



SAFETY DATA SHEET

EnviroMax Fipronil 100SC Termiticide & Insecticide

Section 1: Identification	
Product identifier:	EnviroMax Fipronil 100SC Termiticide & Insecticide.
Other means of identification:	Fipronil suspension concentrate; phenylpyrazole insecticide
Recommended use of the chemical and restrictions on use	For the protection of structures from subterranean termite damage and for the control of subterranean termites around domestic and commercial structures specified on the product label
Details of manufacturer	EnviroMax Technologies Pty Ltd 504 Boundary Road, Archerfield QLD 4108, Australia
Emergency phone number	61- (0) 4099 26561
Section 2: Hazard Identification	
Hazard Classification:	Acute toxicity: oral – Category 4 Acute toxicity: inhalation – Category 3 Specific Target organ toxicity, repeated exposure: Category 2 Very toxic to aquatic organisms, Category 1
Signal Word:	Warning
Hazard statements:	H302-Harmful if swallowed H332-Harmful if inhaled H373-May cause damage to organs H400-Very toxic to aquatic life
Precautionary statements:	Avoid breathing vapours or spray. Contaminated work clothing should not be allowed out of the workplace.
Prevention:	Wear protective chemical resistant clothing buttoned to the neck and wrist and a washable hat, half-face piece respirator with combined dust and gas cartridge and elbow length PVC or nitrile gloves. Wash hands, arms and face thoroughly after handling. Do not eat, drink or smoke when using this product.
Response:	IF SWALLOWED: Call a POISON INFORMATION CENTER (Ph 131 126) or doctor/physician if you feel unwell. Rinse mouth. IF IN EYES wash out immediately with water for at least 15 minutes. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment is not required. Wash contaminated clothing before reuse.

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Disposal: Dispose of contents/container in accordance with container label instructions as per local State and Council requirements.

Symbols:



Exclamation mark Chronic health hazard Acute aquatic hazard

Section 3: Composition / Information On Ingredients

Chemical Identity of Ingredients

Common Name	CAS Number	Concentration
Fipronil	120068-37-3	10%
Non-ionic surfactant	-	< 10%
Preservative	-	< 10%
Other non-hazardous ingredients	-	> 60%

Section 4: First Aid Measures

General Advice:

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor (at once). Have this MSDS with you when you call.

Description of necessary first aid measures

Inhalation:

Remove from exposure area to fresh air immediately, seek medical attention.

Skin Contact:

Remove contaminated clothing and shoes immediately and wash with plenty of water and soap. If irritation develops, seek medical attention.

Eye Contact:

Flush eyes immediately with large amounts of water or normal saline solution, occasionally lifting upper and lower lids until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

Ingestion:

Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Symptoms caused by exposure

Clinical signs and symptoms reported after ingestion of fipronil by humans include sweating, nausea, vomiting, headache, abdominal pain, dizziness, agitation, weakness, and tonic-clonic seizures. Clinical signs of exposure to fipronil are generally reversible and resolve spontaneously

Medical attention and special treatment

Treat symptomatically. Exposure to fipronil and its metabolites can be measured via a blood sample or in the gastric lavage fluid. Samples should be collected as soon after the exposure as possible.²¹ Methods of analysis include an ELISA developed to detect total fipronil (fipronil and its metabolites) and liquid chromatography mass spectrometry which can distinguish fipronil from its sulfone and desulfinyl metabolites

Section 5: Fire Fighting Measures

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Suitable extinguishing equipment:	Water fog or spray, foam, carbon dioxide (CO ₂) or dry chemical.
Specific hazards arising from the chemical	The following substances/groups of substances can be released during a fire: carbon monoxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, organochloric compounds, sulfur oxides
Special protective equipment and precautions for fire fighters	In case of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and chemical-protective clothing. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately. Do not allow contaminated water to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
Section 6: Accidental Release Measures	
Personal precautions, protective equipment and emergency procedures	Avoid contact with eyes and skin. Wear chemical resistant clothing buttoned to the neck and wrist and a washable hat, half-face piece respirator with combined dust and gas cartridge and elbow length PVC or nitrile gloves. After each day's use, wash gloves, contaminated clothing and respirator and if rubber wash with detergent and warm water.
Environmental precautions	In the event of a spill, prevent spillage from entering drains or water courses with absorbent material and call emergency services.
Methods and materials for containment and cleaning up	Contain spill by absorbing with clay, sand, soil or proprietary absorbent (such as vermiculite). Cover drains if possible. Collect spilled material and waste in sealable open-top type containers for disposal.
Section 7: Handling And Storage	
Precautions for safe handling	Read container label before use. Use only in accordance with the instructions provided on the container label, including the Precaution and Protection sections and the Safety Directions.
Conditions for safe storage	Store in the closed, original container in a dry, well ventilated area, as cool as possible.
Section 8: Exposure Controls / Personal Protection	
Exposure control measures	No exposure standards have been set for this product or its ingredients
Biological monitoring	No biological limit allocated for the product or any of its ingredients. No biological monitoring is required.
Control Banding	No control banding level allocated.
Engineering controls	Use only in a well ventilated area.
Individual protection measures	When opening the container, preparing spray and using the prepared spray wear chemical resistant clothing buttoned to the neck and wrist and a washable hat, half-face piece respirator with combined dust and gas cartridge and elbow length PVC or nitrile gloves. After each day's use, wash gloves, contaminated clothing and respirator and if rubber wash with detergent and warm water.
	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
Section 9: Physical and Chemical Properties	
Appearance:	Light brown suspension
Odour:	Minimal odour
pH:	7.2 (1% w/w solution)
Vapour pressure:	2.8x10 ⁻⁹ mmHg @ 25°C (fipronil)
Octanol-Water Partition Coefficient (K_{ow}):	1.00x10 ⁴ (fipronil)
Henry's constant:	3.7 x 10 ⁻⁵ atm·m ³ /mol (fipronil)

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Specific gravity:	1.05 kg/L (fipronil)
Viscosity:	779 cP (fipronil)
Solubility (water)	0.0019 g/L (pH 5); 0.0024 g/L (pH 9) at 20 °C (fipronil) EnviroMax Fipronil 100SC Termiticide & Insecticide is a suspension in water.
Ignition temperature:	No data available

Section 10: Stability And Reactivity

Reactivity:	
Chemical stability:	Stable under normal storage conditions and use.
Possibility of hazardous reactions:	None when stored and used as directed. Hazardous polymerisation is not possible.
Conditions to avoid:	None known. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.
Incompatible materials:	No particular incompatibilities. Store and use as directed.
Hazardous decomposition products	None known. Store and use as directed.

Section 11: Toxicological Information

Acute Oral (LD₅₀):	946 mg/kg (rat, calculated from ingredients) Category 4
Acute Dermal (LD₅₀):	3272 mg/kg (rabbit, calculated from ingredients) Category 5
Acute Inhalation (LC₅₀):	No studies available for the product, estimated LC ₅₀ =5 mg/L calculated from ingredients)
Skin irritation:	Not considered a skin irritant (rabbit)
Eye irritation:	Moderate eye irritant (rabbit)
Skin sensitisation:	Skin sensitiser (fipronil, guinea pig)
Genotoxicity (mutagenicity)	No data for the product. Fipronil is not considered to be genotoxic via in-vitro and in-vivo studies.
Carcinogenicity:	No data for the product. Fipronil is not considered to be carcinogenic (52 week rat studies). Fipronil did not cause mutations in human lymphocytes, Chinese hamster V79 cells, <i>Salmonella</i> (Ames test), or mouse micronuclei.
Reproductive toxicity:	No data for the product. Fipronil is not considered to have significant reproductive toxicity. No developmental abnormalities were reported for fipronil administered to rats and rabbits at oral doses up to 20 mg/kg bw/d and 1 mg/kg bw/d respectively.
Specific Target Organ Toxicity – single exposure:	No data for the product. Fipronil technical produces clinical signs of neurotoxicity.
Specific Target Organ Toxicity – repeat exposure:	No data for the product. Repeated fipronil exposure produces effects on the liver and thyroid.
Aspiration hazard:	No data for the product or fipronil.

Inhalation

Fipronil has sufficiently low vapour pressure so that fipronil does not readily volatilize. Use as per label instructions (low pressure spray) is unlikely to result in significant inhalation exposure. Breathing in very high concentrations of spray mist through use of this product may cause changes in activity, tremors, convulsions, and seizures.

Skin Contact

The product is not considered a skin irritant. Repeated exposure to fipronil can result in skin sensitisation. Care should be taken to avoid future exposure.

Eye Contact

Product may irritate the eyes.

Ingestion

Possible symptoms of exposure include changes in activity, tremors, convulsions, and seizures.

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Exposure levels and health effects

The acute reference dose (ARfD) for fipronil is 0.02 mg/kg body weight based on a combined NOEL of 2.5 mg/kg bw/day from two acute neurotoxicity studies in rats and a safety factor of 100.

Section 12: Ecological Information

ENVIRONMENTAL TOXICITY

Ecotoxicity:	Information on fipronil, the primary environmental toxicant.
Fish:	LC50 (96 h) 0.246 mg/l, <i>Oncorhynchus mykiss</i> LC50 (96 h) 0.083 mg/l, <i>Lepomis macrochirus</i> LC50 (96 h) 0.130 mg/l, <i>Cyprinodon variegatus</i>
Aquatic invertebrates:	EC50 (48 h) 0.19 mg/l, <i>Daphnia magna</i> EC50 (96 h) 0.77 mg/L Eastern Oyster EC50 (96 h) 0.14 µg/L Mysid shrimp
Aquatic plants:	EC50 (96 h) 0.068 mg/l (biomass), <i>Scenedesmus subspicatus</i> .
Birds:	Acute oral LD50 11.3 mg/kg and 31.0 mg/kg, bobwhite quail and pheasants respectively Sub-acute toxicity - 5-day dietary LC50 of 49 mg/kg in bobwhite quail Practically non-toxic to mallard ducks with no documented acute, sub-acute, or chronic effects
Terrestrial insects:	<i>Apis mellifera</i> LD50 4-6.2 ng/bee <i>Anthonomus grandis grandis</i> 48 hour LD50 0.040 µg/weevil
Persistence and degradability	Half-life of fipronil is 122-128 days in aerobic soils. No evidence of volatility Fipronil degrades on soil surfaces by ultraviolet radiation and rapidly in water when exposed to UV light to form fipronil-desulfinyl. Under these conditions, fipronil has a half-life of 34 days in loamy soil and 4 to 12 hours in water. Fipronil is stable to hydrolysis at pH 5 and pH 7. However, it degrades in alkaline conditions direct proportion to increasing pH values.
Bioaccumulative potential	Fipronil accumulates in fish with a bioconcentration factor of 321 for whole fish, 164 for edible tissue, and 575 for nonedible tissue. Fish eliminated fipronil completely 14 days after being transferred to clean water
Mobility in soil	Low mobility in soil and is not expected to leach into groundwater Koc = 427-1248 in sandy loam,

Section 13: Disposal Considerations

Product Disposal:

Product Disposal On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

Container Disposal

Do not use this container for any other purpose. Triple or preferably pressure rinse empty containers before disposal or recycling. Add rinsings to spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and

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bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of water ways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Section 14: Transport Information	
UN Number:	3082 (fipronil)
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains FIPRONIL 10%)
Transport hazard class	9
Packing Group:	III
Environmental hazards for Transport Purposes	Marine Pollutant
Special precautions for user:	None
Hazchem	2X

ADG Code:

NOT considered dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Section 15: Regulatory Information	
SUSDP:	6 - POISON
Commonwealth requirements:	None
AgVet Code Act 1994:	Registered - 65307

Section 16: Other Information

References:

1. Jackson, D.; Cornell, C. B.; Luukinen, B.; Buhl, K.; Stone, D. 2009. Fipronil Technical Fact Sheet; National Pesticide Information Center, Oregon State University Extension Services. <http://npic.orst.edu/factsheets/fiptech.pdf>
2. Gunasekara A. S. and Troung T (2007) Environmental Fate of Fipronil. Environmental Monitoring Branch Department of Pesticide Regulation 1001 I Street California Environmental Protection Agency Sacramento, CA 95812, USA <http://www.cdpr.ca.gov/docs/emon/pubs/fatememo/fipronilrev.pdf>

Acronyms

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

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

SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons

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