

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **MOUSEOFF[®] Bromadiolone Rodent Bait**

Recommended 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 Details

Company: Animal Control Technologies (Australia) Pty Ltd
Address: 46-50 Freight Drive Somerton Vic 3062, Australia
Telephone number: 03 9308 9688 (Monday to Friday, 8:00a.m. – 5:00p.m. EST)
Emergency telephone number: Poisons Information Centre 13 11 26 (24 hours)

2. HAZARDS IDENTIFICATION

Hazard classification: Not classified as a hazardous substance according to the criteria of NOHSC.
Not classified as a dangerous good according to the criteria of the Australian Dangerous Goods Code.

Risk phrase(s): None

Safety phrase(s): None

Poisons schedule number: S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Name:	CAS Number:	Proportion (w/w):
Bromadiolone	28772-56-7	0.05g/kg
Other ingredients not determined to be hazardous	N/A	up to 100%

4. FIRST AID MEASURES

First aid: If poisoning occurs, contact a doctor or Poisons Information Centre. Have this MSDS or the label with you.

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

Eye: Hold eyes open and wash with running water. Bromadiolone is may cause slight irritation to the eye.

Skin: If on skin wash thoroughly with soap and water. Bromadiolone is a non-irritant to the skin. Bromadiolone may be absorbed through the skin.

Advice to doctor: 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 serious 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

Fire & explosion hazards: The bait is not flammable and will not auto-ignite.

Suitable extinguishing media: Water spray, foam, carbon dioxide, dry chemical powder.

Hazards from combustion: In case of fire do not inhale fumes. Wear mask and gloves.

Special protective equipment: Use individual respiratory equipment to protect from fumes.

6. ACCIDENTAL RELEASE MEASURES

Spills and Disposal: While wearing rubber gloves, sweep-up spilt bait using a broom and shovel. Dispose of bait by burial below 50 cm. Rinse away residue with excess water.

7. HANDLING AND STORAGE

Precautions for safe handling: To avoid risks for man and environment the instructions for use are to be followed. Wear protective gloves while handling this product and wash hands thoroughly with soap and water after use.

Conditions for safe storage: 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. Do not leave baits accessible to domestic or farm animals, children or wildlife.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National exposure standards: No exposure standard allocated.

Biological limit values: No biological limit allocated.

Engineering controls: The product formulation dilutes the concentration of bromadiolone and binds the poison to the carried grain. Vapour and dust hazard risk is low.

Personal protective equipment: Do not touch exposed bait. Use scoop or measure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Wheat grain coloured with a green dye.

pH: Not available

Vapour pressure: Not applicable

Vapour density: Not applicable

Boiling point / range: Not applicable

Freezing / melting point: Not available

Solubility in water: The wheat bait is not soluble in water.

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal storage and handling conditions.

Incompatible materials: None applicable

Hazardous decomposition products: No specific data

Hazardous reactions: No specific data

11. TOXICOLOGICAL INFORMATION

Acute: 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.

Swallowed: Poisonous if swallowed. Symptoms include bleeding from nose, gums, blood in stool, blood in urine, bruising, fatigue and shortness of breath during exertion, anaemia.

Eye: Avoid contact with eyes.

Skin: Avoid contact with skin. Bromadiolone may be absorbed through the skin.

Inhaled: There is no inhalation risk with the product.

Chronic: Repeated minor exposure may have a cumulative poisoning effect.

Studies on mutagenicity and teratogenicity effects have not shown any mutagenic, embryotoxic, or teratogenic effect.

12. ECOLOGICAL INFORMATION

Do not contaminate streams, rivers or waterways with the chemical or used containers. 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.

Ecotoxicity: Do not contaminate streams, rivers or waterways with the chemical or used containers. Collect and burn or bury rodent carcasses daily where possible.

Persistence and degradability: The product is biologically degradable and will not accumulate in soil or water.

13. DISPOSAL CONSIDERATIONS

Disposal of bait: 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 50 cm.

Disposal of containers: Break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 50 cm in a disposal pit. Empty containers should not be burnt.

14. TRANSPORT INFORMATION

This product is not classified as a dangerous good according to the Australian Dangerous Goods Code 6th Edn. (1998).

UN number:	Not applicable	UN proper shipping name:	Not applicable
Dangerous Goods Class:	Not applicable	Subsidiary Risk:	Not applicable
Packing group:	Not applicable	Hazchem code:	Not applicable

15. OTHER INFORMATION

Date of Preparation of this MSDS: 23rd June 2013

This Material Safety Data Sheet (MSDS) has been developed using the following references:

- National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition. [NOHSC:2011(2003)]
- Australian Dangerous Goods Code 6th Edition, (1998). Australian Government Publishing Service, Canberra
- Reigart, R. and Roberts, J. editors (1999) *Recognition and Management of Pesticide Poisoning 5th Edition*, EPS Office of Pesticides Programs, Washington D.C.

The physical values and properties described in this MSDS 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 MSDS