



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Print Date: 3/10/14

Page 1 of 7

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: SUPA KILL BLOCKS

SUPPLIER: EFEKTO

PO BOX 652147

BENMORE

2010

TEL No. 011 287 5700

EMERGENCY TELEPHONE NUMBERS:

SPILLAGES: 083 1233 911

Fax: 086 685 3129

POISONINGS:

National Poison Centre 021-9386084 (office hours).

021-9316129 (after hours).

082 446 8946

Use: A ready-to-use rodenticide for the control rodents.

2. HAZARDS IDENTIFICATION

- Toxic if swallowed.

Likely routes of exposure:

Skin and eye contact, ingestion and inhalation.

Poisoning symptoms: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled and overexposure occurs are:

Mild exposure: reduction in The Clotting Power Of Blood, Detectable Only By Laboratory Analysis.

Moderate exposure: symptoms include bleeding gums, increased tendency to bruise, blood in faeces and urine or excessive bleeding from minor cuts or abrasions.

Severe exposure: severe gastrointestinal bleeding, massive internal bleeding resulting in shock, coma and death in very severe cases.

Extremely hazardous if swallowed and on prolonged skin contact. Accumulation of the toxin in the body is possible. Significant skin absorption may occur over an extended period.

Symptoms develop after several hours or days.

Symbol: None

Risk phrases: None

UN No.: Not regulated.



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Page 2 of 7

Print Date: 3/10/14

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredients:

Active ingredients.	CAS No.:	EC No.:
Brodifacoum 0.05 g/kg	56073-10-0	259-980-5
Bitrex	3734-33-6	
Inerts –food base	-	-

Chemical Name: 3-[3-[4-(4-Bromophenyl) phenyl]-1,2,3,4-tetrahydronaphthalen-1-yl]-2-hydroxychromen-4-one(IUPAC)

Chemical Family: Coumarin derivative. [anticoagulant].

Chemical Formula: C₃₁H₂₃BrO₃

NIOSH/RTECS No.: GN4934750

4. FIRST-AID MEASURES

General advice:

Avoid contact with the skin, eyes and clothing. Remove contaminated clothing. If difficulties occur: Obtain medical attention. Show container, label and/or safety data sheet to physician.

If inhaled:

Keep patient calm, remove to fresh air, and seek medical attention.

On skin contact:

After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

Note to physician:

Antidote : Intravenous Vitamin K1, 50 to 150 mg on first day depending on prothrombin time and weight of patient. In severe cases, small transfusions of matched fresh blood may improve prothrombin levels. Keep under medical supervision until prothrombin times return to normal. Gastric lavage may be effective if performed within 4 hours of ingestion.

Domestic animals exhibiting signs of intoxication:

1. Carry out a prothrombin test. Administer parentally 2-5mg/kg of Vitamin K1. Use the smallest diameter needle feasible and avoid the intravenous route in severely haemorrhagic animals.

2. Repeat prothrombin test about four hours after injection. Provided that the prothrombin time has normalised start daily oral vitamin K1 treatment and continue for three to four weeks.

3. Carry out a prothrombin test 24-48 hours after end of treatment. Continue treatment if signs of poisoning reappear or if prothrombin time is still abnormal.



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Print Date: 3/10/14

Page 3 of 7

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use dry extinguishing media, foam, water spray, water fog

Unsuitable extinguishing media for safety reasons: water jet

Specific hazards:

Carbon monoxide, hydrogen fluoride, nitrogen oxides. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protective clothing. Avoid contact with skin and eyes.

Environmental precautions:

Contamination of waterways should be strictly avoided. Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods for cleaning up or taking up:

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

Dispose of material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Avoid raising dust. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

7. HANDLING AND STORAGE

Handling:

No special measures necessary if stored and handled correctly. If dead and/or dying rats or mice are found during and after the control program, these must be cleared away immediately in order to avoid secondary poisoning phenomena.

Protection against fire and explosion:

Dust can form an explosive mixture with air. Avoid dust formation. Avoid deposition of dust. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage:

Segregate from foods and animal feeds.

Further information on storage conditions: Keep locked-up and out of reach of children. Keep in a cool, well-ventilated place. Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability:



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Print Date: 3/10/14

Page 4 of 7

Storage duration: 24 Months

Protect from temperatures above: 30 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guideline:

Brodifacoum: 0.002 mg/kg [manufacturer]

Personal protective equipment

Engineering controls:

In the workplace:

Natural ventilation should be adequate under normal conditions. Keep containers closed when not in use.

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter EN 143 Type P2, medium efficiency, (solid and liquid particles of harmful substances).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact

(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and Other.

Eye protection:

Tightly fitting safety goggles (splash goggles) (EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to DIN-EN 465).

General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended.

Store work clothing separately. Remove contaminated clothing immediately and dispose of safely.

Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or snuff-taking at the place of work. Hands and/or face should be washed before breaks and at the end of the shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, round block.
Colour:	Blue
Odour:	Slight odour, paraffin-like.
Ignition temperature:	235 °C
Bulk density:	0,60 - 0,68 kg/dm ³
Solubility in water:	Insoluble.

10. STABILITY AND REACTIVITY



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Page 5 of 7

Print Date: 3/10/14

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:

No substances known that should be avoided.

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

11. TOXICOLOGICAL INFORMATION

The product is an extremely hazardous anticoagulant rodenticide.

Oral LD₅₀ Rat: > 5,000 mg/kg body weight[similar product]

Dermal LD₅₀ Rat: > 2,000 mg/kg body weight (calculated from technical material)

For Brodifacoum, technical:

Acute oral LD₅₀ to rats is 0.27 mg/kg

Dermal LD₅₀ to rats is 0,25 to 0,63 mg/kg.

Inhalation: Due to the form of this product (solid preparation), inhalation is not considered to be a relevant route of exposure.

Eye: Slight irritant

Skin: Non irritant.

Chronic Toxicity (Active Ingredient):

Brodifacoum technical has been extensively tested in mammals and in test-tube systems.

No evidence of mutagenic, carcinogenic, neurotoxic, teratogenic or reproductive effects was obtained. Studies in rats and rabbits indicate that this material accumulates in body tissues, principally the liver, and has a very long half-life (150 – 200 days in rats dosed with 0.25 mg/kg). Thus, in humans there is a potential for accumulation of small amounts over a long period of continued exposure leading to toxic levels within the body.

12. ECOLOGICAL INFORMATION

Brodifacoum is highly toxic to birds and wildlife.

Birds:

Oral LD₅₀ (chickens) = 4.5 mg/kg.

Oral LD₅₀ (mallard duck) = 0.31 mg/kg.

Dietary LC₅₀ (40 day) mallard ducks = 2.7 ppm.

Dietary LC₅₀ (40 day) Bobwhite quail = 0.8 ppm.

Rainbow Trout, *Oncorhynchus mykiss*, LC₅₀ (96 h) = 0.051 mg/L.

Bluegill sunfish LC₅₀ (96 h) = 0.165 mg/L.

Water flea *Daphnia magna*, LC₅₀ (48 h) = 0.34 mg/L.

LogPOW is 8.5, risk of bioaccumulation in an aquatic species is high.

Brodifacoum degrades slowly in soils under aerobic and flooded conditions. The half life in soil is greater than 12 weeks. It is unlikely to leach to groundwater.



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Page 6 of 7

Print Date: 3/10/14

13. DISPOSAL CONSIDERATIONS

Product:

Must be dumped or incinerated in accordance with local regulations.

Following completion of the control programme, any bait which has not been taken must be collected and disposed of.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. TRANSPORT INFORMATION

UN No.: Not regulated.

15. REGULATORY INFORMATION

Symbol: None

Risk phrase(s):

None.

Safety phrases:

S 2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feedingstuffs.

S20/21 When using do not eat, drink or smoke.

National Legislation:

In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

16. OTHER INFORMATION

Compiled by: Danie Fourie

Regulatory information:

Text of R phrases mentioned in Section 2

R27 Very toxic in contact with skin.

R28 Very toxic if swallowed.

R48/24 Toxic: danger of serious damage to health by prolonged exposure in contact with skin.

R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R36 Irritating to eyes.

R38 Irritating to skin.

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith



MATERIAL SAFETY DATA SHEET

SUPA KILL BLOCKS

Date Issued: May 2011 and is valid for 3 years from this date.

Revision: 1

Print Date: 3/10/14

Page 7 of 7

and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

REFERENCES

- Scientific Supa-Kill MSDS.
- Similar product MSDS.
- ADR 2011, Part 3.
- IMDG Code, 2005 Edition, Vol. 2.
- IATA Dangerous goods regulations, Effective 1 January 2011

END OF MSDS.