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/

REVISION (see box 16) **Issue : 5** **30 : 08 : 2012**

SECTION 1 Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifier	Rodine	HSE 6728, PCS 93672
1.2 Relevant identified uses of the substance or mixture and uses advised against	A rodenticide for amateur use. A blue ready-to-use whole grain bait with no perceptible odour. Contains Bitrex, a bittering agent.	
1.3 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	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	
1.4 Emergency telephone number	0844 892 011 (for use by medical professionals only).	

SECTION 2 Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008.

Not applicable. See section 16.

Classification according to Directive 1999/45/EC (See section 16)

Not classified.

2.2 Label elements

Risk phrase(s) (R), in full / Hazard statement(s) (H), in full.	Hazard statements are a requirement of Regulation (EC) No. 1272/2008 and will be listed when available.
Safety phrase(s) (S), in full / Precautionary Statement(s) (P), in full.	Safety phrases are not required. Precautionary statements are not required.

To avoid risks to man and the environment, comply with the instructions for use.

2.3 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.

SECTION 3 Composition/Information on Ingredients (See section 16)

3.2 Mixtures

% w/w	Common*/ Chemical Name (IUPAC)	CAS No.	EC No.	Index No.	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-hydroxy coumarin	28772-56-7	249-205-9	-	-	T+: R27/28 T: R48/ 24/25 N: R50/53	Not classified.

SECTION 4 First-Aid Measures

4.1 Description of first aid measure

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.

4.2 Most important symptoms and effects both acute and delayed

Emergency Equipment Suggested	Appropriate first-aid equipment should be provided.

4.3 Indication of any immediate medical attention and special treatment needed

Note To Doctor	Further information on all Rentokil Initial formulations is lodged with the local National Poisons Information Service.
Antidote	Vitamin K1 is antidotal.

SECTION 5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media	Use carbon dioxide, foam, water, or dry powder extinguishers.
Unsuitable extinguishing media	Do NOT use a water jet.
5.2 Special hazards arising from the substance or mixture	Combustion or thermal decomposition may evolve toxic or irritant vapours.
5.3 Advice for fire fighters	Wear suitable personal protective equipment conforming to EN469.

SECTION 6 Accidental Release Measures

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

SECTION 7 Handling and Storage

7.1 Precautions for safe handling	No specific handling requirements.
7.2 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.
7.3 Specific end use(s)	Rodenticide.

SECTION 8 Exposure Controls/Personal Protection

8.1 Control Parameters

Exposure standard - Directive 98/24/EC (1st 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 (1st IOELV Directive)	Not applicable.

8.2 Exposure Controls

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:
Individual Protection Measures	
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.

SECTION 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance, odour and physical state	A blue ready-to-use whole grain bait with no perceptible odour.		
pH	Not applicable.	Solubility in water	Insoluble.
Density	Not applicable.	Solubility in other solvents	Not determined.
Relative density	Not determined.	Explosive properties	None.
Flash point	Not applicable.	Combustibility	Combustible.
Flammability	Non-flammable.	Oxidising properties	None.
Initial boiling Point and boiling 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 /	Not determined.	Auto-ignition temperature	Not determined.

Freezing point			

9.2 Other Information			
Upper/lower flammability or explosive limits	Not determined.	Other safety information	None known.
Viscosity	Not applicable.		

SECTION 10 Stability and Reactivity

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

SECTION 11 Toxicological Information (see also box 2)

11.1 Information on toxicological effects		
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.
Repeated 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.
	Developmental	Product does not contain any components known to be toxic to the reproductive system.
Other data	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.	

SECTION 12 Ecological Information

12.1 Toxicity	
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	LC_{50} (fish: *Oncorhynchus mykiss*) (96h): > 1.4 mg/L LC_{50} (fish: *Lepomis macrochirus*) (96h): 3.0 mg/L E_bC_{50} (algae: *Scenedesmus subspicatus*) (72h): 0.17mg/L EC_{50} (*Daphnia magna*) (48h): 2.0 mg/L
12.2 Persistence and degradability	For Bromadiolone: Bromadiolone is not considered volatile and is not expected to volatise to air in significant quantities.
12.3 Bioaccumulative potential	The bromadiolone log Pow is greater than 3, which indicates a potential to bioaccumulate.
12.4 Mobility in soil	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.
12.5 Results of PBT and vPvB assessment	Does not meet requirements for assessment.
12.6 Other Adverse Effects	None known.

SECTION 13 Disposal Considerations

13.1 Waste treatment methods	This product should be disposed in accordance with the information given on the product label.
Product/packaging disposal	This product is for amateur use and can be disposed of as normal household waste. However, if used in a place of work, any product and 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))	Hazard Code: EWC - 20 01 19 Substances making the waste hazardous: / Concentrations (%): Not applicable.
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 Environmental Agency (England and Wales) or Scottish Environment Protection Agency. Local rate from anywhere in the UK: +44 (0) 870 850 6506.

SECTION 14 Transport Information (International unless otherwise indicated)

ADR 2011 (International Road) / IMDG 2010 (Sea)

14.1 UN number	-	**RIS Code**	12 x 50g, 6 x 300g, 6 x 300g - 17% extra free, 25 x 50g, 6 x 150g, Bulk 9710 PSR108, PSR97, PSR101, PSR112, PSR96,
14.2 UN Proper Shipping Name	Not applicable.		
14.3 Transport hazard class(es)	Not applicable.		
ADR HIN	Not applicable.		
UK Hazchem EAC	Not applicable.		
IMDG EMS	Not applicable.		
14.4 Packing Group	Not applicable.	**Labels**	Not applicable.
Transport Category	Not classified.		
14.5 Environmental hazards	Not applicable.		
Marine pollutant	Not applicable.		
Additional precautions	Not applicable.		
	Not applicable.		

14.6 Special precautions for user	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
Limited Quantity Exemptions	Not applicable.
Note for Transport	Local, State or National requirements may apply to the carriage of this product.

SECTION 15 Regulatory Information

15.1 Safety,health and environmental regulations/legislation specific for the substance or mixture

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 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.
15.2 Chemical safety assessment	Information to be made available according to ECHA review programme.

SECTION 16 Other Information

Revisions	Changes have been made to the content of boxes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, compared with issue 4.
Abbreviations and acronyms	Typical standard abbreviations and acronyms used in Rentokil Initial Safety Data Sheets are as follows: ADR 2011 - International Carriage of Dangerous Goods by Road (ADR) ADR HIN - ADR Hazard Identification Number (HIN) Annex I DNEL or PNEC - Derived No Effect Level / Predicted No Effect Concentration CAS No - Chemicals Abstract Service Registry Number COSHH assessments - Control of Substances Hazardous to Health ECHA - European Chemicals Agency EC No - European Commission number EN469 - European standard for Personal Protective Equipment used for fire fighting EN standards for PPE - European Standards for Personal Protective Equipment EWC - European Waste Catalogue Code IMDG 2010 - International Maritime Dangerous Goods (IMDG) Code IUPAC - International Union of Pure and Applied Chemistry LD_{50} - Median lethal dose LC_{50} - Lethal concentration REACH - Registration, Evaluation, Authorisation and restriction of Chemicals RIS Code - Internal manufacturing code number WEL - Workplace Exposure Limit UK Hazchem EAC - UK Hazchem Emergency Action Code Typical Directives and Regulations referred to Rentokil Initial Safety Data Sheets are as follows: Commission Decision 95/320/EC - Scientific Committee for Occupational Exposure Limits to Chemical Agents Commission Decision 2000/532/EC - List of wastes Commission Decision 2001/118/EC - Amendment to 2000/532/EC with regards to List of wastes Directive 67/548/EEC - Dangerous Substances Directive Directive 76/768/EC (as amended) - The Cosmetics Directive Directive 89/686/EEC - The Personal Protective Equipment (PPE) Directive Directive 91/689/EC - Directive on Hazardous waste Directive 98/24/EC (1st IOELV Directive) - Chemical Agents Directive 98/24/EC Protection of the Health and Safety of Workers from the Risks from Chemical Agents IOELV Directive: Indicative Occupational Exposure Limit Values Directive 1907/2006 - REACH (Registration, Evaluation, Authorisation and restriction of Chemicals Directive 1999/45/EC - Dangerous Preparations Directive Directive 2004/37/EC - Carcinogens and Mutagens Directive Regulation (EC) No. 648/2004 - Detergents Regulation Regulation (EC) No 1272/2008 - Classification, Labelling and Packaging

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/Hazard statement text (From section 3 - These refer to the ingredients only. See section 2 for the product risk phrases)	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. Hazard statements 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	1 x 50g, 3 x 50g and 6 x 50g sachets supplied with white, plastic open trays, in a cardboard outer. Also, available in 25 x 50g sachets with 3 white, plastic trays in a plastic tub.