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## SECTION 1 - IDENTIFICATION OF CHEMICAL PRODUCT AND COMPANY

**Rentokil Initial Pty Ltd**

150 Mowbray Rd

Willoughby NSW 2068 ABN 98 000 034 597

Emergency Telephone

(02)9370 9300 (24 hours)

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<b>Substance:</b>	Bromadiolone is an anticoagulant.
<b>Trade Name:</b>	Rentokil Bromard
<b>Product Code:</b>	39461
<b>Product Use:</b>	Rodenticide for use as specified on product label.
<b>Creation Date:</b>	<b>February, 2004</b>
<b>Revision Date:</b>	<b>February, 2004</b>

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## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Not classified as hazardous according to the criteria of NOHSC Australia. Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** None allocated.

**Safety Phrases:** S20. When using, do not eat or drink.

**SUSDP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good.

**UN Number:** None allocated

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### Emergency Overview

**Physical Description & colour:** Blue/green coloured paste.

**Odour:** Characteristic odour of lard.

**Major Health Hazards:** Available data shows that this product is not harmful using LD<sub>50</sub> data. However, it promotes anticoagulation (see below), and should be regarded as harmful.

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### Potential Health Effects

In most cases of ingestion of anticoagulants, victims have remained asymptomatic, due to the small dosage taken. Even in cases involving ingestion of substantial amounts of anticoagulant compound (more often medication than rodenticide), hypoprothrombinaemia has occurred without symptoms of poisoning. Haemorrhage appears only when extraordinary amounts have been absorbed. In reported cases, the anticoagulants were either taken deliberately, were absorbed over long periods out of neglect of elementary hygienic standards, or were ingested by starving indigents who used quantities of rodent bait as food. Victims of large doses exhibit haematuria, nosebleed, haematomata, bleeding gums, and melena, abdominal pain and back pain probably reflecting haemorrhage in the abdominal and retroperitoneal tissues. Weakness occurs as a result of anaemia. Renal colic often complicates severe haematuria. Nasal and gastrointestinal haemorrhages have occasionally caused death from blood loss.

If poisoning is suspected, do not wait for symptoms to develop. Contact a physician, the nearest hospital, or the nearest Poison Control Center.

### Inhalation

**Short term exposure:** Significant inhalation exposure is considered to be unlikely. Available data indicates that this product is not harmful by inhalation. In addition product is unlikely to cause any discomfort or irritation.

### Skin Contact:

**Short term exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition product is unlikely to cause any discomfort in normal use.

### Eye Contact:

**Short term exposure:** Exposure via eyes is considered to be unlikely. This product is believed to be not irritating to eyes.

### Ingestion:

**Short term exposure:** Available data shows that this product is not harmful using LD<sub>50</sub> data. However, it promotes anticoagulation (see above), and should be regarded as harmful.

**Carcinogen Status:**

**NOHSC:** No significant ingredient is classified as carcinogenic by NOHSC.

**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 <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Bromadiolone	28772-56-7	0.01	not set	not set
Other non hazardous ingredients	secret	2.5-10	not set	not set
Lard	61789-99-9	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 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 should not be exceeded for more than 15 minutes and should not be repeated for 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 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Treatment with Vitamin K1 is antidotal, and is the best form of treatment for poisoning.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Skin Contact:** No specific health data is available for this product. If any unusual symptoms become evident, or if in doubt, contact a Poisons Information Centre or a doctor.

**Eye Contact:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**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:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

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

**Flash point:** Not flammable.

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** No data.

**Flammability Class:** No data.

**Section 6 - Accidental Release Measures**

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable Dust Mask.

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Can be slippery on floors, especially when wet. 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 MSDS 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 MSDS 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 class of poison. Store packages of this product in a cool place. Make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10. 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**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

<b>Exposure Limits</b>	<b>TWA (mg/m<sup>3</sup>)</b>	<b>STEL (mg/m<sup>3</sup>)</b>
Exposure limits have not been established by NOHSC for any of the significant ingredients in this product.		
The ADI for Bromadiolone is set at 0.000002mg/kg/day. The corresponding NOEL is set at 0.004mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Aug 2003.		

**Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

**Eye Protection:** Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

**Skin Protection:** The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when handling this product.

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

**Respirator:** If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Blue coloured paste.
<b>Odour:</b>	Characteristic odour of lard.
<b>Boiling Point:</b>	Not available.
<b>Freezing/Melting Point:</b>	about 45-50°C
<b>Volatiles:</b>	No specific data. Expected to be low at 100°C.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	About 1.0
<b>Water Solubility:</b>	Negligible.
<b>pH:</b>	No data.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water distribution:</b>	No data
<b>Autoignition temp:</b>	No data.

## 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:** None known.

**Incompatibilities:** No particular incompatibilities.

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water, small quantities of bromine compounds. 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 is unlikely to undergo polymerisation processes.

## Section 11 - Toxicological Information

### Local Effects:

**Target Organs:** This product will attack blood, reducing prothrombin rating.

### Classification of Hazardous Ingredients

Ingredient	Risk Phrases
No ingredient mentioned in the List of Designated Hazardous Substances is present in this product at hazardous concentrations.	
In 90-day feeding trials the only effect observed in rats and dogs was reduction of prothrombin rating	

## Section 12 - Ecological Information

**Rainbow Trout:** No effect within 96 hours up to 0.46 mg/L of water, of active material; that is, 0.184mL of a concentrate containing 2.5 mg/L. The LC<sub>50</sub> at 96 hours is placed at 1.4 mg/L of water; that is, 0.56mL of a concentrate containing 2.5 gm/litre.

**Bluegill:** No effect within 96 hours up to 1.3 mg/L. The LC<sub>50</sub> at 96 hours is placed at 3 mg/litre of water; that is, 1.2mL of a concentrate containing 2.5 g/L.

**Water flea:** No effect within 48 hours up to 0.088 mg/L. The LC<sub>50</sub> at 24 hours is higher than 8.8 mg/L; that is, 3.52mL of a concentrate containing 2.5 gm/L.

## Section 13 - Disposal Considerations

**Disposal:** Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

## Section 14 - Transport Information

**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

## Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are to be found in the public AICS Database. The following ingredients: Bromadiolone, are mentioned in the SUSDP.

## Section 16 - Other Information

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

### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Number</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOHSC</b>	National Occupational Health and Safety Commission
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSDP</b>	Standard for the Uniform Scheduling of Drugs & Poisons
<b>UN Number</b>	United Nations Number

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 MUST REVIEW THIS MSDS 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.

This MSDS is prepared in accord with the NOHSC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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