised System (GHS) Classification:

Acute toxicity – Oral: Category 4.
Hazardous to the Aquatic Environment – Acute Hazard: Category 1.
Hazardous to the Aquatic Environment – Long term hazard: Category 4.

Signal Word: WARNING.

Hazard Statements:

H302 Harmful if swallowed.
H400 Very toxic to aquatic life.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements:

Prevention:

P264 Wash hands, arms and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P330 Rinse mouth.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container in accordance with national regulations.

Pictogram:



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Bifenthrin	82657-04-3	100 g/L
Propane-1,2-diol	57-55-6	1 - 10%
Other ingredients determined not to be hazardous	mixture	Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Swallowed: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. If any discomfort persists seek medical advice.

Eye: If in eyes, hold eyes open and flush gently with water until chemical is removed. If irritation occurs and persists, obtain medical attention.

Skin: If on skin remove contaminated clothing and wash with soap and water. If irritation occurs and persists see a doctor.

Inhaled: Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

Advice to Doctors: Bifenthrin the active ingredient in this product is a pyrethroid insecticide. It has been reported that a topical application of Vitamin E cream has therapeutic value in reducing skin irritation, associated with skin contact with pyrethroid insecticides. Treatment is otherwise symptomatic and supportive.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Product is a not flammable.

Extinguishing media: Choose extinguishing media to suit the burning material. If containers are ruptured contain all runoff.

Hazards from combustion products: Non-combustible, however after evaporation of water, the residual material will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear protective waterproof clothing, elbow length PVC or nitrile gloves and water resistant footwear.

Spills: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste according to the Australian Standard 2507 - Storage and Handling of Pesticides. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities. Do NOT allow spilled product to enter sewers, drains, creeks or any other waterways.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. Poisonous if swallowed. May irritate eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. **For termite control in buildings and structures:** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. After each day's use, wash gloves and contaminated clothing. **For hand held application:** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. When using the prepared spray wear protective waterproof clothing, elbow length PVC or nitrile gloves and water resistant footwear. After each day's use, wash gloves, contaminated clothing. Wash hands after use.

Conditions for Safe Storage: Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight. DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:

No exposure standard for bifenthrin has been established by Safe Work Australia. However, the following exposure standard has been established:

Atmospheric Contaminant	Exposure Standard (TWA) ^a	Proportion in AquaMax
Propane-1,2-diol total: (vapour & particulates)	150 ppm (474 mg/m ³)	< 10%

TWA = Time-weight Average

It is highly unlikely that atmospheric concentrations of Propane-1,2-diol will reach the above concentrations when used as directed.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas only. Use local exhaust at all process locations where spray may be emitted. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use.

Personal Protective equipment (PPE):

General: **For termite control in buildings and structures:** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. After each day's use, wash gloves and contaminated clothing. **For hand held application:** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC or nitrile gloves. When using the prepared spray wear protective waterproof clothing, elbow length PVC or nitrile gloves and water resistant footwear. After each day's use, wash gloves, contaminated clothing. Wash hands after use.

Personal Hygiene: Poisonous if swallowed. May irritate eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Wash hands and arms before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White, opaque liquid.
Odour:	Very mild, soap like odour.
Boiling point:	Not available.
Freezing point:	Not available.
Specific Gravity:	1.02 g/mL.
pH:	Not available.
Solubility in Water:	Product suspends in water.

Flammability: Not flammable.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Corrosive hazard: Non corrosive; compatible with stainless steel containers & polyethylene used in spray tanks and parts.
Flashpoint (°C): Not applicable, not flammable.
Flammability Limits (%): Not flammable.
Poisons Schedule: Product is a schedule 6 poison.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: No particular conditions to avoid.

Incompatible materials: No particular materials to avoid.

Hazardous decomposition products: When the product is heated to high temperatures and the water is evaporated, the active constituent will decompose and emit toxic and noxious fumes.

Hazardous reactions: No particular reactions to avoid.

SECTION 11 TOXICOLOGICAL INFORMATION

Potential 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.

Acute

Swallowed: This product is harmful if swallowed; the acute oral LD₅₀ (rat) = 505 mg/kg (calculated).

Eye: Irritating to the eyes.

Skin: This product has a low dermal toxicity. The acute dermal LD₅₀ (rabbit) > 2000 mg/kg. May cause skin irritation. Skin sensitising may occur in sensitive individuals.

Inhaled: This product is harmful if inhaled. Acute inhalation LC₅₀ > 8.7 mg/L/4 hour (calculated).

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.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: The active ingredient, Bifenthrin, is highly toxic to fish and aquatic arthropods with LC₅₀ values ranging 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 molluscs at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds with LC₅₀ values range from 1800 mg/kg to > 2,150 mg/kg. Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container.

Environmental Properties: The active ingredient, Bifenthrin, degrades at a moderate rate in agricultural 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.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal: Label all recovered material for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities. Do not bury waste or surplus product. Dispose of undiluted waste by dilution and use,

according to the Directions for Use, or returning to the point of purchase in the original container for controlled disposal.

SECTION 13 DISPOSAL CONSIDERATIONS (Continued)

Dispose of diluted surplus product by using according to the Directions for Use. Do not re-use empty container.

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

Disposal of empty, non-returnable containers: 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, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Marine and Air Transport: Biflex AquaMax Insecticide is classified as 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). Hazchem code •3Z. Hazard Identification Number (HIN) 90.

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xn).
Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 6 poison.
This product has registration pending under the Agricultural and Veterinary Chemicals Code Act 1994. Product No. 60678.
Product is not classified as a Dangerous Good according to the ADG Code (7th Ed).
Product is classified as a Dangerous Good according to the International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).
Requirements concerning special training:
Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 1 August 2016. Valid for 5 years.

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
Carcinogen: An agent which is responsible for the formation of a cancer.
Clonic: Alternate involuntary muscular contraction and relaxation in rapid succession.
Genotoxic: Capable of causing damage to genetic material, such as DNA.
Lacrimation: The production, secretion, and shedding of tears.
Lavage: The irrigation or washing out of an organ, as of the stomach or bowel.
Mutagen: An agent capable of producing a mutation.
Oedema: Accumulation of fluid in tissues.

Pneumonitis: A general term that refers to inflammation of lung tissue.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

SECTION 16 OTHER INFORMATION (Continued)

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2015).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End SDS