

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Product Name: **MOUSEOFF® Bromadiolone Rodent Block**

Recommended use of the chemical and restrictions on use: **For the control of mice and rats.**
Not to be used in crops, do not leave baits accessible to domestic animals, livestock or wildlife including birds. Do not allow bait to contaminate foodstuff or feed intended for human or animal consumption. To be used only in accordance with label instructions.

Supplier: **Animal Control Technologies (Australia) Pty Ltd**

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Emergency Telephone: **Poisons Information Centre 13 11 26 (24 hours)**

2. HAZARDS IDENTIFICATION

Classification of the substance mixture: Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion (w/w)
The components in this formulation are considered not to be hazardous and therefore are not required to be disclosed according to the WHS Regulations. Following is the information for the active constituent which is not classified as hazardous in this formulation.		
Bromadiolone	28772-56-7	0.005%

4. FIRST AID MEASURES

If poisoning occurs, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor. Have this SDS or the label with you.

Inhalation: There is no inhalation risk with this product, bring affected person to fresh air.

Skin Contact: Remove contaminated clothing. Rinse and wash skin thoroughly with soapy water immediately after contact. Bromadiolone is a non-irritant to the skin. Bromadiolone may be absorbed through the skin. Seek medical attention if irritation develops or persists.

Eye Contact: If in eyes, hold eyes open, flood with running water for at least 15 minutes and see a doctor. Bromadiolone may cause irritation to the eye, seek medical assistance if required.

Ingestion: Hazardous, seek medical attention. Effects are cumulative and delayed in action. Contact a doctor or Poisons Information Centre.

First Aid Facilities: Eyewash and normal washroom facilities.



Medical attention and special treatment:

Bromadiolone is a “second generation” modified coumarin derived anticoagulant whose mode of action is to block the liver enzyme epoxide reductase. This enzyme re methylates spent Vitamin K for reuse. Following absorption, over time symptoms of anticoagulation develop once reserves of active vitamin K are depleted as active Vitamin K is required to catalyse two stages of the clotting cascade in mammals. Symptoms may not appear for several days following initial exposure.

Vitamin K1 (phytomenadione) only, can be used as an antidote if patient shows signs of anticoagulant poisoning (bleeding, haemorrhage). Repeat as necessary based on monitoring of prothrombin (PT) times. It is important to ascertain the route of exposure and the quantity of bait exposed to. Prolonged PT times and symptoms may not be evident until several days after exposure. Symptoms include anaemia, excessive bleeding from minor cuts, nose bleeds and bleeding from the gums. Life threatening symptoms include complications from massive gastrointestinal bleeding and intracranial haemorrhage. Bromadiolone has a longer half-life than warfarin but lower half life than Brodifacoum. Effects may be prolonged after significant single exposure and intermittent repeat small exposures can be cumulative.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards arising from the substance or mixture:	The block is not flammable, non- combustible and will not auto-ignite. In case of fire do not inhale fumes. Wear mask and gloves
Special protective equipment and precautions for fire-fighters:	Fire fighters should wear a respirator and suitable protective clothing to prevent risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/ Environmental precautions:	Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.
Personal precautions/ Protective equipment:	Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact. Work up wind or increase ventilation.
Methods and materials for containment and cleaning up:	Contain - prevent run off into drains and waterways. While wearing protective equipment, sweep-up spilt bait using a broom and shovel. Collect and seal in properly labelled containers or drums for disposal. Dispose of bait by burial below 50 cm. Rinse away residue with excess water. Avoid contaminating water sources, rivers etc.

7. HANDLING AND STORAGE

Precautions for safe handling:	Keep containers closed at all times - check regularly for leaks or spills. Transport and store upright. To avoid risks to people and environment the instructions for use are to be followed. Avoid all contact with the product and wear protective clothing and gloves while handling bait. Keep out of reach of children. Do not eat, drink or smoke in contaminated areas. Always remove contaminated clothing and wash hands before eating, drinking, smoking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Apply in inhabited areas only if domestic animals can be kept away.
Conditions for safe storage, including any incompatibilities:	Store in the closed, original container in a dry, cool, well ventilated area out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Keep working dogs, pets and wildlife away from baits as they are highly susceptible to the poison and may eat the baits.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia.

Appropriate engineering controls: The product formulation dilutes the concentration of Bromadiolone and binds the poison within the bait block matrix. Vapour and dust hazard risk is low. Blocks are individually sachet wrapped to maintain palatability and minimise operator exposure.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Observe good standards of hygiene and cleanliness. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Respiratory Protection: A respirator is not needed under normal and intended conditions of product use however if ventilation is not adequate then wear a respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Eye and Face protection: Eye and face protection is not needed under normal and intended conditions of product use. However if protection is required consult AS/NZS 1336 and AS/NZS 1337 for further information.

Skin Protection: Do not touch bait. Baits may be placed without unwrapping from packing sachet and may be handled without protective equipment while in sachet. PVC or nitrile rubber gloves may be worn as a general precaution. Always check with the glove manufacturer or your personal protective equipment supplier regarding the correct type of glove to use. Consult AS/NZS 2161 for further information.

Trousers, long sleeved shirt and closed in shoes or safety footwear may also be worn as a general precaution. Consult AS/NZS 2210 and AS/NZS 2919 for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Pink coloured waxy block. Blocks are individually sachet packed. 50g block containing 2.5mg Bromadiolone total per block.

Colour: Pink

Odour: Wheat cereal like odour.

pH: No information available.

Bulk Density g/cc: 1.1gm/cc

Melting Point/Freezing Point: No information available.

Boiling Point/range: No information available.

Flash Point: Not flammable

Evaporation Point: No information available.

Vapour Pressure: No information available.

Vapour Density: No information available.

Solubility: The blocks resist water and Bromadiolone is insoluble in water.

Partition coefficient: n- octanol/water No information available.

Auto-ignition Temperature: Not relevant.

Decomposition Temperature: No information available.

Viscosity: Not relevant.

10. STABILITY AND REACTIVITY

Reactivity: Non-reactive under normal conditions.

Chemical stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.



Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	None known.
Incompatible materials:	None known.
Hazardous decomposition products:	None known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Bromadiolone causes a depression in the liver function to activate vitamin K. This in turn causes a decrease in blood clotting factors (II, VII, IX and X) causing an antiprothrombin effect (the inability for the blood to clot). Large single doses can cause acute poisoning. Bromadiolone can have a cumulative effect, causing anticoagulation poisoning with a long latent period between ingestion and symptoms. Anticoagulant effects may persist for days, weeks or months depending on the dose consumed. Patients with hepatic dysfunction, malnutrition or a bleeding diathesis are at greater risk. No definite toxic dose has been established for humans, because of limited clinical reports. LD50 oral doses reported for rats are 1.12mg/kg bw and mice 1.75mg/kg bw.
Ingestion:	Poisonous if swallowed. Symptoms include bleeding from nose, gums, blood in stool, blood in urine, bruising, fatigue and shortness of breath during exertion, anaemia.
Inhalation:	Available information indicates that it is not considered an inhalation risk.
Skin:	Not considered a skin irritant however as a general precaution, avoid contact with skin. Bromadiolone may be absorbed through the skin.
Eye:	Not considered an eye irritant however as a general precaution, avoid contact with eyes.
Respiratory or skin sensitisation:	Not a skin sensitiser and not expected to be a respiratory sensitiser.
Germ cell mutagenicity:	Not considered to be a mutagenic hazard.
Carcinogenicity:	Not considered to be a carcinogenic.
Reproductive toxicity:	Not considered to be toxic to reproduction.
STOT-single exposure:	Not expected to cause toxicity to a specific target organ.
STOT-repeated exposure:	Not expected to cause toxicity to a specific target organ.
Aspiration hazard:	Not expected to be an aspiration hazard.
Chronic health effects:	Repeated minor exposure may have a cumulative poisoning effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	<p>Avoid contaminating stream, rivers or waterways with the chemical and used containers. Under normal and intended conditions of use, the product does not present an ecotoxicity hazard to fish, bees or earthworms. Collect and burn or bury rodent carcasses daily if possible.</p> <p>Information on non-target animal distribution, conservation status, habitat preference, diet, body weight and size of home range can be used to reduce poisoning risks posed by baiting programs. Time baiting programs when non-target species are least active or least susceptible. Second generation anticoagulant baits are not suitable for control of rats and mice in crops. Alternate products such as zinc phosphide baits are better suited for this application. When possible apply anticoagulant baits in bait stations throughout rodent infested areas.</p>
Persistence/degradability:	The product is biologically degradable.
Bioaccumulative potential:	The product will not accumulate in soil or water.
Mobility in Soil:	No information available.



13. DISPOSAL CONSIDERATIONS

Disposal methods: Bait that is not eaten by the end of the baiting program is to be collected and destroyed by incineration, or buried to a depth of 50cm.

Before disposal ensure container is completely empty by shaking. Break, crush or puncture and bury containers in a local authority landfill. If no landfill is available bury the containers below 500mm in a disposal pit specially marked for this purpose, clear of waterways, desirable vegetation and roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

Road and Rail Transport: Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Marine Transport: Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON- DANGEROUS GOODS.

Air Transport: Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON- DANGEROUS GOODS.

15. REGULATORY INFORMATION

Poison Schedule (SUSMP): 6

APVMA Approval No.: 64931

AICS: All the constituents of this material are either listed on the Australian Inventory of Chemical Substances (AICS), not required due to the nature of the chemical, or have been assessed under the National Industrial Chemicals (Notification and Assessment) Act 1989 as amended.



16. OTHER INFORMATION

GENERAL INFORMATION: None

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ISSUE DATE: 08 July 2016

In any event, the review and, if necessary, the re-issue of an SDS shall be no longer than 5 years after the last date of issue.

Reason(s) for Issue: Second Issue.
Revised Primary SDS and updated to GHS requirements.

LITERARY REFERENCE: ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS - Australian Inventory of Chemical Substances
APVMA – Agricultural Pesticides and Veterinary Medicines Australia
GHS - Globally Harmonised System of Classification and Labelling of Chemicals (3rd revised edition) 2009
IARC - International Agency for Research on Cancer
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (December 2016)
STEL - Short term exposure limit means the average airborne concentration of a substance calculated over a 15 minute period. The STEL should not be exceeded at any time during a normal eight hour working day.
SUSMP - Standard for the Uniform Scheduling of Medicines & Poisons
SWA - Safe Work Australia, formerly ASCC and NOHSC
TGA – Therapeutic Goods Australia
TWA - Time-weighted average means the average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.
WHS – Workplace Health and Safety

The physical values and properties described in this SDS are typical values based on scientific literature and material produced to date, and are believed to be reliable. Animal Control Technologies provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. The information is supplied upon the condition that the persons receiving information will make their own determination as to the suitability for their purposes prior to use of this product. Due care should be taken to ensure that the use of this product and its disposal is in compliance with all relevant Federal, State and Local Government regulations.

End of SDS