

# SAFETY DATA SHEET

<b>Product:</b>	No Mosquitoes Professional Mosquito Control Biting Midge & Mosquito Barrier	<b>Date Prepared:</b> 16 December 2019
<b>Company:</b>	Australian Outdoor Lifestyle Pty Ltd	<b>Replaces:</b> New Page 1 of 9

## 1 Identification

**Product Name:** No Mosquitoes Professional Mosquito Control Biting Midge & Mosquito Barrier

**Other Names:**

**Uses:** For the control of adult mosquitoes and midges

**Supplier**

**Name:** Australian Outdoor Lifestyle Pty Ltd

**Address:** 4/25 Veronica Street, Capalaba, Qld 4157 Australia

**Telephone:** +61 (0) 1800 667 784

**Website:** [www.mosquitobarrier.com.au](http://www.mosquitobarrier.com.au)

## 2 Hazards Identification

Users of the product should refer to the APVMA approved label on the container for advice in relation to use and handling of the product.

The information contained in this SDS is primarily for people handling the product and its ingredients in the manufacturing environment, transport or distribution.

### Hazard Class and Category:

Acute Oral Toxicity (Category 4)

Eye damage/Irritation (Category 2B)

Skin Sensitization (Category 1B)

Hazardous to the aquatic environment – long term hazard (Category 1)



### Signal Word:

Warning

### Hazard Statements:

H302: Harmful if swallowed.

H320: Causes eye irritation.

H317: May cause an allergic skin reaction.

H410: Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

#### Prevention

P261: Avoid breathing mist/spray.

P264: Wash contacted areas 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.

P280: Wear protective gloves, protective clothing and eye or face protection.

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**Response**

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
 P302+ P303+P361+P352+ P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Wash with plenty of soap and water.  
 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+ P337+P313: If skin or eye irritation persists: Get medical advice.  
 P391: Collect spillage.  
 P370+P378: In case of fire, product does not burn. Use extinguishing media suited to surrounding materials.

**Storage**

P410: Protect from sunlight.  
 P403+P235: Store in a well-ventilated place. Keep cool.

**Disposal**

P501: Dispose of contents and containers as specified on the registered label

<b><u>Identity (Other Names)</u></b>	<b><u>CAS Number</u></b>	<b><u>Proportion % (w/v)</u></b>
Bifenthrin	82657-04-3	10
Other ingredients not contributing to hazard		90

## 3 First Aid Measures

**If poisoning occurs, contact a doctor or Poisons Information Centre.  
Phone 13 11 26.**

<b>First Aid</b>		
-	<b>Swallowed:</b>	Do not induce vomiting. Wash mouth with water. Contact a doctor or Poisons Information Centre (Phone 13 11 26)
-	<b>In Eye:</b>	Flush continuously with water for 20 minutes. Seek prompt medical attention.
-	<b>On Skin:</b>	Remove any contaminated clothing. Wash affected areas immediately and wash thoroughly with soap and water. Seek Medical advice if irritation persists.
-	<b>Inhaled:</b>	Remove to fresh air. If breathing difficulties are experienced, seek medical attention.
<b>Advice to Doctor</b>		The active constituent of this product, bifenthrin, it is a pyrethroid insecticide. It has moderate oral toxicity and may causes eye irritation. It may cause skin irritation and sensitisation. Treat symptomatically. Digestible fats, oils, alcohol and milk products increase absorption and should be avoided.

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## 5 Fire Fighting Measures

<b>Flammability</b>	Does not burn
<b>Extinguishing Media:</b>	Soft stream water fog, foam, CO2 or dry chemical.
<b>Hazardous Combustion Products:</b>	Carbon Monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride.
<b>Precautions for Fire Fighters:</b>	Violent reaction or explosion likely to occur. Wear self-contained breathing apparatus and protective clothing.
<b>Hazchem Code:</b>	2Z

## 6 Accidental Release Measures

### Emergency Procedures:

Prevent spillage from entering drains, sewers or watercourses. If contamination thereof is unavoidable, warn the local Environmental Agency. Spills should be contained.

### Containment of Spill:

In case of **small spill**, Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material.

In case of **larger spill**, Prevent spillage from entering drains. Wear personal protective equipment (see Section 8). Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, create a dike to stop material spreading or going into drains or waterways. Cover with absorbent material. Shovel material into clean, dry, labelled containers and close lid.

## 7 Handling and Storage

### Precautions for Safe Handling:

Keep out of reach of children. Avoid contact with eyes and skin. Wash hands after use, and before smoking or eating / drinking. Wash protective gear and clothing after each day's 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.

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## 8 Exposure Controls / Personal Protection

### Exposure Standards:

Exposure limits have not been established by Safe Work Australia for any of the significant ingredients in this product.

### Engineering Controls:

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

### Personal Protective Equipment:

**Respiratory Protection:** Usually, no respirator is necessary when handling this product. However, if a respirator is considered necessary consult the Australian Standard AS/NZS 1715.

**Eye and Face Protection:** Protective glasses or goggles should be worn when this product is being handled. 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 and Body Protection:** Prevent skin contact by wearing impervious gloves (PVC, neoprene or rubber), clothes and, preferably an apron. Make sure that all skin areas are covered.

## 9 Physical and Chemical Properties

Appearance	White liquid
Odour	Almost odourless
Flammability	Not flammable
Flash point	> 100 °C
Boiling point	Approximately 100 °C
pH	5-9
Vapour density	Not measured
Specific gravity	1.032
Solubility (water)	Miscible
Vapour pressure	$1.81 \times 10^{-7}$ mmHg at 25 °C (bifenthrin)
Upper explosion limit	Not explosive
Lower explosion limit	Not explosive
Partition coefficient	( $K_{ow}$ ) <sup>5</sup> : $1.0 \times 10^6$ (bifenthrin)

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## 10 Stability and Reactivity

### Chemical Stability:

**Thermal Decomposition:** If involved in a fire, the formation of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride can be expected.

**Hazardous reactions:** No hazardous reactions with proper storage and handling.

**Hazardous Polymerization:** Unlikely to occur.

**Stability:** Stable under normal conditions of storage and use.

**Hazardous decomposition products:** None with proper storage and handling.

### Conditions to Avoid:

None with proper storage and handling, other than extreme heat.

## 11 Toxicological Information

### Acute Toxicity:

**Oral:** Bifenthrin is harmful to mammals when ingested. Large doses may cause incoordination, tremor, salivation, vomiting, diarrhoea, and irritability to sound and touch. The bifenthrin LD<sub>50</sub>, is approximately 54 mg/kg in female rats and 70 mg/kg in male rats.

### Inhalation:

**Dermal:** The bifenthrin dermal LD<sub>50</sub> for rabbits is > 2,000 mg/kg.

**Skin Corrosion/Irritation:** The product is expected to be a skin irritant based on animal studies.

**Eye Damage/Irritation:** The product is expected to be an eye irritant based on animal studies.

**Sensitisation:** The product is expected to be a skin sensitiser based on animal studies.

**Mutagenicity:** Evidence of mutagenic effects from exposure to bifenthrin are 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

**Carcinogenicity:** There was no evidence of cancer in a 2-year study of rats who ate as much as 10 mg/kg/day of bifenthrin. However, an 87 week feeding study of mice with doses of 7, 29, 71, and 86 mg/kg showed a significantly higher, dose related trend of increased tumor incidence in the male urinary bladder. The incidence was significantly increased at 86 mg/kg/day. Also, females had higher incidences of lung cancer than the controls at doses of 7 mg/kg and higher. The US EPA has classified bifenthrin as a class C carcinogen,

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a possible human carcinogen.

**Reproduction:** The bifenthrin maternal toxicity NOEL is 1 mg/kg/day for rats and 2.67 mg/kg/day for rabbits. The developmental toxicity NOEL is 1 mg/kg/day for rats and is greater than 8 mg/kg/day for rabbits.

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

**Target Organ Toxicity:** Pyrethroids are poisons that affect the electrical impulses in nerves, over-stimulating nerve cells causing tremors and eventually causing paralysis

## 12 Ecological Information

### Ecotoxicity:

**Birds:** Bifenthrin is moderately toxic to many species of birds. The 8-day dietary LC<sub>50</sub>, is 1,280 ppm for mallard ducks and 4,450 ppm for bobwhite quail. The acute oral LD<sub>50</sub> is 1,800 mg/kg for bobwhite quail and 2,150 mg/kg for mallard ducks. There is concern about possible bioaccumulation in birds.

**Aquatic Organisms:** Bifenthrin is very highly toxic to fish, crustaceans and aquatic animals. The LC<sub>50</sub> after a 96-hour exposure is 0.00015 mg/l for rainbow trout, 0.00035 mg/l for bluegill, and 0.0016 mg/l for Daphnia. Because of its low water solubility and high affinity for soil, bifenthrin is not likely to be found in aquatic systems.

**Other Animals:** Bifenthrin is toxic to bees

### Persistence and Degradability:

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 is 7 days to 8 months depending on the soil type and the amount of air in the soil.

**Bioconcentration:** A whole fish log BCF of 3.8 was measured in bluegill sunfish exposed to bifenthrin for 28 days, corresponding to a BCF of 6,100 suggesting the potential for bioconcentration in aquatic organisms is high.

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## 13 Disposal Considerations

### Disposal Methods:

Dispose of waste according to the Australian Standard AS 2507 - Storage and Handling of Pesticides. DO NOT allow spilled product to enter sewers, drains, creeks or any other waterways.

See the product label and Section 6 of this SDS for advice regarding disposal of small quantities, and how to cleanse containers. For disposal of unwanted rural chemicals, contact ChemClear 1800 008 182 (<http://www.chemclear.com.au/>) and for disposal of empty drums, contact DrumMuster (<http://www.drummuster.com.au/>) in your area.

## 14 Transport Information

<b>Dangerous Goods Class</b>	Class 9: Miscellaneous Dangerous Goods.
<b>UN Number:</b>	3082
<b>Proper Shipping Name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>Packing Group:</b>	III
<b>Packaging Method:</b>	P001, IBC03, LP01
<b>Special Provisions:</b>	179, 274, AU01
<b>Limited quantities:</b>	ADG 7 specifies a Limited Quantity value of 5 L for this class of product.
<b>Hazchem Code:</b>	2Z

## 15 Regulatory Information

<b>Poison Scheduling:</b>	Schedule 6 Poison
<b>Registration/Notification:</b>	Registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA Number 88130)

## 16 Other Information

<b>Date Prepared:</b>	16 December 2019
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<b>ADG</b>	Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017
<b>AS/NZS</b>	Australian Standard/New Zealand Standard
<b>BCF - Bioconcentration Factor</b>	Ability to accumulate a chemical in an organism to levels greater than in the surrounding medium. Calculated by dividing the concentration of a chemical in an organism by

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<b>Explosive Limits</b>	the concentration in the surrounding medium. The range of concentrations (% by volume in air) of a flammable gas or vapour that can result in an explosion in a confined space.
<b>CAS Number:</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub>:</b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species).
<b>GHS:</b>	Globally Harmonized System of classification and labelling of chemicals (GHS)
<b>Hazchem Code:</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HCIS:</b>	Hazardous Chemical Information System ( <a href="http://hcis.safeworkaustralia.gov.au/HazardousChemical">http://hcis.safeworkaustralia.gov.au/HazardousChemical</a> )
<b>IARC:</b>	International Agency for Research on Cancer
<b>LD<sub>50</sub>:</b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>IDLH:</b>	Immediately dangerous to life or health ( <b>IDLH</b> ) is <b>defined</b> by the US National Institute for Occupational Safety and Health (NIOSH)
<b>K<sub>oc</sub></b>	The organic carbon partition coefficient (mL soil water / g organic carbon).
<b>LC<sub>50</sub>:</b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population.
<b>NOAEL</b>	The highest dose or concentration of a substance used in a test/study that does not produce any observable adverse effects in the target organism.
<b>NOEL</b>	The highest dose call concentration of a substance used in a test/study that does not produce any observable effects in the target organism.
<b>NTP:</b>	National Toxicology Program (USA)
<b>pH</b>	Measure of how acidic or alkaline a material is using a 1 - 14 scale. pH 1 is strongly acidic and pH 14 strongly alkaline.
<b>Polymerisation</b>	A chemical reaction in which molecules (monomers) combine to form larger molecules (polymers). A hazardous polymerisation reaction is one that occurs at a fast rate and releases large amounts of energy.
<b>SDS:</b>	Safety Data Sheet
<b>P<sub>ow</sub></b>	The octanol-water partition coefficient. The ratio of the concentration of octanol and in water at equilibrium and at a specified temperature used in environmental studies to indicate fate of chemicals and the environment.
<b>STEL:</b>	Short term exposure limit (STEL) means the time-weighted average maximum airborne concentration of a substance calculated over a 15 minute period.
<b>SWA</b>	Safe Work Australia.
<b>TWA:</b>	8-hour Time-weighted average (TWA) means the maximum average airborne concentration of a substance when



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calculated over an eight-hour working day, for a five-day working week.

**WES:** Workplace exposure standard

**UN Number:** United Nations Dangerous Goods Number

## Disclaimer

This Safety Data Sheet (SDS) has been prepared in compliance with the Safe Work Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (February 2016). The information in this SDS should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Australian Outdoor Living Pty Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.

## References

Prepared using data supplied by manufacturer and public databases. Hazard classification conducted according to the Safe Work Australia Guidance on the Classification of Hazardous Chemicals under the WHS Regulations. Australian Dangerous Goods Code (ADG 7). Pubchem.

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