

SAFETY DATA SHEET

BIFLEX® AQUAMAX 100 SC INSECTICIDE

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification BIFLEX® AQUAMAX 100 SC INSECTICIDE
Product description Bifenthrin insecticide.
Use Suspension concentrate Pest Control Insecticide

New Zealand Distributor Garrards (NZ) Ltd
Unit 4/27B Cain Road
Penrose, New Zealand

Telephone (09) 526 5232
Fax (09) 526 4272

24-hour Emergency phone National Poisons Centre 0800 POISON (0800 764766)

Date of Issue 3 February 2015

2. HAZARDS IDENTIFICATION

This product is hazardous under the HSNO (minimum degrees of hazard) Regulations 2001.

EPA Approval No: HSR100508

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
9.1A	H4101	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.	-

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Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fumes, mist, vapours and spray.
P264	Wash hands 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.
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 (0800 766 764) or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + 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.

3.COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Wt%	CAS NUMBER.
Bifenthrin	10	82657-04-3
4-isothiazolin-3-one, 5-chloro-	0.1-0.4	26172-55-4

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2-methyl		
Oxirane, Methyl-, Polymer with oxirane, monobutyl ether	3 - 5	75-21-8
Other ingredients determined not to be hazardous	Balance	-

4. FIRST AID MEASURES

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 contact	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 contact	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.

5. FIRE FIGHTING MEASURES

Flashpoint	Product is a not flammable.
Extinguishing Media	Foam, CO ₂ 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

6. ACCIDENTAL 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.
Cleanup procedures	To clean spill area, tools and equipment, wash with a solution of soap,

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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.

7. HANDLING AND STORAGE

Handling

Read label before use. Read safety data sheet before use. Do not breathe fumes, mist, vapours and spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective clothing. In case of inadequate ventilation wear respiratory protection.

Storage

Keep out of reach of children. DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in the closed original container, in a cool well-ventilated area, out of direct sunlight. Store in a locked room or place away from children, animals, food, feed stuffs, seed and fertilizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

No exposure standard for bifenthrin has been established by NOHSC 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)	< 5%
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.

Engineering Controls

Use in well-ventilated area 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 Protection

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

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Colour	White, opaque
Odour	Very mild, soap like odour.
Odour Threshold	N/A
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not applicable
Specific Gravity	1.02 g/ml
Flash Point	Not applicable.
Flammability	Non Flammable
Upper and Lower Exposure Limits	Not applicable
Solubility	Product suspends in water
Corrosivity	Non corrosive; compatible with stainless steel containers & polyethylene used in spray tanks and parts.
pH	Not applicable
Vapour Pressure	Not available
Vapour Density	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

10. STABILITY AND REACTIVITY

Stability	Product is considered stable in ambient conditions for a period of at least 2 years after manufacture
Incompatible materials	No incompatibilities reasonably foreseeable.
Conditions to avoid	No particular conditions to avoid.
Decomposition Products	When the product is heated to high temperatures, the active constituent will decompose and emit toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute Effects:

Swallowed	Harmful if swallowed (Acute oral LD ₅₀ = 505mg/kg calculated)
Dermal	Not applicable.
Inhalation/Respiratory	Harmful by inhalation (1 hour LC ₅₀ :> 8.7 mg/L/4 hr - calculated). May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Eye	Causes serious eye irritation.
Skin	Causes skin irritation.

Chronic Effects:

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

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.

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 (t₅₀ = 50 to 205 days), and more rapidly on the surface of bare soils (t₅₀ = 7 to 62 days). Bifenthrin is tightly bound in most soils and has extremely low water solubility.

Bioaccumulation

Bifenthrin No data available.

Mobility in soil

Bifenthrin No data available.

Other adverse effects

Bifenthrin No data available.

13. DISPOSAL CONSIDERATION

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.

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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 cleaned empty containers in a local authority landfill. If not available bury the cleaned 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.

14. TRANSPORT INFORMATION

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

Road, Air, Marine

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Contains 8% bifenthrin)
D.G. Class	9
UN Number	3082
Hazchem	2X
Pack Group	III
Marine Pollutant	Yes

If the product/combination of packages is shipped in quantities less than 5lt/kg, this is exempt from DG information requirements, provided an SDS is issued.

15. REGULATORY INFORMATION

EPA Approval Code HSR100508

Trigger quantities for this substance

	Trigger Quantity
Approved Handler	Yes – Any if: a) Applied in a wide dispersive manner b) Used by a commercial contractor.
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L (9.1A)
Emergency Response Plan trigger Quantities	100L (9.1A)
Secondary Containment	100L(9.1A)

16. OTHER INFORMATION

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists.
DT ₅₀	Time(days) for 50%loss.
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.

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ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substances and New Organisms.
IARC	International Agency for Research on Cancer.
K _{oc}	Organic carbon partition coefficient (ml soil water/g organic carbon)
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
NOEL	No observable effect level.
OSHA	American Occupational Safety and Health Administration.
P _{ow}	The octanol-water partition coefficient is the ratio of the concentration of a chemical in octanol and in water at equilibrium at a specified temperature.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

Miscellaneous

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process

The information herein is given in good faith, but no warranty, express or implied is made.
Please contact the New Zealand proprietor, Garrards New Zealand, if further information is required.

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