



Agro Chemicals (pty) Ltd
1997/006442/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@varrooyco.co.za
VAT #: 43101733663

MATERIAL SAFETY DATA SHEET

KILL ALL LIQUID BAIT

Revision date: March 2009

1. COMPOSITION AND PRODUCT IDENTIFICATION

Product name: Kill All Liquid Bait 0.05%

Common name: Brodifacoum

IUPAC name: 3-(3-(4'-bromobiphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphthyl)-4-hydroxycoumarin

Chemical group: Bromylated coumarin compound

CAS No: 56073-10-0

Formulation: Liquid bait

Primary use: Liquid Rodenticide

Supplier: Almond Agrochemicals
88 Forrest Road
PO Box 783703
Sandton 2146
South Africa

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	% w/w	Symbol	Risk phrases
Brodifacoum	0.05	T ⁺ , N	R27/28, R48/24/25, R50/53
Embittering agent	<0.01	Xn	R20/22, R38, R41, R52/53
Solvent	<25	Xi	R36/38
Buffer	<5	Xi	R36

See sections 15 and 16 for full explanation of risk factors

Appearance: Blue liquid



Agro Chemicals (pty) Ltd
1997/006442/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@vahrooyco.co.za
VAT #: 43101733663

Page 2 / Cont'd /
KILL ALL LIQUID BAIT

3. HAZARDS IDENTIFICATION

Harmful in contact with skin and if swallowed.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
If ingested or in contact with the skin, symptoms may include nosebleed and bleeding gums. In severe cases there may be bruising, haematomas of the joints and blood present in the faeces and urine.

4. FIRST AID MEASURES

Skin contact: Harmful in contact with skin.
Remove contaminated clothing, wash off immediately with soap and plenty of water. If irritation persists, obtain medical attention. Contaminated clothing should be washed before re-use.

Eye contact: Rinse immediately with plenty of water and seek medical advice.

Inhalation: Move to fresh air. Obtain medical attention immediately.

Ingestion: Harmful if swallowed. If swallowed, seek medical advice immediately and show this container or label.

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
ADVICE FOR DOCTORS: Brodifacoum is an indirect anticoagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin times not less than 18 hours after consumption. If elevated, administer Vitamin K1 until prothrombin time normalises. Continue determination of prothrombin time for two weeks after withdrawal of antidote and resume treatment if elevation occurs in that time.

5. FIRE FIGHTING MEASURES

Extinguishing media: Keep fire exposed containers cool by spraying with water if exposed to fire. Carbon Dioxide (CO₂), alcohol resistant foam, water spray mist or foam. **DO NOT USE WATER JETS**

Specific hazards: Toxic fumes will be produced in a fire.

Page 3 / Cont'd /



Agro Chemicals (pty) Ltd
1997/006442/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@vahrrooyco.co.za
VAT #: 43101733663

Page 3 / Cont'd /
KILL ALL LIQUID BAIT

**Special equipment
for firefighters:**

In the event of a fire, wear self-contained breathing apparatus, suitable gloves and boots.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear suitable protective clothing, gloves and eye/face protection. See section 8

Environmental precautions: Contain or absorb leaking liquid with earth and sand. Prevent further leakage or spillage if safe to do so. Prevent liquid entering watercourses, sewers or basements. If substance has entered a watercourse or sewer or contaminated soil or vegetation, inform appropriate authority.

Methods of cleaning up: Soak up with inert absorbent material. Transfer to a suitably labelled container. Subsequently, wash the contaminated area with water, taking care to prevent the washings entering sewers or drains.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Do not breathe in vapours or spray mist. Keep away from sources of ignition. Do not smoke eat or drink while handling this product. Always use good personal hygiene procedures when handling chemicals. Wash hands and face before eating, drinking or smoking. Read the label before use.

Storage: Keep in a cool, well-ventilated, place. Keep out of reach of children. Keep away from food and animal feedstuffs. Keep away from oxidising agents.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Respiratory protection: Suitable respiratory equipment if exposed to spray mists.

Hand protection: Impervious gloves.

Eye protection: Tight fitting goggles.

Page 4 / Cont'd /



Agro Chemicals (pty) Ltd
1997/00644/2/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@vanrooyco.co.za
VAT #: 43101733663

Page 4 / Cont'd /
KILL ALL LIQUID BAIT

Skin and body protection: Impervious clothing, boots.

9. PHYSICAL / CHEMICAL PROPERTIES

Description:	Liquid
Colour	Blue
Odour:	Characteristic
pH:	9.5
Boiling point/range:	~187°C
Flash point:	>90°C
Relative density:	~1.05
Water solubility:	Miscible

10. STABILITY AND REACTIVITY

Stability:	Stable at room temperature.
Conditions to avoid:	Heat, flames and sparks
Materials to avoid:	Oxidising agents, strongly alkaline and strongly acidic materials in order to avoid exothermic reactions.
Hazardous decomposition products:	Combustion or thermal decomposition will produce toxic and irritant fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Harmful in contact with skin and if swallowed. ORAL LD ₅₀ approx 0.27 mg/kg (rat) of technical material. Calculated ORAL LD ₅₀ ~540 mg/kg for 0.05% product Calculated Dermal LD ₅₀ ~500 mg/kg for 0.05% product
Primary irritation:	May cause irritation to eyes and skin
Sensitisation:	May cause sensitisation of susceptible persons by skin contact.

Page 5 / Cont'd /



Agro Chemicals (pty) Ltd
1997/006442/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@vanrooyco.co.za
VAT #: 43101733663

Page 5 / Cont'd /
KILL ALL LIQUID BAIT

**Repeated or prolonged
Exposure:**

Harmful: Danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

Mutagenic effects:

Anticoagulant rodenticides show no evidence of mutagenic effects.

Carcinogenic effects:

Anticoagulant rodenticides show no evidence of carcinogenic effects.

12. ENVIRONMENTAL INFORMATION

LC₅₀ rainbow trout 96 h: >100 mg/l (calculated)

LD₅₀ mallard duck: 600 mg/kg (calculated)

13. DISPOSAL CONSIDERATIONS

General information: Dispose of as special waste in accordance with local and national regulations.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORTATION INFORMATION

ADR/RID:

UN-N^o:	3026	Packing group:	III
Class:	6.1	Hazard ID:	60
Proper shipping name:	COUMARIN DERIVATIVE PESTICIDE, LIQUID TOXIC (contains Brodifacoum 0.05%)		

IMO:

UN-N^o:	3026	Packing group:	III
Class:	6.1	Marine pollutant:	No
EmS:	F-A S-A		
Proper shipping name:	COUMARIN DERIVATIVE PESTICIDE, LIQUID TOXIC (contains Brodifacoum 0.05%)		

IATA-DGR:

UN-N^o:	3026	Packing group:	III
Class:	6.1	Marine pollutant:	No
Proper shipping name:	COUMARIN DERIVATIVE PESTICIDE, LIQUID TOXIC (contains Brodifacoum 0.05%)		

Page 6 / Cont'd /



Agro Chemicals (pty) ltd
1997/006442/07

88 Forrest Road • PO Box 783703
Sandton • 2146 • South Africa
Telephone: (011) 883 7414 • Fax: (011) 883 2077
Email: office@vanrooyco.co.za
VAT #: 43101733663

Page 6 / Cont'd /
KILL ALL LIQUID BAIT

15. REGULATORY INFORMATION

Symbols:	Xn – Harmful
R-Phrases:	R21/22 – Harmful in contact with skin and if swallowed. R55 – Toxic to fauna R36/38 – Irritating to eyes and skin
S-phrases:	To avoid risks to man and the environment, comply with the instructions for use: S1/2 – Keep locked up and out of reach of children. S13 – Keep away from food, drink and animal feeding stuffs. S29 – Do not empty into drains. S36/37 – Wear suitable protective clothing and gloves. S45 – In case of accident or if you feel unwell, seek medical advice immediately (Show label where possible).

16. OTHER INFORMATION

R-phrases from Section 2:	R27/28 – Very toxic in contact with the skin and if swallowed. R20/22 – Harmful by inhalation or if swallowed. R38 – Irritating to skin. R41 – Risk of serious damage to eyes. R36 – Irritating to eyes. R48/24/25 – Toxic: danger of serious damage to health by prolonged exposure in contact with the skin and if swallowed R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 – Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Recommended use:	Concentrate for producing ready to use anti-coagulant rodenticides.

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information in this data sheet does not constitute or replace the user's own assessment of work place risk as required by other health and safety regulation.