

SAFETY DATA SHEET

SUPA-KILL Liquid Concentrate Rat & Mouse Bait
Reg. No.: L5987 Act No. 36 of 1947 Republic of South Africa

Product: SUPA-KILL Liquid Concentrate Rat & Mouse Bait
Version 1.1

Date issued: January 2013
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1. PRODUCT AND COMPANY IDENTIFICATION:

Identification of the product:

Product name: SUPA-KILL Liquid Rat & Mouse Bait Registration No. L5986

Uses: Rodenticide for Pest Control Officers (PCOs) only

Active ingredient Brodifacoum – 2.5 g/l (0.25 %)

Company identification:

Company Name: Scientific Supa-Kill cc

Tel: +27 11 394 3941

Contact person: Lee Ashford

Fax: +27 11 394 3939

Address: P.O. Box 8020

Emergency No. +27 21 931 6129 (24 hours)

Edleen 1625

Tygerberg Poison Information Centre

Republic of South Africa

eMail: lee@supa-kill.com

2. PRODUCT HAZARD IDENTIFICATION:

Main Hazard: Not classified as hazardous due to low concentrations of brodifacoum present in the formulation and Bitrex™ which acts as a deterrent to humans. However, prolonged and/or repeated exposure to small amounts of product can produce cumulative toxicity. Normal safety precautions for handling chemicals must be observed and the label directions adhered to.

Adverse health effects:

Eye contact: May be mildly irritating to the eye on contact, causing redness, pain and blurred vision.

Skin contact: Brodifacoum is absorbed through intact skin.

Ingestion: Large quantities would have to be ingested to produce a toxic effect. Accumulation of the toxin in the body is possible. Nausea and vomiting may occur soon after ingestion, but several hours/days may elapse before typical features of anticoagulant poisoning become evident; symptoms may include increased tendency to bleed, bruising, nose and gum bleeds, pallor, blood in the urine and faeces, haemorrhage into and around elbow and knee joints.

Inhalation: Due to the nature of this product, inhalation is not considered to be a relevant route of exposure.

Vapour inhalation: Decomposes in a fire to emit toxic fumes.

3. COMPOSITION:

Hazardous component:

Chemical name: brodifacoum

Chemical family: coumarin

Synonym: bromfenacoum

Molecular formula: C₃₁H₂₃BrO₃

Cas No.: 56073-10-0

IUPAC name: 3-[3-[4-(4-bromophenyl) phenyl]-1,2,3,4-tetrahydronaphthalen-1-yl]-2-hydroxychromen-4-one

Classification: T+: R27/28, T: R48/24/25, N: R50/53

Non-hazardous components:

Bitrex™, liquid and other food-grade ingredients.

4. FIRST AID MEASURES:

	Remove person/s from contaminated area and keep calm and reassured.
Eyes:	Immediately wash eye with copious amounts of clean, cold water for at least 15 minutes. If symptoms persist, seek medical advice.
Skin:	Remove contaminated clothing. Rinse the affected skin area with plenty of water and soap. Do not rub skin hard.
Ingestion:	If bait is swallowed SEEK MEDICAL ATTENTION IMMEDIATELY . Do not induce vomiting. However, if medical assistance is not readily available and the ingestion of a large amount of bait was recent, (less than 3 h) induce vomiting by tickling the back of the throat, providing the person is conscious . Take to a doctor or hospital and show the MSDS or the product label.
Note to physician:	Brodifacoum is a delayed-action anticoagulant. Vitamin K1 , administered by intravenous injection, is an antidote . Treat patient symptomatically and supportively. Stomach wash, followed by repeated doses of activated charcoal, may be effective if performed within 4 hours of ingestion. In the case of haemorrhages, prothrombin time should be determined and if elevated, Vitamin K1 must be administered. If necessary, give small transfusions of matched, fresh blood or frozen fresh plasma to restore clotting factors. Continue treatment until prothrombin time normalises. It may be necessary to continue treatment for several months. CONTACT A POISON CENTRE FOR ADVICE .

5. FIRE FIGHTING MEASURES:

Extinguishing media:	CO ₂ and dry powder for small fires and foam or water fog for large fires. (DO NOT use a solid water stream as it may scatter and spread the fire).
Special hazards:	Brodifacoum may decompose in a fire to emit toxic fumes.
Protective clothing:	Personnel involved in a fire situation with this material should wear self-contained breathing apparatus as toxic fumes may be given off. No unprotected person should be allowed in the vicinity of the fire.
Further information:	Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions:	Full protective clothing to be worn when clearing spillage.
Small and large spills:	Contain spillage with sand or other suitable absorbent material. Collect with a spade and deposit in a secure, properly labelled, sealable container. In the case of spillage in water, use barrier devices to prevent dispersion of the product. If possible, absorb liquid spillage onto vermiculite and treat similarly. Dispose of waste in accordance with local/national regulations. Contact the competent authorities in the event of a large spill or if the situation cannot be controlled.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Contaminated area should be washed down with cold water and a surfactant/detergent. Waste water should be disposed of in the same way as contaminated waste. Do not flush into surface water or sanitary sewer system. Prevent environmental contamination.

7. HANDLING AND STORAGE

Suitable material: Store in original, sealed container.

Handling/storage precautions: Store under lock and key away from children, uninformed persons and animals. Store in a cool, dry place away from sources of heat and ignition. Store away from food, feed, eating utensils and drinking water.

Clean protective clothing, used protective clothing and worker's personal clothing must be kept apart. At the end of each day, all protective clothing must be decontaminated, washed, rinsed and dried. Extra care must be taken when cleaning equipment after use.

Wear rubber gloves and wash hands after handling. Avoid all contact by mouth. Contamination of food, feed, eating utensils and all sources of drinking water, rivers, dams, crops or grazing shall be prevented. Toxic to aquatic organisms, fish and wildlife. Bury all dead rodents and any bait not consumed at end of treatment.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits: None assigned.

Engineering control measures: Introduce technical measures to lessen exposure.

Personal protection: **Respiratory:** When handling this material in an emergency, effective respiratory protection must be worn.
Hands: Nitrile rubber gloves.
Eyes: Close fitting safety goggles or face shield.
Skin: Full length protective clothing and boots.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Blue liquid	Flammability:	Not flammable
Odour:	No significant odour	Explosive properties:	None
Solubility in water:	Miscible		

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Hazardous decomposition products: None expected to be formed under normal conditions. Hazardous gases may be produced in a fire.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: (a.i.) Rat oral LD₅₀ 0.27 mg/kg Rabbit dermal LD₅₀ 0.25-0.63 mg/kg

Acute tox: (0.25% Formulation concentrate) Rat oral LD₅₀ (M) = 163 mg/kg Rabbit dermal LD₅₀ (M) > 2000 mg/kg

Carcinogenicity: No carcinogenic effects have been demonstrated with technical brodifacoum in tests (ICI Ltd).

Embryotoxic, teratogenic effects: None demonstrated in rats and rabbits. No data are available on whether brodifacoum crosses the placenta during pregnancy.

Mutagenicity: No data available

12. ECOLOGICAL INFORMATION

Aquatic toxicity: (active ingredient)	Bird: Mallard duck LD ₅₀ 0.26 mg/kg Fish: Acute (96h) LC ₅₀ 0.051 mg/l (rainbow trout) Daphnia: Acute 48 hour EC ₅₀ 0.98 mg/l Algae: No data available.
Bio-accumulation:	Liabile to bio-accumulate.
Biodegradability:	Slowly degraded in soil; will not accumulate in soil or water.
Mobility:	Mobility depends on soil type.

13. DISPOSAL CONSIDERATIONS:

Disposal methods:	Residue may be disposed of in accordance with local/national regulations.
Disposal of packaging:	Empty containers to be triple rinsed and rendered unusable by puncturing and flattening. Dispose of containers in a responsible manner. Do not re-use for any other purpose.

14. TRANSPORT INFORMATION

Transport by land ADR/RID:	Proper Shipping Name/Description of goods: COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC. Class/Div. 6.1; UN No. 3026; Packing Group III Maximum quantity by rail carriage 60 l
Sea Transport IMDG:	Proper Shipping Name/Description of goods: COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC. Class/Div. 6.1; UN No. 3026; Packing Group III IMDG Code (Amendment 29-98): Refer to page 6219
Air transport ICAO - IATA: Packing instructions:	Proper Shipping Name/Description of goods: COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC. Class/Div. 6.1; UN No. 3026; Packing Group III Passenger aircraft 611: maximum 60 l; Cargo aircraft 618: maximum 220 l

15. REGULATORY INFORMATION:

Classification:	T+: Very toxic; T: Toxic; N: Dangerous to the environment
Risk phrases:	R27/28 Very toxic: By skin contact and if swallowed. R48/24/25 Toxic: Danger of serious damage to health by prolonged exposure or skin contact and if swallowed. R50/53 Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.
Safety phrases:	S2 Keep out of the reach of children. S13 Keep away from food, drink and animal feed S20/21 When using do not eat, drink or smoke. S37 Wear suitable gloves. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
National Legislation:	Occupational Health and Safety Act No. 85 of 1993 (amended 2002). National Road Traffic Act No. 93 of 1996 as amended. Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947 as amended. Registration No. L5986 Republic of South Africa.

16. OTHER INFORMATION:

Exclusion of liability:

The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. **SCIENTIFIC SUPA-KILL c.c.** provides no warranties, express or implied, and assumes no responsibility for the accuracy and completeness of the data contained herein. This information is offered for your consideration and investigation. The user is responsible for ensuring they have all the data relevant to their use.