

MATERIAL SAFETY DATA SHEET

Racumin® Rat and Mouse Paste

Date of Issue: September 12th, 2006

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Racumin® Rat and Mouse Paste
Other names: None
Product code: 4943529 (500 g), 5837560 (5000 x 10 g), 5836750 (500 x 100 g)
Chemical group: Coumarin
Recommended use: Ready-to-use rodenticide paste bait for rodent control.

Formulation: Bait
Supplier: Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd
ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone: (03) 9248 6888
Facsimile: (03) 9248 6800
Website: www.bayercropscience.com.au
Contact: Technical Manager (03) 9248 6888
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

Not irritating. Not flammable.

Hazard designation: Non-hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases: Not applicable
Safety phrases: See Sections 4, 5, 6, 7, 8, 9, 13
ADG classification: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SUSDP classification: Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/kg):
Coumatetralyl	[5836-29-3]	0.375
Other ingredients (non-hazardous)	-	To 1 kg

This product contains BITREX™ which is a deterrent designed to prevent domestic animals eating the bait

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4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

Inhalation:	Presentation as a soft paste bait means inhalation is unlikely.
Skin contact:	Wash skin with soap and water.
Eye contact:	Hold eyes open and flush with clean water for at least 15 minutes.
Ingestion:	If poisoning via the oral route occurs, seek immediate medical advice. As the concentration of coumatetralyl in the final product is very low, large amounts of the product would have to be ingested.
First Aid Facilities:	Provide washing facilities in the workplace (including eye-wash).
Medical attention:	Coumatetralyl inhibits vitamin K1-dependant coagulation.

Symptoms

Symptoms after ingestion (though also toxic via the dermal route) may range from increased bleeding tendency (e.g. gingiva bleeding or nose bleeding) to massive haemorrhage in severe cases. Hematuria, bruisability, vomiting blood, cerebrovascular bleeding are possible.

Treatment

Elementary aid, decontamination and symptomatic treatment.

Note for physicians

Gastric lavage should be performed in cases of significant ingestions, followed by administration of activated charcoal and sodium sulfate. The antidote for coumatetralyl is vitamin K1. The efficacy of vitamin K1 treatment should be assessed by monitoring the coagulation parameters, such as prothrombin time or INR. Initial treatment may be done with intravenous vitamin K1 in severe cases, while usually oral vitamin K1 should be sufficient. Severe poisoning cases may require the initial application of blood products:

- whole blood
- fresh frozen plasma and fresh blood should be used in cases of severe bleeding to rapidly restore blood clotting factors

Transfusions may be required in cases of significant blood loss.

It is expected that repeated intake of coumatetralyl would be required to cause an actual poisoning, yet it is prudent to control coagulation parameters for several days after ingestions.

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5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray, carbon dioxide, foam, sand

Hazards from combustion products: In a fire, carbon monoxide may be released.

Precautions for fire fighters: Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away and move all other personnel to windward side of fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later.

6. ACCIDENTAL RELEASE MEASURES

Dealing with spills and disposals may result in the potential for increased personal exposure. Protective clothing and equipment as described in the PERSONAL PROTECTION section should be worn. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away. Prevent spillage from spreading or entering waterways and drains. Work from up-wind side of spill. Vacuum or sweep up spill. Fill material along with any contaminated soil etc., into sealable containers. Clean affected area with an aqueous detergent and a small amount of water. Absorb this with hydrated lime and place in a sealable drum. Spread hydrated lime over the affected area. Do not smoke, eat or drink during clean-up operation.

7. HANDLING AND STORAGE

Handling: Keep out of reach of children. Should not be used in areas accessible to children. Poisonous if swallowed.

Storage: Store in the tightly closed, original container in a dry, well-ventilated area, as cool as possible out of direct sunlight. Destroy untaken baits. Any spillage of bait should be removed immediately. Break, crush, or puncture and bury empty containers in a local authority landfill. If not available bury the container below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: NOHSC exposure standards have not been established for the active constituent or any inert ingredient in this formulation.

Engineering controls: No engineering controls are required for normal use of this product according to label

Personal Protective Equipment: It is recommended to wear gloves during handling.
If product on skin and after each baiting, wash thoroughly with soap and water.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Soft block of blue paste enclosed in a tea-bag like sachet
Odour:	Slight characteristic smell
Vapour pressure:	8.5×10^{-6} mPa (20°C) (coumatetralyl)
Vapour density:	Not relevant.
Boiling point:	Not relevant.
Melting point:	172 – 176 °C (coumatetralyl)
Solubility in water:	425 mg/L at 20°C (coumatetralyl)

Density:	Approx 1 kg/L
pH:	Not relevant
Flash Point:	Not relevant
Flammability (explosive) limits:	Not explosive
Auto-ignition temperature:	Not flammable
Octanol/water partition coefficient:	Not relevant
Formulation:	Ready to Use Paste bait

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	Hazardous polymerisation will not occur.
Conditions to avoid:	Keep away from heat or moisture
Incompatible materials:	Avoid strong oxidising agents.
Hazardous decomposition products:	In a fire, carbon monoxide may be released.

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11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	Coumatetralyl is poisonous by inhalation, however presentation as a soft bait paste containing 0.0375% coumatetralyl makes inhalation unlikely.
Skin contact:	Not a skin irritant.
Eye contact:	Not an eye irritant.
Ingestion:	See below.
Other:	Coumatetralyl is a first generation anticoagulant of the warfarin type. Symptoms of overexposure relate to failure of the blood clotting mechanism and include bleeding gums and failure of blood clotting after skin wounds. After one exposure the toxicity of coumatetralyl is relatively low, however if exposure continues over several days the product becomes more toxic. That is, the product must be constantly present in the blood for more than 1 to 2 days in order to be highly toxic. A single exposure, even though relatively large, may not produce toxic symptoms as the compound is quite rapidly metabolised.

ANIMAL TOXICITY DATA – ACTIVE INGREDIENT:

Acute:

Oral toxicity:	Acute oral LD ₅₀ : Rat 16.5 mg/kg [Sub-chronic oral LD ₅₀ (5 d): Rat 0.3 mg/kg/day]
Dermal toxicity:	Acute percutaneous LD ₅₀ rat: 100 - 500 mg/kg
Inhalation toxicity:	LC ₅₀ (4 h) for rats 39 mg/m ³
Skin irritation:	Coumatetralyl is not classified as a skin irritant
Eye irritation:	Coumatetralyl is not classified as an eye irritant
Sensitisation:	Coumatetralyl is not classified as a skin sensitiser

Chronic:

Animal studies show no evidence of carcinogenic or teratogenic effects.

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12. ECOLOGICAL INFORMATION

Do not allow dogs, cats or other mammals to contact this product.

Fish toxicity: LC₅₀ (96h) 48 mg/L (rainbow trout) (coumatetralyl)

Daphnia toxicity: LC₅₀ (48h) >14 mg/L (coumatetralyl)

Toxicity to algae: E_rC₅₀ >18 mg/L (coumatetralyl)

Bird toxicity: Acute oral LD₅₀ for Japanese Quail >2000 mg/kg bw.
Dietary LC₅₀ (8d) for hens >50 mg/kg bw daily (coumatetralyl)

Bee toxicity: Not available

Environmental fate, persistence and degradation: Rapidly decomposed in aqueous solutions exposed to sunlight or UV light: DT₅₀ c. 1 Hour. (coumatetralyl)

13. DISPOSAL CONSIDERATIONS

- 1) After intended use: Use all the bait at the baiting site. Do not dispose of undiluted chemicals on-site. Break, crush or puncture and bury empty containers in a local authority landfill. If not available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots.
- 2) After spill or accident: Dispose of sealed containers at an approved local waste disposal site.

14. TRANSPORT INFORMATION

UN number: Not applicable

Proper shipping name: Not applicable

Class and Subsidiary Risk: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Packing Group: Not applicable

EPG: Not applicable

Hazchem code: Not applicable

Marine pollutant: No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 51508

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16. OTHER INFORMATION

Trademark information: Racumin® is a Registered Trademark of Bayer.

Preparation information: Replaces May 15, 2004 edition.
Reasons for update: Hazards Identification, Formulation Composition, First Aid Measures, Hazards from Combustion Products, Accidental Release Measures, Storage.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

This MSDS 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 MSDS 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.

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.

END OF MSDS