

SAFETY DATA SHEET



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Date of Issue: August 2016
SDS No. FMC/RAD/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: RADIATE[®] TERMITICIDE

Other Names: Fipronil. Phenylpyrazole chemical family
Use: Termiticide for protection of buildings and other structures.
Company: FMC Australasia Pty Ltd.
Address: 12 Julius Avenue, North Ryde NSW 2113
Telephone Number: 02 9887 0900 **Fax Number:** 02 9887 0911
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

GHS Classification:

Acute Toxicity – Oral: Category 4.
Acute Toxicity – Inhalation: Category 4.
Acute inhalation: Categories 1, 1A, 1B.
Specific Target organ toxicity, repeated exposure: Category 1.
Hazardous to the Aquatic Environment – Acute Hazard: Category 1.
Hazardous to the Aquatic Environment – Long Term Hazard: Category 1.

Signal Word: DANGER

Hazard Statements:

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H372 Causes damage to organs through repeated exposure.
H400 Very toxic to Aquatic life.
H410 Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P233 Store in a well ventilated place.
P260 Do not breathe mist, vapours or spray.
P261 Avoid breathing vapours or spray.
P264 Wash hands arms and face thoroughly after handling.
P270 Do not eat drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective equipment (see section 8).
P285 In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P314 Get medical advice/attention if you feel unwell.
P322 Specific measures see Safety Direction on label.

SECTION 2 HAZARDS IDENTIFICATION (Continued)*Response (Cont):*

- P330 Rinse mouth.
 P342+ P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P363 Wash contaminated clothing before reuse.

Disposal:

- P501 Dispose of container as per section 13.

Pictograms:

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Fipronil	120038-37-3	100 g/L
Other ingredients determined not to be hazardous	mixture	Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Swallowed:** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, do not induce vomiting. Give a glass of water. If any discomfort persists seek medical advice.
- Eye:** If in eyes, hold eyes open and flush with water until chemical is removed. If irritation occurs and persists, obtain medical attention.
- Skin:** If on skin immediately wash with plenty of soap and water. Remove contaminated clothing. If irritation occurs and persists see a doctor. Launder contaminated clothing before re-use.
- Inhaled:** Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

Advice to Doctors: Fipronil is a reversible gamma-aminobutyric (GABA) receptor inhibitor. During intoxication it will induce neurological stimulation with possible convulsions. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise symptomatic and supportive.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Product is a combustible liquid. Flash point > 97°C.

Extinguishing media: Foam, CO₂ or dry chemical. Soft stream water fog if no alternatives. Contain all runoff.

Hazards from combustion products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear chemical resistant buttoned at the neck and wrist and washable hat, half facepiece respirator with combined dust and gas cartridge and elbow-length PVC or nitrile gloves.

SECTION 6 ACCIDENTAL RELEASE MEASURES (Continued)

Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, 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.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with the eyes and skin. Wash hands after use. When opening the container, preparing the spray wear chemical resistant buttoned at the neck and wrist and washable hat, half facepiece respirator with combined dust and gas cartridge and elbow-length PVC or nitrile gloves. After each days use, wash gloves, contaminated clothing, respirator and if rubber, wash with detergent and warm water.

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. 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. Do not store near sources of ignition or naked flames. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

No exposure standard for fipronil has been established by Safe Work Australia.

Biological Limit Values:

No biological limit allocated.

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 close when not in use.

Personal Protective Equipment (PPE):

General: When opening the container, preparing the spray wear chemical resistant buttoned at the neck and wrist and washable hat, half facepiece respirator with combined dust and gas cartridge and elbow-length PVC or nitrile gloves. After each days use, wash gloves, contaminated clothing, respirator and if rubber, wash with detergent and warm water.

Personal Hygiene: May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with the eyes and skin. 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Smooth creamy liquid suspension.
Odour:	No odour.
Boiling point:	Not available.
Freezing point:	Not available.
Specific Gravity:	1.05 g/mL.
pH:	Not available.
Solubility in Water:	Product emulsifies in water.
Flammability:	Combustible liquid (C1).

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Flashpoint (°C): > 97°C.
Flammability Limits (%): Not established.
Poisons Schedule: Product is a schedule 5 poison.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Store away from sources of ignition. Avoid alkaline materials.

Incompatible materials: No particular materials to avoid.

Hazardous decomposition products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

Hazardous reactions: No particular reactions to avoid.

SECTION 11 TOXICOLOGICAL INFORMATION***Potential Health Effects:***

Effects from overexposure result from swallowing, breathing or coming in contact with the eyes and skin. Symptoms of overexposure include tremors, loss of motor control and greater numbing, burning and tingling. These sensations are reversible and usually subside within 12 hours.

Acute

Swallowed: This product is harmful if swallowed; the acute oral LD₅₀ (rat) > 2000 mg/kg.

Eye: Irritating to the eye. Product can be absorbed through the eyes.

Skin: Harmful in contact with the skin. Avoid skin contact. The dermal LD₅₀ (rabbit) > 2000 mg/kg. Skin sensitising may occur in sensitive individuals.

Inhaled: This product is harmful if inhaled. Acute inhalation LC₅₀ = 1.7 mg/L/4 hour

Chronic: No data available on this formulation. In a chronic toxicity study, rats receiving the highest dose of fipronil showed an increased incidence of thyroid tumours. The rat thyroid gland is very sensitive to chemicals and functions differently from the human thyroid, and therefore, fipronil is not considered to pose an increased risk of cancer to humans. Similar studies in mice and dogs did not show an increased incidence of thyroid tumours. In studies with laboratory animals, Fipronil Technical did not cause mutagenic, teratogenic or carcinogenic effects.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Fipronil is toxic to fish and aquatic organisms. Toxicity to fish: LC₅₀ (96 hr) 0.25 mg/L (*Oncorhynchus mykiss*), LC₅₀ (96 hr) 0.0852 mg/L (*Lepomis macrochirus*). LC₅₀ (96 hr) 0.43 mg/L (*Cyprinus carpio*). Toxic to aquatic plants: EC₅₀ (96 hr) 0.068 mg/L (biomass) (*Scenedesmus subspicatus*). Toxic to aquatic invertebrates: EC₅₀ (48 hr) 0.19 mg/L (*Daphnia magna*). Highly toxic to bees. Non toxic to earthworms.

Environmental Properties: Fipronil has low mobility in soil. Not readily biodegradable. Fipronil degrades slowly on vegetation and relatively slowly in soil and in water, with a half-life ranging between 36 hours and 7.3 months depending on substrate and conditions. It is relatively immobile in soil and has low potential to leach into groundwater. One of its main degradation products, fipronil desulfinyl, is generally more toxic than the parent compound and is very persistent. There is evidence that fipronil and some of its degradates may bioaccumulate, particularly in fish.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent, bleach or caustic soda) and add the solution to the drums of waste already collected. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

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 empty containers in a local authority landfill. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the container below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: Radiate Termiticide is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 litres. Bulk shipments should use UN 3082, as per below. This product is a Combustible Liquid (C1) for storage purposes.

Marine and Air Transport: Radiate Termiticide is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 10% Fipronil).

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xi, Xn).
Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 68515.

Product is not classified as a Dangerous Good according to the ADG Code (7th Ed) in containers less than 3000 litres.

Product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 1 August 2016. Valid for 5 years.

Key to abbreviations and acronyms used in this SDS:

- ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
- Carcinogen: An agent which is responsible for the formation of a cancer.
- Clonic: An abnormality in neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.
- Genotoxic: Capable of causing damage to genetic material, such as DNA.
- Haematopoietic: Pertaining to the formation of blood or blood cells.
- Lavage: The irrigation or washing out of an organ, as of the stomach or bowel.
- Mutagen: An agent capable of producing a mutation.
- Oedema: Accumulation of fluid in tissues.
- NOHSC: National Occupational Health and Safety Commission.
- Teratogen: An agent capable of causing abnormalities in a developing foetus.
- Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2015).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

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 should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End SDS