

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	EnviroMax Permethrin 500 EC Residual Insecticide.
Other means of identification:	Permethrin emulsifiable concentrate; synthetic pyrethroid insecticide.
Recommended use of the chemical and restrictions on use:	A liquid, synthetic pyrethroid insecticide concentrate suitable for a broad range of applications as described by the label.
Supplier:	EnviroMax Technologies Pty Ltd
ABN:	132 643 577
Street Address:	Level 6, 10 Eagle Street, Brisbane, QLD 4000
Telephone No:	+ 61-7-3897 8300
Fax:	+61-7-3386 3333
Email:	www.awct.com.au
Distributed by:	Australasian Wholesale Chemical Technologies Pty Ltd PO Box 984 North Lakes QLD, Australia 4509
Emergency Telephone:	+ 61- (0) 409 926 561

2. HAZARDS IDENTIFICATION

Classification of the substance mixture: Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Acute Oral Toxicity - Category 4
Acute Inhalation Toxicity – Category 4
Aspirational hazard - Category 1
Eye Corrosive – Category 1
Skin Sensitisation – Category 1A

The following health hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

SIGNAL WORD: DANGER



Hazard Statement(s):

H302 Harmful if swallowed
H332 Harmful if inhaled
H304 May be fatal if swallowed and enters airways
H317 May cause an allergic skin reaction - Category 1A
H318 Causes serious eye damage

Precautionary Statement(s):

Prevention:

Safety Data Sheet

EnviroMax Permethrin 500 EC Residual Insecticide

- P264 Wash hands, arms and face thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P261 Avoid breathing mist/vapour/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/Eye protection/Face protection.

Response:

P301+P310+P331 IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting

P304+P340 If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician if in eyes.

P302+P352+P333+P313 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention

P363 Wash contaminated clothing before reuse

Storage:

P405 Store locked up

Disposal:

P501 Dispose of contents/container in accordance with Federal, State and Local Government regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion (w/w)
Permethrin	52645-53-1	(50%) 500 g/L
Aromatic hydrocarbons	64742-94-5	30 - 60%
Calcium alkylbenzene sulfonate	26264-06-2	< 10%
Other non-hazardous ingredients	-	to 100%

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation: Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin Contact: If skin or hair contact occurs, remove contaminated clothing and wash skin and hair with soap and water. If irritation occurs seek medical advice.

Eye Contact: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

First Aid Facilities: Eyewash and normal washroom facilities.

Indication of immediate medical attention and special treatment needed: Treat symptomatically. Note that this product contains an aromatic hydrocarbon. Induction of vomiting may lead to inhalation of its vapours, which in turn may lead to lung damage. Therefore, induction

of vomiting is preferably performed under trained medical supervision.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Normal foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards arising from the substance or mixture:	In the event of fire the following may be released: Hydrogen chloride (HCl); Carbon monoxide (CO); Carbon dioxide (CO ₂).
Special protective equipment and precautions for fire-fighters:	Fire fighters should wear self-contained breathing apparatus and suitable protective clothing to prevent risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/ Environmental precautions:	Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.
Personal precautions/ Protective equipment:	Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation.
Methods and materials for containment and cleaning up:	Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling:	Keep containers closed at all times - check regularly for leaks or spills. Transport and store upright. Avoid skin and eye contact. Keep out of reach of children. Do not eat, drink or smoke in contaminated areas. Always remove contaminated clothing and wash hands before eating, drinking, smoking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.
Conditions for safe storage, including any incompatibilities:	Store in the original container, in a cool dry well-ventilated area out of direct sunlight. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters:	No value assigned for this specific material by Safe Work Australia.
Appropriate engineering controls:	Use in well ventilated areas. Keep containers closed when not in use.
Individual protection measures, such as Personal Protective Equipment (PPE):	
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. Observe good standards of hygiene and cleanliness. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.	
Respiratory Protection:	A respirator is not needed under normal and intended conditions of product use however if ventilation is not adequate then a respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
Eye and Face protection:	Safety glasses/goggles with side shield protection should be worn as a general precaution. Consult AS/NZS 1336 and AS/NZS 1337 for further information.
Skin Protection:	PVC or nitrile rubber gloves should be worn as a general precaution. Always check with the glove manufacturer or your personal protective equipment supplier regarding the correct type of glove to use. Consult AS/NZS 2161 for further information. Trousers, long sleeved shirt or overalls and closed in shoes or safety footwear should be worn as a general precaution. Consult AS/NZS 2210 and AS/NZS 2919 for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Pale brown
Odour:	Mild aromatic odour
pH:	6 to 7.5 pH (1% w/w solution)
Specific Gravity:	1.05 at 20°C
Melting Point/Freezing Point:	No information available.
Boiling Point/Range:	No information available.
Flash Point:	62°C (aromatic hydrocarbon)
Evaporation Point:	No information available.
Vapour Pressure:	No information available.
Vapour Density:	No information available.
Solubility:	Insoluble. Emulsifiable in water.
Partition coefficient: n- octanol/water	No information available.
Auto-ignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.
Flammable limits in air:	Lower Flammable Limit: 0.6; Upper Flammable Limit: 7.0 (aromatic hydrocarbon)

10. STABILITY AND REACTIVITY

Reactivity:	Stable under normal storage conditions and use.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	None when stored and used as directed. Hazardous polymerisation is not possible. This product is unlikely to undergo polymerisation processes.
Conditions to avoid:	Excess heat, ignition sources.
Incompatible materials:	Strong acids, strong bases, strong oxidising agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of hydrogen chloride (HCl) and carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	No toxicity data for this specific product is available, however the estimated toxicity of the mix has been calculated from the hazardous ingredients: ATEmix LD50 (oral): 711 mg/kg ATEmix LC50 (inhalation): 3 mg/L/4hr (dusts and mists)
Ingestion:	Harmful if swallowed.
Inhalation:	Harmful if inhaled.
Skin:	Irritating to the skin, avoid contact with skin.
Eye:	Causes serious damage to eyes. Contamination of eyes may result in permanent injury. Avoid contact with eyes.
Respiratory or skin sensitisation:	Is considered to cause skin sensitisation and allergic skin reactions.
Germ cell mutagenicity:	Not considered to be a mutagenic hazard. Permethrin is not considered to be a mutagen based on negative results from a bacterial DNA assay, an Unscheduled DNA Synthesis (UDS) assay in primary rat hepatocytes, and an in vitro chromosome aberration study
Carcinogenicity:	Not considered to be a carcinogenic. No carcinogenic effects were found in mice or rats fed Permethrin daily for two years.
Reproductive toxicity:	Not considered to be toxic to reproduction. Permethrin did not affect reproduction in studies. No adverse reproductive effect (including indices of fertility, gestation, viability and lactation) was seen with permethrin at dosage levels of 500, 1000 and 2500 mg/kg (diet).

STOT-single exposure:	Not expected to cause toxicity to a specific target organ.
STOT-repeated exposure:	Not expected to cause toxicity to a specific target organ.
Aspiration hazard:	Aspiration hazard. May be fatal if swallowed and enters the airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Avoid contaminating waterways. Do not discharge product into the environment without control.
Fish:	Information on Permethrin technical grade active constituent: Permethrin is highly toxic to fish: 96-hour LC50 0.0125 mg/L (<i>Oncorhynchus mykiss</i>).
Aquatic invertebrates:	Permethrin is highly toxic to aquatic invertebrates: 96-hour LC50 0.00012 mg/L (<i>Daphnia magna</i>) & 96-hour LC50 0.00002 mg/L (<i>Americamysis bahia</i>). However, field applications of Permethrin are not expected to affect fish and aquatic organisms significantly as it binds tightly to soil and breaks down quickly.
Birds:	Permethrin is practically non-toxic to birds, acute oral LD50 for mallard ducks >9800 mg/kg. Permethrin did not affect the reproduction of female Japanese quail when fed up to 1.0 mg for 34 days.
Terrestrial insects:	Permethrin is highly toxic to honeybees: 48 hr contact LD50 29 µg/bee; and algae: chronic 96 hour NOEC (growth) of 0.0009 mg/L. Low toxicity to earthworms: Acute 14 day LC50 1440 mg kg ⁻¹ .
Persistence/degradability:	Non-persistent with aerobic half-life in soil is 13 days in lab conditions, and 42 days in field dissipation studies. Moderately fast photolysis, 1 day DT50. Permethrin was stable to hydrolysis in a solution of pH 7 (31 days DT50).
Bioaccumulative potential:	Permethrin is predicted to have moderate potential to bioaccumulate in the environment.
Mobility in Soil:	Permethrin is considered relatively immobile in soils. Permethrin has little potential to leach into groundwater due to its strong tendency to bind to soil organic matter (GUS leaching potential index -1.11).

13. DISPOSAL CONSIDERATIONS

Disposal methods:	On site disposal of the concentrated product is not acceptable. Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations. Empty containers should not be burnt.
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14. TRANSPORT INFORMATION

Road and Rail Transport:	According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500kg or 500 L are not subject to the ADG Code.
Transport:	If transported above these limits, then it is classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS
UN Number:	3082
Proper Shipping Name or Technical Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN Emulsifiable)
Transport Hazard Class:	9
Packaging Group:	III
Hazchem Code:	•3Z

Safety Data Sheet

EnviroMax Permethrin 500 EC Residual Insecticide

Marine Transport:	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
	UN Number: 3082
	Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN)
	Transport Hazard Class: 9
	Packaging Group: Not assigned.
	IMDG EMS Fire: F - A
	IMDG EMS Spill: S - F
Air Transport:	Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.
	UN Number: 3082
	Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN)
	Transport Hazard Class: 9
	Packaging Group: Not assigned.

15. REGULATORY INFORMATION

Poison Schedule (SUSMP):	6 - POISON
APVMA Approval No:	63598
AICS:	All the constituents of this material are either listed on the Australian Inventory of Chemical Substances (AICS), not required due to the nature of the chemical, or have been assessed under the National Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

16. OTHER INFORMATION

General Information:	Pyrethroids are poisons that affect the electrical impulses in nerves, over-stimulating nerve cells causing tremors and eventually causing paralysis. Permethrin is considered to be readily absorbed when administered orally but minimally through skin. There is little tendency for Permethrin to accumulate in tissues. In rats the metabolism of permethrin is very rapid, metabolites with no known toxic effects. Elimination is rapid, with 50% excreted within 48 hours and 100% eliminated within 8 to 12 days. The ADI for Permethrin is set at 0.05 mg/kg/day. The corresponding NOEL is set at 5 mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2002.
Issue Number:	003
Issue Date:	5 th Feb 2020
Reason(s) for Issue:	In any event, the review and, if necessary, the re-issue of an SDS shall be no longer than 5 years after the last date of issue.
Literary Reference:	Revised SDS format. No amendments to hazard classification. IUPAC Agrochemical Information: Permethrin http://sitem.herts.ac.uk/aeru/iupac/515.htm World Health Organization Food And Agriculture Organization. Data Sheet On Pesticides No. 51: Permethrin http://www.inchem.org/documents/pds/pds/pest51_e.htm United States Environmental Protection Agency: Deltamethrin. Permethrin Facts. (Reregistration Eligibility Decision (RED) Fact Sheet) http://www.epa.gov/oppsrrd1/REDs/factsheets/permethrin_fs.htm
Key abbreviations or acronyms used:	ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) AICS - Australian Inventory of Chemical Substances



Safety Data Sheet

EnviroMax Permethrin 500 EC Residual Insecticide

AgVet Code Act 1994 – Agricultural and Veterinary Chemicals Code Act 1994

APVMA – Agricultural Pesticides and Veterinary Medicines Australia

GHS - Globally Harmonised System of Classification and Labelling of Chemicals (3rd revised edition) 2009

IARC - International Agency for Research on Cancer

LD₅₀ or LC₅₀ – Estimated lethal dose / concentration to kill 50% of the population/sample.

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (December 2016)

STEL - Short term exposure limit means the average airborne concentration of a substance calculated over a 15 minute period. The STEL should not be exceeded at any time during a normal eight hour working day.

STOT – Specific Target Organ Toxicity

SUSMP - Standard for the Uniform Scheduling of Medicines & Poisons

SWA - Safe Work Australia, formerly ASCC and NOHSC

TGA – Therapeutic Goods Australia

WHS – Workplace Health and Safety

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END OF SDS