

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/rentokil-pest-control/>

REVISION (see box 16)

Issue : 05 16: 03 : 2009

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY		
Product Name	BRODIFACOUM PASTE	HSE 6696
Description	A blue, ready-to-use rodenticidal paste, containing a bittering agent. For use by professionals in the control of mice and rats indoors.	
Company	Rentokil Initial UK Ltd, Liverpool, L33 7SR. Product Advice Line: +44 (0)151 548 5050 Emergency Line: +44 (0)1293 858 000 E-mail: sds@rentokil.com	

2 HAZARD IDENTIFICATION
Classification (Supply – Use) : In compliance with EC Directive 1999/45.
Not classified
Adverse Physical, Chemical, Significant Human Health and Environmental Effects (See also box 11):
This product contains an indirect anticoagulant compound. If sufficient quantities are ingested, nose-bleed and bleeding gums may occur. In severe cases there may be bruising, haematomas of the joints and blood present in the urine and faeces.
No other significant adverse effects expected under normal conditions of handling and use.

3 COMPOSITION / INFORMATION ON INGREDIENTS (SEE ALSO BOX 16)		
% w/w	Common*/Chemical Name, ELINCS/EINECS & CAS No. of Ingredients	EC 1999/45 Classification
0.005	Brodifacoum*/3-[3-(4'-bromobiphenyl-4-yl)-1,2,3,4-tetrahydro-1-naphyl]-4-hydroxycoumarin EINECS : 259-980-5 CAS : 56073-10-0	T+ : R27/R28 T : R48/24/25 N : R50,53
≤ 1	Bitrex®*/Denatonium Benzoate EINECS : 3734-33-6 CAS : 223-095-2	X _n : R20/22 X _i : R38, R41 R52,53

BRODIFACOUM PASTE

4 FIRST-AID MEASURES (SEE ALSO “ADVERSE EFFECTS” IN BOX 2)	
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. For the UK this should be in accordance with the Health & Safety (First-Aid) Regulations 1981. See also the Approved Code of Practice “First-aid at Work”.
Note To Doctor	Further information on all Rentokil Initial formulations is lodged with the National Poisons Information Service in the UK. Vitamin K1 (phytomenadione) is a known antidote.

5 FIRE FIGHTING MEASURES	
Fire Extinguisher Type	Use carbon dioxide, foam, water, or dry powder extinguishers.
Special Fire-Fighting Procedures	Wear suitable personal protective equipment.
Special Exposure Hazards	None.

6 ACCIDENTAL RELEASE MEASURES	
Personal Precautions (See also box 8)	Wear suitable personal protective equipment.
Environmental Precautions	Keep away from drains, surface and ground water, and soil.
Clean-up Procedure (See also box 13)	Safely gather spill and transfer to a suitable container for subsequent disposal.

7 HANDLING AND STORAGE (SEE ALSO BOX 8)	
Handling	No specific handling requirements.
Storage	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.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION	
Exposure Standard - Directive EC/98/24 (1st IOELV Directive)	Not assigned.
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 Protection	Label advice indicates none necessary under normal handling and use. However, consider other precautionary requirements.
Hand Protection	Suitable hand protection such as gloves.
Skin Protection	Suitable skin protection such as coveralls.
Breathing 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.

9 PHYSICAL AND CHEMICAL PROPERTIES			
Appearance and Odour	A blue paste with no perceptible odour.		
pH	Not applicable.	Solubility in Water	Insoluble.
Density	1.0 - 1.2 g/mL at 20°C	Solubility in Other Solvents	Partially soluble.
Flash Point	Not applicable.	Explosive Properties	Not determined.
Flammability	Non-flammable.	Combustibility	Not determined.
Boiling Point/Range	Not applicable.	Oxidising Properties	Not determined.
Vapour Density	Not determined.	Evaporation Rate	Not determined.
Vapour Pressure	Not determined.	Partition Coefficient	Not applicable.
Viscosity	Not determined.	Other Data	Melting point = ca 45°C

BRODIFACOU M PASTE

10 STABILITY AND REACTIVITY	
Conditions to avoid	Avoid extremes of temperature, e.g. below 0°C and above 40°C.
Materials to avoid	None.
Hazardous Breakdown Products	None.

11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)	
Acute Toxicity	Oral For brodifacoum: LD ₅₀ : 0.4 mg/kg (male rats). LD ₅₀ : 0.2 mg/kg (male rabbits). Inhalation This route of exposure is not anticipated. Dermal Not determined.
Corrosivity/Irritation	Skin Negligible risk of sensitisation. Eyes Negligible risk of sensitisation. Respiratory tract Not determined.
Sensitisation	Skin Contains no known skin sensitisers. Respiratory Contains no known respiratory sensitisers.
Repeat-Dose Toxicity	Product does not contain any components known to have any effects relating to repeated-dose toxicity.
Mutagenicity	Product does not contain any components, at concentrations greater than the lower limit of concentration of 0.1%, known to have a mutagenic effect.
Carcinogenicity	Product does not contain any components, at concentrations greater than the lower limit of concentration of 0.1%, 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	Brodifacoum 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	This product does not contain any substances that are classified as dangerous to the environment present above the lower limits of concentration as specified in EC Directive 1999/45. Controlled release of this product is not expected to cause environmental contamination. Use only in accordance with instructions given.
Ecotoxicity Data	For brodifacoum: Mallard ducks: LD ₅₀ (oral) 0.31 mg/kg Rainbow trout: LC ₅₀ (oral) (96hr) 0.051 mg/L Daphnia: LC ₅₀ (48hr) 0.34 mg a.i/L For Bitrex®: Rainbow trout: LC ₅₀ (96hr) >1000 mg/L Shrimp: LC ₅₀ (96hr) 400 mg/L Daphnia magna: EC ₅₀ (48hr) 13 mg/L
Mobility	For Bitrex®: Water solubility 45 g/L
Persistence and Degradability	For brodifacoum: Degrades in soils (pH 5.5-8) under aerobic and flooded conditions. For Bitrex®: Abiotic degradation 10% after 5 days at 50°C at any pH and 10% after 30 days at 25°C at any pH.
Bioaccumulative Potential	For Bitrex®: Low bioaccumulation potential.
Other Adverse Effects	For Bitrex®: If this substance is discharged at low concentrations into an adapted biological effluent treatment plant, the degrading action of the activated sludge will not be affected.

13 DISPOSAL CONSIDERATIONS	
Disposal of Waste / Containers	Under normal circumstances, waste / empty containers will be disposed of by Rentokil Initial.
Classification (Council Directive 91/689/EC, Commission Decision 2000/532/EC (amended) Commission Decision 2001/118/EC))	Not classified.
Note for Disposal	Components making the waste hazardous Not required. Concentrations (%): Not required.
	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.

BRODIFACOU PASTE

14 TRANSPORT INFORMATION (INTERNATIONAL UNLESS OTHERWISE INDICATED)

UN No.	Not classified.	Tremcard Reference No.	Not required.	RIS Code
Transport Category	Not required.	UK Hazchem EAC	Not required.	PSB101
ADR 2007 (International Road)	Class Not required.	ADR HIN	Not required.	Labels Not required.
Proper Shipping Name	Not required.			
Limited Quantity Exemptions	Not required.			
Special Requirements	Not required.	Packing Group	Not required.	
IMDG 2006 (Sea)	Class Not required.	IMDG EMS	Not required.	Labels Not required.
Proper Shipping Name	Not required.			
Limited Quantity Exemptions	Not required.			
Special Requirements	Not required.	Packing Group	Not required.	
Note for Transport	Local, State or National requirements may apply to the carriage of this product.			

15 REGULATORY INFORMATION (HEALTH AND SAFETY INFORMATION (SEE ALSO BOX 2))

Safety Phrases	Safety phrases are not required.
Additional Label Phrases	To avoid risks to man and the environment, comply with instructions for use.
Legislation	<p>Labelling is in accordance with UK regulations implementing the EC Directive 1999/45.</p> <p>Additional labelling requirements may be necessary in accordance with other National legislation. Outside the UK, the registration of this product may be necessary before use and any additional local requirements must be observed at all times.</p> <p>The information given on this Safety Data Sheet (SDS) does not constitute an assessment in accordance with Control of Substances Hazardous to Health (COSHH) Regulations 2002, in the UK.</p> <p>Other National measures or guidance should be followed where appropriate.</p>

16 Other Information and indication of revisions

Bitrex® is a registered trademark of Macfarlan Smith Ltd.	
Packaging Information	High density polyethylene cartridge containing 400g of product.
Revisions	Changes have been made to the content of boxes 01, 11 & 16 (as indicated by the thick lines on the left-hand side of the boxes) compared with issue 04.
Risk phrase text (From box 3 - These refer to the ingredients only. See box 2 for the product risk phrases)	R20/22 : Harmful by inhalation and if swallowed. 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. R38 : Irritating to skin. R41 : Risk of serious damage to eyes. R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

BRODIFACOU M PASTE

SDS No. 704

Issue : 05

16:03: 2009

Page 4 of 4

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.

Copyright © (2009) Rentokil Initial plc, European Technical Centre, Units 7 & 8 Foundry Court, Foundry Lane, Horsham, West Sussex. RH13 5PY. United Kingdom.

Telephone: +44 (0) 1293 858000 Fax: +44 (0) 1403 214101