



SAFETY DATA SHEET

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Bromadiolone 0.25% Red

Revision 2
Revision date 30-May-2008

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name Bromadiolone 0.25% Red

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Product code 700.

2 HAZARDS IDENTIFICATION.

Main hazards Harmful in contact with skin and if swallowed. Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 . COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients	Conc.	CAS	EINECS	Symbols/Risk phrases
propane-1,2-diol	90-100%	57-55-6	200-338-0	
Bromadiolone	0-0.5%	28772-56-7	249-205-9	T+; R27/28 T; R48/24/25 N; R50/53

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Skin contact	Remove contaminated clothing. Wash off immediately with plenty of soap and water. If irritation persists obtain medical attention. Contaminated clothing should be washed and dried before re-use.
Eye contact	Rinse immediately with plenty of water and seek medical advice..
Inhalation	Move the exposed person to fresh air. Obtain medical advice immediately.
Ingestion	Harmful if swallowed. Obtain medical advice immediately.
General information	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). ADVICE FOR DOCTORS: Bromadiolone is an indirect anti-coagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin times not less than 18 hours after consumption. If elevated, administer Vitamin K1 until prothrombin time normalises. Continue determination of prothrombin time for two weeks after withdrawal of antidote and resume treatment if elevation occurs in that time.

5. FIRE FIGHTING MEASURES

Extinguishing media	Keep fire exposed containers cool by spraying with water if exposed to fire. Carbon dioxide (CO ₂) Alcohol resistant foam. Dry chemical. Use extinguishing media appropriate to the surrounding fire conditions. Do NOT use ... Water jet.
Fire hazards	Burning produces irritating, toxic and obnoxious fumes. Vapour may travel considerable distance to source of ignition and flash back.
Protective equipment	In the event of fire, wear a self-contained breathing apparatus, a chemical protection suit suitable gloves and boots.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear suitable protective clothing, gloves and eye/face protection. See section 8.
Environmental precautions	Contain or absorb leaking liquid with earth or sand. Prevent liquid entering water courses, sewers or basements. If substance has entered a watercourse or sewer or contaminated soil or vegetation, inform the appropriate authority.
Clean up methods	Absorb with inert, absorbent material. Transfer to a suitably labelled container. Subsequently, wash the contaminated area with water, taking care to prevent the washings entering sewers or drains.

7. HANDLING AND STORAGE

Handling	Avoid contact with eyes and skin. Keep away from sources of ignition - No smoking. Do not smoke eat or drink while handling this product. Always use good personal hygiene procedures when handling chemicals.
Storage	Keep in a cool, dry, well ventilated area. Keep out of the reach of children. Keep away from food and animal feedstuffs. Keep away from oxidising agents. Store in accordance with Health and Safety Executive's Guidance Note HSG71
Specific use	Concentrate for producing ready for use anticoagulant rodenticides.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

propane-1,2-diol particulates	WEL 8-hr limit ppm: - WEL 15 min limit ppm: -	WEL 8-hr limit mg/m3: 10 WEL 15 min limit mg/m3: -
propane-1,2-diol total vapour and particulates	WEL 8-hr limit ppm: 150 WEL 15 min limit ppm: -	WEL 8-hr limit mg/m3: 474 WEL 15 min limit mg/m3: -

Engineering measures	Ensure adequate ventilation of the working area.
Occupational exposure controls	Always use good personal hygiene procedures when handling chemicals. Wash hands and exposed skin before meals and after use.
Respiratory protection	Suitable approved respirator if exposed to spray mists.
Hand protection	Impervious gloves.
Eye protection	Approved safety goggles.
Protective equipment	Impervious clothing. Rubber boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Liquid.
Colour	Red.
pH	8.5
Flash point	90°C
Relative density	~1.05
Water solubility	Miscible in water. Bromadiolone is sparingly soluble in water (19mg/l).

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to avoid	Heat, sparks and open flames.
Materials to avoid	Oxidising agents.
Hazardous decomposition products	Combustion or thermal decomposition will produce toxic and irritant fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Harmful in contact with skin and if swallowed. ORL RAT LD50 < 5mg/kg for technical bromadiolone. Calculated as less than 2000mg/kg for a 0.25% solution. DERMAL RAT LD50 : 23 mg/Kg technical material. Calculated as approx 9,200 mg/kg for 0.25% liquid concentrate.
Repeated or prolonged exposure	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
Mutagenic effects	No evidence to suggest anticoagulant rodenticides are mutagenic.
Carcinogenic effects	No evidence to suggest anticoagulant rodenticides are carcinogenic.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Bromadiolone	Algae EC50/72h = 0.664 mg/l Daphnia EC50/48h = 5.79 mg/l Rainbow trout LC50/96h = 2.89 mg/l

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General information	Dispose of as special waste in compliance with local and national regulations.
Disposal methods	For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.
Disposal of packaging	Empty containers can be sent to landfill or for recycling after cleaning, if in compliance with local and national regulations.

14. TRANSPORT INFORMATION**ADR/RID**

UN 3026	Packing group III
Class 6.1	Hazard ID 60
Proper Shipping Name	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC N.O.S. (bromadiolone 0.25%).

IMDG

UN 3026	Packing group III
Class 6.1	Marine pollutant NO
EmS Code F-A S-A	

IATA

UN 3026	Packing group III
Class 6.1	Subsidiary risk -
Packing Instruction 618 (Cargo)	Maximum quantity 220 L
Packing Instruction 611 (Passenger)	Maximum quantity 60 L

15. REGULATORY INFORMATION**Symbols** Xn - Harmful**Risk phrases**

R21/22 - Harmful in contact with skin and if swallowed.
 R48/21/22 - Also Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
 R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

S28 - After contact with skin, wash immediately with plenty of soap and water.
 S36/37 - Wear suitable protective clothing and gloves.
 S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S60 - This material and its container must be disposed of as hazardous waste.
 S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

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16. OTHER INFORMATION

Text of risk phrases in Section 3.	R27/28 - Very toxic in contact with skin and if swallowed. R48/24/25 - Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Restricted use	Concentrate for producing ready for use anticoagulant rodenticides.
Data sources	CHIP 2002 EH40 Raw material suppliers Safety Data Sheets.
Revision	This document differs from the previous version in the following areas: Section 1, 4, 5, 7, 11, 12,14