Section 1 - Identification of The Material and Supplier

Ensystex Australasia Pty Ltd
Warehouse D, Building 6, The Switchyard
161 Manchester Road, AUBURN, NSW 2144
13 35 36 (all hours)

Ensystex New Zealand Ltd
17C Corinthian Drive
Albany, Auckland 0752
0800 ENSYSTEX (0800 367 978)

Chemical nature:	**Bifenthrin is a pyrethroid derivative**
Trade Name:	MAXXTHOR® 100 Water-based Termiticide & Insecticide
Product Code:	Australia APVMA: 60113 New Zealand HSR Approval: HSR 100773
Product Use:	Termiticide and/or insecticide for use as described on the registered product label. APPROVED for use in food manufacturing and food processing areas.
Creation Date:	**June, 2014**
This version issued:	**November, 2024** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature
SUSMP Classification: S6
ADG Classification: Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500 kg(L) or less; or IBCs (refer to SP AU01).
IATA/IMDG Classification: Where net quantity per single or inner packaging is 5 L or less for liquids or 5 kg or less for solids, goods may be transported as non-dangerous goods as provided in special provision A197 of the IATA regulations and section 2.10.2.7 of IMDG code. This product is always packed at 5 L or less. See details in Section 14 of this SDS.
UN Number: 3082
GHS Classification:

Acute toxicity – Oral: Category 4
Acute toxicity – Inhalation: Category 5
Carcinogenicity: Category 2
Hazardous to aquatic environment, long-term hazard: Category 2

GHS Signal word: WARNING

HAZARD STATEMENT:

H302: Harmful if swallowed.
H333: May be harmful if inhaled.
H351: Suspected of causing cancer
H411: Toxic to aquatic life with long lasting effects.

PREVENTION

P102: Keep out of reach of children.
P202: Do not handle until all safety precautions have been read and understood.
P264: Wash contacted areas thoroughly after handling.
P270: Do not eat, drink, or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves and protective clothing.

RESPONSE

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P312: IF INHALED: Call a POISON CENTRE or doctor if you feel unwell.
P308+P313: IF exposed or concerned: Get medical advice.
P391: Collect spillage.

STORAGE

P405: Store locked up.
P410: Protect from sunlight.

DISPOSAL

P501: If they cannot be recycled, dispose of contents to an approved waste disposal plant and containers to landfill (see Section 13 of this SDS).

Emergency Overview

Physical Description & colour: White to pale beige opaque liquid.
Odour: Characteristic odour.
Major Health Hazards: Bifenthrin is harmful to mammals when ingested. Large doses may cause incoordination, tremor, salivation, vomiting, diarrhoea, and irritability to sound and touch.

Potential Health Effects

Inhalation:

Short term exposure: Available data indicates that this product is not harmful. However, product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.
Long Term exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However, product may be irritating, but is unlikely to cause anything more than mild transient discomfort.
Long Term exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However, product may be irritating, but is unlikely to cause anything more than mild transient discomfort.
Long Term exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short term exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.
Long Term exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Bifenthrin is classified as category 2 carcinogen by SWA.
NTP: No significant ingredient is classified as carcinogenic by NTP.
IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m^3)	STEL (mg/m^3)
Bifenthrin	82657-04-3	10% (100 g/L)	not set	not set
Other non-hazardous ingredients	various	10% approx.	not set	not set
Water	7732-18-5	to 100%	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned, or irritated by this product. The number is 13 11 26 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air, and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
Fire decomposition products from this product are likely to be toxic and corrosive if inhaled. Take appropriate protective measures.

Extinguishing Media: Not combustible. Use extinguishing media suited to burning materials.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point:	Does not burn.		
Upper Flammability Limit:	Does not burn.	**Lower Flammability Limit:**	Does not burn.
Autoignition temperature:	Not applicable - does not burn.	**Flammability Class:**	Does not burn.

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the clean-up area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.
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, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions.
After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport, and storage of this schedule of poison. Make sure that containers of this product are kept tightly closed. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits **TWA (mg/m^3)** **STEL (mg/m^3)**

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

The ADI for Bifenthrin is set at 0.01 mg/kg/day. The corresponding NOEL is set at 1 mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2013.

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.

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash bath/facilities are recommended in an area close to where this product is being used.

Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	White to pale beige opaque liquid.
Odour:	Characteristic odour.
Boiling Point:	Approx. 100 °C at 100 kPa
Freezing/Melting Point:	Approx. 0 °C
Volatiles:	No data.
Vapour Pressure:	2.37 kPa at 20 °C (water vapour pressure).
Vapour Density:	No data.
Specific Gravity:	1.0 approx.
Water Solubility:	Completely soluble.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water distribution:	No data
Autoignition temp:	Not applicable - does not burn.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Keep containers tightly closed.

Incompatibilities: strong acids, strong bases, oils.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: This product (MAXXTHOR) was tested under GLP conditions with the following results: LD_{50} (Oral), Rat, female, was estimated to be 1,098 mg/kg (OECD 425). The LD_{50} (Dermal), Rat (male and female) was found to be >2000 mg/kg (OECD 420). The LD_{50} (Inhalation), rat (male and female) was found to be greater than 5.340 mg/L air. This product is not considered as skin sensitization (OECD 406) and not classified as a skin or eye irritant (OECD 404, 405).
Bifenthrin is harmful to mammals when ingested. Large doses may cause incoordination, tremor, salivation, vomiting, diarrhoea, and irritability to sound and touch. LD_{50}, for bifenthrin is about 54 mg/kg in female rats and 70 mg/kg in male rats. The LD_{50} for rabbits whose skin is exposed to bifenthrin is greater than 2,000 mg/kg. Bifenthrin does not sensitize the skin of guinea pigs. Although it does not cause inflammation or irritation on human skin, it can cause a tingling sensation which lasts about 12 hours. It is virtually non-irritating to rabbit eyes.
Chronic Toxicity: No information Available.
Reproductive Effects: The dose at which no toxic effect of bifenthrin is observed on the mother (maternal toxicity NOEL) is 1 mg/kg/day for rats and 2.67 mg/kg/day for rabbits. At higher doses, test animals had tremors. The dose at which no toxic effect is observed on development (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.
Organ Toxicity: Pyrethroids are poisons that affect the electrical impulses in nerves, over-stimulating nerve cells causing tremors and eventually causing paralysis.
Fate in Humans and Animals: Bifenthrin is absorbed through intact skin when applied topically. It undergoes similar modes of breakdown within animal systems as other pyrethroid insecticides. In mammals, bifenthrin is rapidly broken down and promptly excreted. Rats treated with 4 to 5 mg/kg, excreted 70% in the urine and 20% in the faeces within 7 days. After 7 days, the remaining bifenthrin was found accumulated in tissues with high fat content such as the skin and fat in males and females and the ovaries of females. Bifenthrin is less toxic to warm-blooded animals, such as mammals, than to cold-blooded animals.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Bifenthrin	>=3%Conc<25%: Xn; R22

There is no data to hand indicating any particular target organs.

Section 12 - Ecological Information

Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.
Effects on Birds: Bifenthrin is moderately toxic to many species of birds. The dietary concentration (8 day) at which half of the test animals die, the LC_{50}, is 1,280 ppm for mallard ducks and 4,450 ppm for bobwhite quail. The acute oral LD_{50} is 1,800 mg/kg for bobwhite quail and 2,150 mg/kg for mallard ducks.
Effects on Aquatic Organisms: Bifenthrin is very highly toxic to fish, crustaceans, and aquatic animals. The LC_{50} 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.
Effects on Other Animals (Non-target species): Bifenthrin is toxic to bees.

ENVIRONMENTAL FATE
Breakdown of Chemical in Soil & Groundwater: 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, the amount of time it takes to degrade to half of its original concentration, is 7 days to 8 months depending on the soil type and the amount of air in the soil.
Breakdown of Chemical in Vegetation: Bifenthrin is not absorbed by plant foliage, nor does it translocate in the plant.

Section 13 - Disposal Considerations

Disposal: Containers should be emptied as completely as practical before disposal. If possible, recycle product and containers either in-house or send to recycle company. If this is not practical, send to a commercial waste disposal site.
Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details.

Section 14 - Transport Information

UN number:	3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenthrin contained)
Transport class:	9
Packing group:	III
Environmentally hazardous:	Yes

According to AU01 of Australian Special Provision, Environmentally Hazardous Substances meeting the description of UN3082 are not subject to this Code (ADG 07) when transported by road and rail in:

a) packaging that does not incorporate a receptacle exceeding 500 kg (L); or
b) IBCs.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

This material is not a hazardous material as defined by the U.S. Department of Transportation 49 CFR Parts 100 through 185, unless shipped in bulk packaging. This classification pertains only to the shipment in bulk packaging [(>119 gal, liquid) or (882 lb, solid)].

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.
The following ingredient: Bifenthrin, is mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

If there is any conflict between this SDS and the registered label, instructions on the label prevail.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

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