

## SAFETY DATA SHEET



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SDS No. FMC/BIFSC100/3

### SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name: BIFLEX<sup>®</sup> AQUAMAX INSECTICIDE**

**Other Names:** Bifenthrin  
**Use:** General pest insecticide for use in industrial, commercial and domestic areas.  
**Manufacture:** FMC New Zealand Limited  
**Address:** 6 Clayton Street, Newmarket  
Auckland 1023  
www.fmccrop.nz  
**Freephone:** 0800 990 088

**New Zealand Emergency Telephone**  
**Transport Emergency:** 0800 387 668  
**24 hr Emergency Medical Information:** 0800 111 174  
**National Poisons Centre:** 0800 POISON (0800 764 766)

### SECTION 2 HAZARDS IDENTIFICATION

This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

EPA Approval No: HSR100739

Pictograms:



Toxic    Chronic    Ecotoxic

**Signal Word:** WARNING

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D	H302	Harmful if swallowed.	Category 4
6.1D	H332	Harmful if inhaled.	Category 4
6.3A	H315	Causes skin irritation.	Category 2
6.4A	H320	Causes eye irritation.	Category 2A
6.5B	H317	May cause an allergic skin reaction	Category 1
6.9B	H373	May cause damage to through prolonged or repeated exposure.	Category 2

**SECTION 2 HAZARDS IDENTIFICATION (Continued)**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Category 1
9.2C	H423	Harmful to the soil environment.	-
9.3B	H432	Toxic to terrestrial vertebrates.	-
9.4A	H441	Very toxic to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe gas, vapours, mist or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing.
P285	In case of inadequate ventilation wear respiratory protection.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER (0800) 766 764 or doctor/physician if you feel unwell.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P302 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P302 + P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up in the closed original container, in a cool well-ventilated room/area, out of direct sunlight and away from children, animals, food, feed stuffs, seed and fertilizers.

Disposal Code	Disposal Statement
P501	Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. Very toxic to aquatic life with long lasting effects. Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways. Disposal of spills and their residues: Label all recovered material for contents. Dispose of drummed wastes, including decontamination solution as a hazardous waste, in accordance with the requirements of national regulations and local by-laws.

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**

**Ingredients:**

<b>CHEMICAL</b>	<b>CAS NUMBER</b>	<b>PROPORTION (WT %)</b>
Bifenthrin	82657-04-3	10
4-isothiazolin-3-one, 5-chloro-2-methyl	26172-55-4	0.1-0.4
Oxirane, Methyl-, Polymer with oxirane, monobutyl ether	75-21-8	3 - 5
Other ingredients determined not to be hazardous	-	Balance

**SECTION 4 FIRST AID MEASURES**

**FIRST AID**

- Inhalation:** If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER (0800) 766 764 or doctor/physician.
- Skin:** Wash with plenty of soap and water. Remove and wash contaminated clothing before re-use. If skin irritation or rash occurs: Get medical advice/attention.
- Eye:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs and persists, seek medical attention.
- Ingestion:** If swallowed, Rinse mouth. For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or call a doctor immediately.

**SECTION 5 FIRE FIGHTING MEASURES**

**Flashpoint:** Product is a not flammable.

**Extinguishing media:** Foam, CO2 or dry chemical. Soft stream water fog if no alternatives. Contain all runoff.

**Fire Fighting Instructions:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

**Combustion products:** On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

**Hazchem Code:** 2X

**SECTION 6 ACCIDENTIAL RELEASE MEASURES**

**Spill precautions:** Isolate and post spill area. Keep out unprotected persons and animals. Wear prescribed protective clothing and equipment as detailed in Section 8.

**Spill clean-up:** 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.

**Clean-up 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. Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

**SECTION 7 HANDLING AND STORAGE**

**HANDLING PRECAUTIONS: DO NOT** handle until all safety precautions have been read and understood. A contractor must not handle or apply the Biflex® Aquamax insecticide unless the contractor is a qualified UPM contractor. However, a contractor other than a qualified UPM contractor may handle or apply the Biflex® Aquamax insecticide if a qualified UPM contractor:

1. Has provided guidance to the contractor in respect of the application of the substance at the place; and
2. Is available at all times to provide assistance, if necessary, to the contractor while the substance is being applied by the contractor.

**STORAGE:** Store in original container tightly closed and in a locked, dry, cool, well ventilated area, away from feed, seeds and foodstuffs. Store in accordance with NZS 8409 Management of Agrichemicals. Stores containing 100 L are subject to signage, and more than 100 L require emergency response plans. When stored appropriately this product should show no significant degradation for 2 years. Contact your supplier for further information about the use of any product that is older than this.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Atmospheric Contaminant	Exposure Standard (TWA)		Exposure Standard STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Propylene Glycol [57-55-6] vapour & particulates particulates only	150	474	-	-
	Proportion in AquaMax < 5%			

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

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

**Biological Limit Values:**

No biological limit allocated.

**Engineering controls:**

Use in well ventilated area only. Ventilate all transport vehicles prior to unloading. 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):**

**Work Clothing:** Wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC or nitrile gloves and face shield or goggles.

**Eye Protection:** When using product, wear chemical protective goggles or face shield.

**Respiratory Protection:** If inhalation risk exists, wear a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (Australian Standards).

**Gloves:** Wear chemical protective gloves made of materials such as nitrile, Viton® brand or PVC when handling this product. Inspect regularly for leaks. Wash the outside of gloves with soap and water prior to removal.

**Personal Hygiene:** Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

**SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Opaque white liquid
<b>Odour</b>	Very mild, soap like odour
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	Not applicable
<b>Boiling Point</b>	Not applicable
<b>Melting Point</b>	Not applicable
<b>Freezing Point</b>	Not applicable
<b>Flash Point</b>	Not flammable.
<b>Flammability</b>	Not flammable.
<b>Upper and Lower Exposure Limits</b>	Not applicable
<b>Vapour Pressure</b>	Not applicable
<b>Vapour Density</b>	Not applicable
<b>Specific Gravity</b>	1.02 g/ml
<b>Solubilities</b>	Product suspends in water
<b>Corrosivity</b>	Non corrosive; compatible with stainless steel containers & polyethylene used in spray tanks and parts.
<b>Partition Coefficient:</b>	Not applicable
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not applicable
<b>Kinematic Viscosity</b>	Not applicable
<b>Particle Characteristics</b>	Not applicable

**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 incompatibilities reasonably foreseeable.

**Decomposition products:** When the product is heated to high temperatures, the active constituent will decompose and emit toxic fumes.

**Hazardous reactions:** Will not polymerise.

**SECTION 11 | TOXICOLOGICAL INFORMATION**

**Acute Effects:**

<b>Swallowed</b>	Harmful if swallowed. Mixture Calculation = LD <sub>50</sub> = 505mg/kg
<b>Dermal</b>	Not applicable.
<b>Inhalation</b>	Harmful by inhalation (1hour LC50:> 8.7 mg/L/4 hr - calculated). May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Eye</b>	Causes serious eye irritation.
<b>Skin</b>	Causes skin irritation.

**Chronic Effects:**

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	May cause damage to organs through prolonged or repeated exposure

**Potential Health Effects:**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

**SECTION 12 ECOLOGICAL INFORMATION**

HSNO Classes: 9.1A = Very toxic to aquatic life with long lasting effects.  
9.2C = Harmful to the soil environment.  
9.3B = Toxic to terrestrial vertebrates.  
9.4A = Very toxic to terrestrial invertebrates.

<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available

Environmental toxicity data are based on the active constituents, bifenthrin and alpha-cypermethrin. The physical and environmental properties as well as the environmental toxicology of Alpha-cypermethrin are similar to cypermethrin. Unless indicated the information below pertains to cypermethrin.

**Environmental Toxicology:** Bifenthrin, is highly toxic to fish and aquatic arthropods with LC<sub>50</sub> 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 LC<sub>50</sub> 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:** Bifenthrin, degrades at a moderate rate in agricultural soils (t<sub>1/2</sub> = 50 to 205 days), and more rapidly on the surface of bare soils (t<sub>1/2</sub> = 7 to 62 days). Bifenthrin is tightly bound in most soils and has extremely low water solubility.

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Spills & Disposal:** In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter. Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of local and national regulations.

Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers.

*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 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 container below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local or National government regulations. Empty containers and product should not be burnt. Do not re-use empty containers.

**SECTION 14 | TRANSPORT INFORMATION**

**Transport: This product is classified as a Dangerous Good for land transport under NZS 5433: 2012.**

Road, Air and Marine Transport

UN No: 3082  
Packing Group III  
D.G. Class 9  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S (Contains 8% bifenthrin)  
Marine Pollutant Yes

**SECTION 15 | REGULATORY INFORMATION**

**EPA Approval Code:** HSR100739

**SECTION 16 | OTHER INFORMATION**

**Glossary**

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.
2. Hazardous Substances (Safety Data Sheets) Notice 2017.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text. The information herein is given in good faith, but no warranty, express or implied is made.

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