

Section 1 - Identification of The Material and Supplier

Ensystem South Africa (Pty) Ltd
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Chemical nature: Second Generation Anticoagulant Rodenticide (SGAR).

Trade Name: **MUSKIL® Dual Active Rodenticide Blocks – with FLUO-NP Technology**

Product Codes: Reg. No. L10359

Product Use: Rodenticides for use as described on the product labels.

Creation Date: **October, 2015**

This version issued: **December, 2023** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

DG Classification: None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMSBC criteria. **IATA:** Non-Hazardous for Air Transport.

UN Number: None allocated



GHS Signal word: **WARNING**

HAZARD STATEMENT:

H373: May cause damage to organs through prolonged or repeated exposure.

PREVENTION

P102: Keep out of reach of children.

P262: Do not get in eyes, on skin, or on clothing.

P281: Use personal protective equipment as required.

RESPONSE

P314: Get medical advice or attention if you feel unwell.

P352: Wash with plenty of soap and water.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P370+P378: Not combustible. Use extinguishing media suited to burning materials.

STORAGE

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Emergency Overview

Physical Description & colour: Extruded 10 g fluorescent red wax block or 10 g bait sachet containing fluorescent red paste.

Odour: Mild characteristic odour.

Major Health Hazards: Ingestion of actives is initially asymptomatic, and may continue as such even with prolonged alterations in prothrombin time. No gastrointestinal tract or other symptomatology occurs. Coagulation disturbances may become evident a few days after ingestion, and may be detected only by laboratory studies. In severe poisoning, gum-bleeding, epistaxis, petechiae, ecchymoses, haematomata, blood in urine and faeces, and genital haemorrhage may occur. Internal bleeding and cerebral haemorrhage may complicate the patient's prognosis. Danger of cumulative effects.

Potential Health Effects

Symptoms and Effects No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may occur if the product is mishandled are:

- **Mild Exposure:** Reduction in the clotting ability of the blood, detectable only by medical analysis.
- **Moderate Exposure:** Bleeding from gums, tendency to bruise easily, blood present in faeces and/or urine, excessive bleeding from minor cuts.
- **Severe Exposure:** Severe intestinal bleeding and/or internal bleeding resulting in shock, coma and even death in very severe cases.

Inhalation:

Short term exposure: Available data indicates product is not harmful. Product is unlikely to cause any discomfort or irritation.

Long Term exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

Long Term exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short term exposure: This product may be mildly irritating to eyes, but is unlikely to cause anything more than mild discomfort which should disappear once product is removed.

Long Term exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short term exposure: Significant oral exposure is considered to be unlikely. The denatonium benzoate in the product makes it very unpalatable to humans. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

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 ³)	STEL (mg/m ³)
Bromadiolone	28772-56-7	0.0025% (0.025 g/kg)	not set	not set
Difenacoum	56073-07-5	0.0025% (0.025 g/kg)	not set	not set
Denatonium benzoate	3734-33-6	0.001%	not set	not set
Natural food ingredients	various	to 100%	not set	not set

These are commercial products whose exact ratio of components may vary slightly.

These products DO NOT contain peanuts.

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Section 4 - First Aid Measures

General Information:

In case of human or animal poisoning, call the Griffon Poison Centre 082-446-8946 (24 hr service). Have this SDS with you when you call.

Vitamin K1 (Phytomenadione) is antidotal.

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

Skin Contact: Gently brush away excess particles. If on skin and after each baiting, wash thoroughly with soap and water. Wash hands after use.

Eye Contact: Quickly and gently brush particles from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Domestic animals: Immediately transport to a veterinary surgeon. If no signs of intoxication are noted, but bait consumption is suspected, induce vomiting only if ingestion is recent, less than six (6) hours. Use a solution of salty water (2-3 tablespoons salt in a cup of water), place in a soft drink bottle and squirt it down the animal's throat. Vomiting should take place after about 10 minutes. Seek veterinary advice.

Advice to Doctor/ Veterinarian: Bromadiolone and difenacoum, the active constituents of MUSKIL Rodenticides are long lasting anticoagulant chemicals, which if ingested by humans, domestic animals or pets, can reduce the clotting power of the blood and haemorrhage may result. Vitamin K1 (Phytomenadione) should be administered urgently by medical, appropriate para-medical personnel or veterinarians. If administered intravenously the injection must be given slowly.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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

Extinguishing Media: Not combustible. Use extinguishing media suited to burning materials.

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

Flash point: No data

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: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

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 SDS 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 schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Check packaging - there may be further storage instructions on the label.

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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**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits **TWA (mg/m³)** **STEL (mg/m³)**

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should be used in a well ventilated area.

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: When using the product wear elbow length chemical resistant gloves.

Protective Material Types: We suggest that protective clothing be made from the following materials: cotton, 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:

Physical Description & colour:	Extruded 10 g fluorescent red wax block/ 10 g sachet containing fluorescent red paste.
Odour:	Mild characteristic odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Solid at normal temperatures.
Volatiles:	No specific data. Expected to be low at 100 °C.
Vapour Pressure:	Negligible at normal ambient temperatures.
Vapour Density:	Not applicable.
Specific Gravity:	No data.
Water Solubility:	Insoluble.
pH:	No data.
Volatility:	Negligible at normal ambient temperatures.
Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water distribution:	No data
Viscosity:	Not applicable.
VOC:	0.0%
Autoignition temp:	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: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong acids, strong bases, strong oxidising agents.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. 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 will not undergo polymerisation reactions.

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Section 11 - Toxicological Information

Acute toxicity:

Bromadiolone	Oral LD ₅₀	1.125 mg/kg (rat)
	Dermal LD ₅₀	1.71 mg/kg (rabbit)
	Inhalation LC ₅₀ /4h	0.00043 mg/L (rat)
Difenacoum	Oral LD ₅₀	1.8 mg/kg (rat) / 2.0 mg/kg (rabbit)
	Dermal LD ₅₀	1000 mg/kg (rabbit)
Denatonium benzoate	Oral LD ₅₀	749 mg/kg (rat)
	Dermal LD ₅₀	>2000 mg/kg (rat)
	Inhalation LC ₅₀ /4h	0.2 mg/L (rat)
Primary irritation	skin:	No irritant effect.
	eye:	No irritating effect.
Sensitisation:	No sensitizing effects known.	

Additional toxicological information: The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.	

Section 12 - Ecological Information

PROTECTION OF LIVESTOCK, WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Depending on the amount eaten, this bait may kill or injure. The bait is hazardous to dogs, cats, pigs, poultry and other wildlife. Place bait stations in areas which are inaccessible to non-target animals, wildlife or birds. Map location and number of baits to assist in retrieval and ongoing surveillance. Ensure all baits are removed after treatment. Regularly search for, remove and destroy carcasses and moribund rodents so that cats, dogs or non-target animals don't eat poisoned rats and mice. Dispose of carcasses by burning or burying. Do NOT contaminate dams, waterways and drains with the bait or its used container.

Bromadiolone	LC ₅₀ /96h	3.0 mg/L (bluegill sunfish)
		1.4 mg/L (rainbow trout)
	Oral LD ₅₀	138 mg/kg (bobwhite quail)
Difenacoum	LC ₅₀	>1000 mg/kg (worm)
	LC ₅₀ /96h	0.10 mg/L (rainbow trout)
	Oral LD ₅₀	>50 mg/kg (chicken)

Section 13 - Disposal Considerations

Disposal: Break, crush, puncture and bury empty containers and dispose of unused bait in a local authority landfill. If no landfill is available, bury the containers or unused bait below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Do NOT use containers which have held bait for any other purpose.

Dispose of carcasses safely by burning or burying in an approved landfill.

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good by ADG, IATA or IMSBC criteria.

No special transport conditions are necessary unless required by other regulations.

IATA: Non-Hazardous for Air Transport.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredients: Bromadiolone, difenacoum and denatonium benzoate, are mentioned in the SUSMP.

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Section 16 - Other Information

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

If there is any conflict between this SDS and the registered label, instructions on the label prevail.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS SDS 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 SDS 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.

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