

Safety Data Sheet

NOTE: Access to a copy of this Safety Data Sheet (SDS) via our Website does not constitute the issue of a controlled Copy under EU legislation. To be issued with such a copy please contact Rentokil Initial using the details below. In order to confirm the latest version of the SDS for this product visit <http://www.rentokil-initial.com/sds>

Issue : 01 10 : 03 : 2011

1 IDENTIFICATION OF THE MIXTURE AND COMPANY		
Product identifier	BROMADIOLONE PERFORATED SACHETS	HSE 9272 PCS 96198
Relevant identified uses of the mixture and uses advised against	A rodenticide for professional use. A blue ready-to-use whole grain bait in a perforated sachet with no perceptible odour. Contains Bitrex®, a bittering agent. Part of the Deadline Range.	
Details of the supplier of the safety data sheet	Rentokil Initial Supplies, Liverpool, L33 7SR. UK Product advice line: +44 (0)151 548 5050 Emergency line: +44 (0)1342 833 022 E-mail: sds@rentokil.com	
National Contact	As above	
Emergency telephone number	0844 892 011 (for use by medical professionals only).	

2 HAZARDS IDENTIFICATION	
Classification according to Regulation (EC) No 1272/2008 (See section 16)	
See section 16 / Not applicable.	
Classification according to Directive 1999/45/EC (See section 16)	
Not classified.	
Label elements	
Hazard symbol not required	
Risk phrase(s), in full	Risk phrases not required.
Safety phrase(s), in full	Safety phrases are not required.
To avoid risks to man and the environment, comply with the instructions for use. Safety Data Sheet available to professional user on request.	
Other hazards	
None expected under normal conditions of handling and use.	
This product contains an anticoagulant compound. If ingested, symptoms may include nosebleed and bleeding gums. In severe cases there may be bruising, haematomas of the joints and blood present in the faeces and urine. Phytomenadione, Vitamin K1, is antidotal.	

3 COMPOSITION / INFORMATION ON INGREDIENTS (See section 16)							
% w/w	Common*/ Chemical Name (IUPAC)	CAS No.	EC No.	Index No.	Regulation (EC) No 1907/2006 (REACH) Registration No.	Directive 67/548/EEC Classification	Regulation (EC) No 1272/2008 classification
0.005	Bromadiolone*/3-[3-(4'-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxycoumarin	28772-56-7	249-205-9	-	-	Not classified.	T+ : R26/27/28 : R48/24/25 N : R50/53

4 FIRST-AID MEASURES	
Inhalation	This route of exposure is not anticipated.
Eye Contact	Rinse affected eye with clean running water, or eyewash solution, for at least 15 minutes holding eyelids well apart. Rinse entire surface and do not allow run-off to contaminate unaffected eye. Seek medical attention.
Skin Contact	Remove and wash contaminated clothing immediately. Wash affected area thoroughly with soap and water. If the patient feels unwell seek medical advice.
Ingestion (Swallowing)	Do NOT induce vomiting. If unconscious place in the recovery position and apply supportive measures if necessary. If conscious give patient up to ½ litre or 1 pint of water to drink. Seek medical attention.
Emergency Equipment Suggested	Appropriate first-aid equipment should be provided.
Note To Doctor	Further information on all Rentokil Initial formulations is lodged with the National Poisons Information.
Antidote	Phytomenadione, Vitamin K1, is antidotal.

5 FIRE FIGHTING MEASURES	
Suitable extinguishing media	Use carbon dioxide, foam, water, or dry powder extinguishers.
Unsuitable extinguishing media	Do not use water jet as this may spread the fire.
Special hazards arising from the mixture	Combustion or thermal decomposition may evolve toxic and irritant vapours.
Advice for fire-fighters	Wear suitable personal protective equipment conforming to EN469.

6 ACCIDENTAL RELEASE MEASURES	
Personal precautions, protective equipment and emergency procedures	Wear suitable personal protective equipment.
Environmental Precautions	Keep away from drains, surface and ground water, and soil.
Methods and material for containment and cleaning up	Collect up spilt material and transfer to a suitable container for re-use or subsequent disposal.
Reference to other sections	Please also see sections 8 and 13 for further information.
Additional Information	Clear spills immediately.

7 HANDLING AND STORAGE	
Precautions for safe handling	No specific handling requirements.
Conditions for safe storage, including any incompatibilities	Store in original container in a cool, dry, ventilated place out of the reach of children and away from food, drink and animal feeding stuffs.
Specific end use(s)	Rodenticide.

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standard - Directive EC/98/24 (1 st IOELV Directive)	Workplace Exposure Limit (WEL) long-term exposure (8 hour Time Weighted Average).	Not applicable.
	Workplace Exposure Limit (WEL) short-term exposure (15 minute reference period).	Not applicable.
	Substance name used in Directive EC/98/24 (1 st IOELV Directive).	Not applicable.
Appropriate engineering controls	Where exposure may occur, engineering controls, rather than the provision of Personal Protective Equipment (PPE) should be employed. On completion of a risk assessment, the following PPE may be required:	
Eye/face protection	Label advice indicates none necessary under normal handling and use. However, consider other precautionary requirements.	
Hand protection	Label advice indicates none necessary under normal handling and use. However, consider other precautionary requirements.	
Skin/body protection	Label advice indicates none necessary under normal handling and use. However, consider other precautionary requirements.	
Respiratory protection	Label advice indicates none necessary under normal handling and use. However, consider other precautionary requirements.	
Environmental Exposure Controls	Use only in accordance with instructions given. An ecological hazard assessment indicates no specific restrictions on environmental release.	

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odour/odour threshold	A blue ready-to-use whole grain bait with no perceptible odour.		
pH	Not applicable.	Solubility in water	Insoluble.
Density	Not determined.	Solubility in other solvents	Not determined.
Specific gravity	0.72 g/cm ³ .	Explosive properties	None.
Flash point	Not applicable.	Combustibility	Combustible.
Flammability	Non-flammable.	Oxidising properties	None.
Boiling point/range	Not applicable.	Evaporation rate	Not applicable.
Vapour density	Not applicable.	Partition coefficient: n-octanol/water	Not applicable.
Vapour pressure	Not applicable.	Decomposition temperature	Not determined.
Melting point/freezing point	Not determined.	Auto-ignition temperature	Not determined.
Upper/lower flammability or explosive limits	Not determined.	Other safety information	None known.
Viscosity	Not applicable.		

10 STABILITY AND REACTIVITY

Reactivity	This product is stable under normal conditions of handling and use.
Chemical Stability	Stable.
Possibility of hazardous reactions	None expected under normal conditions of handling and use.
Conditions to avoid	Avoid extremes of temperature, e.g. below 0°C and above 40°C.
Incompatible materials	Avoid contact with oxidising agents which the substance or mixture could react to produce a hazardous situation.
Hazardous decomposition products	Combustion or thermal decomposition may evolve toxic and irritant vapours.

11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)		
Acute Toxicity	Oral	For Bromadiolone: LD ₅₀ (rat) < 5 mg/kg
	Inhalation	This route of exposure is not anticipated.
	Dermal	For Bromadiolone: LD ₅₀ (male rat) < 1820 mg/kg
Corrosivity/Irritation	Skin	No skin irritation potential expected.
	Eyes	No eye irritation potential expected.
	Respiratory tract	No respiratory tract irritation potential expected.
Sensitisation	Skin	Contains no known skin sensitisers.
	Respiratory	Contains no known respiratory sensitisers.
Repeat-Dose Toxicity	For Bromadiolone: LOAEL; 90 days; dog: 20µg/kg bw/day based on haemorrhagic changes seen at necropsy. The substance is classified as having danger of serious damage to health by prolonged exposure.	
Mutagenicity	Product does not contain any components known to have a mutagenic effect.	
Carcinogenicity	Product does not contain any components known to have a carcinogenic effect.	
Reproductive Toxicity	Fertility	Product does not contain any components known to have effects on fertility.
	Development	Product does not contain any components known to be toxic to the reproductive system.
Other Information	Bromadiolone is an indirect anticoagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin times not less than eighteen 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.	

12 ECOLOGICAL INFORMATION	
General Information	The Bromadiolone in this product is classified as very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. The Denatonium Benzoate in this product is classified as harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. However, when used in accordance with instructions given, controlled release of this product is not expected to cause environmental contamination.
Ecotoxicity Data	For Bromadiolone: LC ₅₀ (Fish: <i>Oncorhynchus mykiss</i>) (96h): >1.4 mg/L LC ₅₀ (Fish: <i>Lepomis macrochirus</i>) (96h): 3.0 mg/L EbC ₅₀ (Algae: <i>Scenedesmus subspicatus</i>) (72h): 0.17mg/L EC ₅₀ (<i>Daphnia magna</i>)(48h) : 2.0 mg/L
Persistence and Degradability	For Bromadiolone: Bromadiolone is not considered volatile and is not expected to volatilise to air in significant quantities.
Bioaccumulative Potential	For Bromadiolone: The log Pow is greater than 3, which indicates a potential to bioaccumulate.
Mobility	For Bromadiolone: Bromadiolone and any potential degradation products, even if released indirectly to soil in small quantities, are not likely to move through the soil profile and are unlikely to reach groundwater in significant quantities.
Results of PBT and vPvB assessment	Does not meet the requirements for assessment.
Other Adverse Effects	None known.

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13 DISPOSAL CONSIDERATIONS				
Waste treatment methods	All pesticide waste should be disposed of using EWC code EWC: 20 01 19. If plastic or metal container is empty and triple rinsed, it can be disposed of as non-hazardous controlled waste.			
Product/packaging disposal	This product and its empty container must be disposed of as controlled waste.			
Classification (Council Directive 91/689/EC, Commission Decision 2000/532/EC (amended) Commission Decision 2001/118/EC)	<u>Hazard Code</u> : Not classified.			
	<table border="1"> <thead> <tr> <th><u>Components making the waste hazardous</u></th> <th><u>Concentrations (%)</u></th> </tr> </thead> <tbody> <tr> <td>Not required.</td> <td></td> </tr> </tbody> </table>	<u>Components making the waste hazardous</u>	<u>Concentrations (%)</u>	Not required.
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Not required.				
Note for Disposal	The best means of disposal of any product is through proper use according to the label. For further advice about disposal, in the UK, contact the local office of the Environment Agency (England and Wales) or Scottish Environment Protection Agency. Local rate from anywhere in the UK: +44 (0) 870 850 6506.			

14 TRANSPORT INFORMATION (INTERNATIONAL UNLESS OTHERWISE INDICATED)					
UN No.	Not applicable.		Tremcard Reference No.	Not applicable.	RIS Code
Transport Category	Not applicable.		UK Hazchem EAC	Not applicable.	PSD83 (50 x 100g) 0309, 0312
ADR 2011 (International Road)	Class	Not applicable.	ADR HIN	Not applicable.	Labels
Proper Shipping Name	Not applicable.				Not applicable.
Limited Quantity Exemptions	Not applicable.				
Special Provisions	Not applicable.		Packing Group	Not applicable.	
IMDG 2010 (Sea)	Class	Not applicable.	IMDG EMS	Not applicable.	
Proper Shipping Name	Not applicable.				
Limited Quantity Exemptions	Not applicable.				
Special Requirements	Not applicable.		Packing Group	Not applicable.	
Note for Transport	Local, State or National requirements may apply to the carriage of this product.				

15 REGULATORY INFORMATION	
Authorisations and/or restrictions on use	Information to be made available according to ECHA review programme.
Other EU regulations	This safety data sheet was prepared in accordance with EC Directive 1907/2006. Labelling is in accordance with UK regulations implementing the EC Directive 1999/45. Additional labelling requirements may be necessary in accordance with other National legislation. The registration of this product may be necessary before use and any additional local requirements must be observed at all times. Other National measures or guidance should be followed where appropriate.
Chemical safety assessment	Information to be made available according to ECHA review programme.

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16 OTHER INFORMATION																																																															
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Abbreviations and acronyms	<p>Typical standard abbreviations and acronyms used in Rentokil Initial Safety Data Sheets are as follows:</p> <table border="0"> <tr> <td>ADR 2011</td> <td>International Carriage of Dangerous Goods by Road (ADR)</td> </tr> <tr> <td>ADR HIN</td> <td>ADR Hazard Identification Number (HIN)</td> </tr> <tr> <td>Annex I DNEL or PNEC</td> <td>Derived No Effect Level / Predicted No Effect Concentration</td> </tr> <tr> <td>CAS No</td> <td>Chemicals Abstract Service Registry Number</td> </tr> <tr> <td>COSHH assessments.</td> <td>Control of substances hazardous to health</td> </tr> <tr> <td>ECHA</td> <td>European Chemicals Agency</td> </tr> <tr> <td>EC No</td> <td>European Commission number</td> </tr> <tr> <td>EN469</td> <td>European standard for Personal Protective Equipment used for fire fighting.</td> </tr> <tr> <td>EN standards for PPE</td> <td>European Standards for Personal Protective Equipment</td> </tr> <tr> <td>EWC</td> <td>European Waste Catalogue Code</td> </tr> <tr> <td>IMDG 2010</td> <td>International Maritime Dangerous Goods (IMDG) Code</td> </tr> <tr> <td>IUPAC</td> <td>International Union of Pure and Applied Chemistry</td> </tr> <tr> <td>LD₅₀</td> <td>Median lethal dose</td> </tr> <tr> <td>LC₅₀</td> <td>Lethal concentration 50</td> </tr> <tr> <td>REACH</td> <td>Registration, Evaluation, Authorisation and restriction of Chemicals</td> </tr> <tr> <td>RIS Code</td> <td>Internal manufacturing code number</td> </tr> <tr> <td>WEL</td> <td>Workplace Exposure Limit</td> </tr> <tr> <td>UK Hazchem EAC</td> <td>UK Hazchem Emergency Action Code</td> </tr> </table> <p>Typical Directives and Regulations referred to Rentokil Initial Safety Data Sheets are as follows:</p> <table border="0"> <tr> <td>Commission Decision 95/320/EC</td> <td>Scientific Committee for Occupational Exposure Limits to Chemical agents.</td> </tr> <tr> <td>Commission Decision 2000/532/EC</td> <td>List of wastes</td> </tr> <tr> <td>Commission Decision 2001/118/EC</td> <td>Amendment to 200/532/EC with regards to List of wastes</td> </tr> <tr> <td>Directive 67/548/EEC</td> <td>Dangerous Substances Directive</td> </tr> <tr> <td>Directive 89/686/EEC</td> <td>The Personal Protective Equipment (PPE) Directive</td> </tr> <tr> <td>Directive 91/689/EC</td> <td>Directive on Hazardous waste</td> </tr> <tr> <td>Directive 98/24/EC (1st IOELV Directive)</td> <td>Chemical Agents Directive 98/24/EC Protection of the Health and Safety of Workers from the Risks from Chemical Agents. 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Key literature references and sources for data	For details of the data and information sources used, please contact Rentokil Initial using the details in Section 1.																																																														
Classification and used classification procedure for mixtures labelled to Directive 1999/45/EC according to Regulation (EC) No 1272/2008	Not currently classified to Regulation (EC) No 1272/2008 until 31/05/2015.																																																														
Risk phrase text (From section 3 - These refer to the ingredients only. See section 2 for the product risk phrases)	<p>R26/27/28 : Very toxic by inhalation, in contact with skin and if swallowed.</p> <p>R48/24/25 : Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.</p> <p>R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>																																																														
Hazard statement text (From section 3 - These refer to the ingredients only. See section 2 for the product risk phrases)	Hazard phrases are a requirement of Regulation (EC) No 1272/2008, and will be listed when available.																																																														
Training advice	Use biocides safely. Always read the label and product information before use. Ensure you have received adequate training and or instructions before use.																																																														
Further information	A perforated plastic sachet containing 100 g of product. Packed as 50 x 100g sachets. Bitrex® is a registered trademark of Macfarlan Smith Ltd.																																																														

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Before using any product, ensure that you read and understand its label.

The information contained in this safety data sheet is, to the best of our knowledge and belief, accurate and reliable at the time of publication. The information relates only to the specific material designated in this safety data sheet and may not be valid for such material if it is used in combination with any other material(s) or any other use than that specified herein. Rentokil Initial UK Ltd is not liable for the use of this product for any other purpose than that described in this safety data sheet. This does not affect your statutory rights. It is the user's responsibility to satisfy him/herself as to the suitability in completeness of such information for his/her own particular use.

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