

## SAFETY DATA SHEET

### KILL-ALL LIQUID

Issue date: 10.08.2015

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

##### Product identifiers

Product name: KILL-ALL LIQUID  
Chemical name: Brodifacoum  
CAS No.: 56073-10-0

##### Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Rodenticide bait

##### Supplier of Safety Data Sheet:

Almond Agro Chemicals (Pty) Ltd.  
PO Box 783703  
Sandton, 2146  
Republic of South Africa

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**EMERGENCY No. in case of poisoning:** 0861 555 777 (Poison Information Centre)

#### SECTION 2: HAZARDS IDENTIFICATION

##### Symbols:



**Xn: Harmful**

##### R-Phrases:

R21/22: Harmful in contact with skin and if swallowed  
R36/38: Irritating to eyes and skin  
R55: Toxic to fauna

##### S-phrases:

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.



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S45: In case of accident or if you feel unwell, seek medical advice immediately (Show label where possible).

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No	Conc. (g/L)	Symbol	R-phrases
Brodifacoum	56073-10-0	0.5	T+ T N	R27/28 R48/24/25 R50/53
Embittering agent	-	<0.1	Xn	R22, R36/37/38
Buffer (EDTA complex)	-	<50	Xi	R36

See Sections 2 and 16 for R-pharse explanations

### SECTION 4: FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre and follow the advice given. Show this Safety Data Sheet to the doctor.

**Inhalation:** If inhaled, remove to fresh air, keep warm and at rest. Seek medical attention.

**Skin contact:** Avoid contact with skin. Remove contaminated clothing and footwear. Wash affected areas with large amounts of water for at least 10 minutes. Seek medical advice if concerned.

**Eye contact:** Rinse eyes with plenty of water keeping the eyelids open for at least 15 minutes. Get medical attention.

**Ingestion:** DO NOT induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person.

**Treatment:** Brodifacoum is an indirect anticoagulant. This product contains anticoagulants with an effect similar to warfarin in that they act by interfering with the synthesis of prothrombin. The specific measure of effect is the prothrombin time. Note this may not become prolonged until 12-18 hours after ingestion. The specific antidote is Vitamin K1 (Phytomenandione BP). 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.

### SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing media:** Water fog, fine water spray, foam, dry chemical, carbon dioxide. Do not use water jet.



**Hazards from combustion products:** Combustion products are toxic and/or irritant.

**Advice for fire fighters:** Fire-fighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. Use water spray to cool containers.

Bund area with sand or earth to prevent contamination of drains and/or waterways. Dispose of fire control water or other extinguishing agent and spillage safely.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear PPE as recommended in section 8. Avoid breathing vapours, mist or fumes. Ensure adequate ventilation. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away.

**Environmental precautions:** Prevent product from entering drains or water courses. Warn the local water authority if water-courses become contaminated.

**Clean-up methods:** Soak up with inert absorbent material. Transfer to a suitably labelled container. Wash the contaminated area with water. Decontaminate the area and equipment by washing areas with water. Keep in suitable, closed containers for disposal. Contaminated extinguishing water must be disposed of in accordance with official regulations.

#### SECTION 7: HANDLING AND STORAGE

**Handling:** Keep out of reach and sight of children. Avoid breathing fumes. For product in eyes, wash immediately with water. For product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

**Storage:** Store in the closed original container, in a cool, dry, well-ventilated area, away from direct sunlight. Protect from frost.

**Incompatibility:** Avoid oxidising agents.

**Flammability:** Not flammable under normal conditions of use. The product does not sustain combustion.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure limits:**  
Brodifacoum 0.002 mg/m<sup>3</sup> 8 hr TWA

**Engineering controls:** Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below exposure limits.

**Personal protective equipment:** Wear face shield or goggles, cotton coveralls, boots and impervious gloves (eg butyl rubber gloves).  
If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear a respirator with filter for vapours.  
After each day's use, wash gloves, goggles or face shield, respirator if worn, and contaminated clothing.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Blue liquid
<b>Odour:</b>	odourless
<b>Specific gravity:</b>	1.04 g/mL (20°C)
<b>Flash Point:</b>	>100°C
<b>Freezing point:</b>	-60°C
<b>Boiling point:</b>	185°C
<b>Solubility in water:</b>	0.0038 mg/L (tech.)
<b>Vapour pressure:</b>	0.13 mPa (20°C) (tech.)
<b>Log P<sub>ow</sub>:</b>	6.12
<b>Explosive properties:</b>	Not explosive
<b>Oxidising properties:</b>	Not oxidising

### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions of use. Will not polymerise.
<b>Chemical stability</b>	The product is stable if stored and handled as prescribed /indicated.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to instructions.
<b>Conditions to avoid</b>	Sources of ignition and extreme heat.



**Incompatible materials** Strong oxidisers, alkalis.

**Hazardous decomposition Products:** Does not decompose at ambient temperature. Combustion or thermal decomposition will evolve toxic and irritant vapours.

#### SECTION 11: TOXICOLOGICAL INFORMATION

**Oral toxicity:** LD<sub>50</sub> rat: >300-2000 mg/kg, GHS cat 4  
(derived from components)

**Dermal toxicity:** LD<sub>50</sub> rat: >1000-2000 mg/kg, GHS cat 4  
(derived from components)

**Inhalation toxicity:** LC50 rat >5.0 mg/L (4h)  
Equivalent to >1.25 mg/L (1h)  
(derived from components)

**Skin irritation:** May cause mild irritation

**Eye irritation:** May cause eye irritation

**Skin sensitisation:** Not a skin sensitiser

**Repeated or prolonged Exposure:** 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.

#### SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity** (technical material)

**Fish toxicity:** LC<sub>50</sub> 96 h rainbow trout 0051 mg/L

**Daphnia toxicity:** EC<sub>50</sub> 48 h *Daphnia magna* 0.98 mg/L

#### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Product:** Dispose of waste product through an official waste contractor. Obtain advice from local waste regulation authority.

**Contaminated packaging:** Do not burn empty containers. Recycle, or return to supplier through local schemes if applicable. Disposal should be in accordance with local, state or national legislation.



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#### SECTION 14: TRANSPORTATION INFORMATION

<b>UN number:</b>	3026		
<b>UN Proper Shipping Name:</b>	COUMARIN DERIVATIVE PESTICIDE, LIQUID TOXIC (contains Brodifacoum 0.05%)		
<b>Transport hazard class:</b>	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
<b>Packaging group:</b>	ADR/RID: III	IMDG: III	IATA: III
<b>Environmental hazard:</b>	ADR/RID: No	IMDG: Marine pollutant: No	IATA: No

#### SECTION 15: REGULATORY INFORMATION

No additional regulatory information required for this product

#### SECTION 16: OTHER INFORMATION

##### Additional relevant risk phrases:

These risk phrases are for hazardous components in the product but are not at levels that require risk phrases for classification. They provide additional information on risks.

##### Risk phrases:

R22	Harmful by inhalation
R27/28	Very toxic in contact with skin and if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

TWA: Time weighted average: average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

No liability is accepted for any injury, loss, damage or cost arising directly or indirectly from the use of the product or from the use of information contained within the safety data sheet since the customer's handling of the product is necessarily beyond our control. The supplied data are based on current knowledge and experience. This safety data sheet is intended to describe our product in terms of safety requirements. The customer should determine by appropriate trials that the product is suitable for his intended use.

Sections 9, 11 and 12 based on available EU and own data  
Self-classification of mixture