

# Safety Data Sheet

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**REVISION (see box 16)**

Issue : 10 13 : 06 : 2006

## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

<b>Product Name</b>	<b>BROMATROL (with Bitrex®)</b>
<b>Description</b>	A ready-to-use rodenticide for use by professional operators in the control of rats and mice. A blue, whole grain bait with no perceptible odour containing a bittering additive.
<b>Company</b>	Rentokil Initial Supplies, Webber Road, Knowsley Industrial Park, Liverpool, L33 7SR. For general enquiries telephone: +44 (0) 151 548 5050. For safety or regulatory enquiries telephone: + 44 (0) 1342 833 022.

## 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):**

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.

Combustion or thermal decomposition may evolve toxic and irritant vapours.

## 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	Bromadiolone* / 3-[3-(4-bromobiphenyl-4-yl)-3-hydroxy-1-phenylpropyl]-4-hydroxycoumarin EINECS : 249-205-9 CAS : 28772-56-7	T+ : R26/27/28 N : R50/53
>2.5 ≤10.0	Monopropylene glycol* / propane-1,2-diol EINECS : 200-338-0 CAS : 57-55-6	Not classified.
≤2.5	Bitrex®* / denatonium benzoate EINECS : 223-095-2 CAS : 3734-33-6	Xn : R20/22 : R38 : R41 : R52/53

**BROMATROL (with Bitrex®)**

## 4 FIRST-AID MEASURES (SEE ALSO "ADVERSE EFFECTS" IN BOX 2)

<b>Inhalation</b>	This route of exposure is not anticipated.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Remove and wash contaminated clothing immediately. Wash affected area thoroughly with soap and water. If the patient feels unwell seek medical advice.
<b>Ingestion (Swallowing)</b>	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.
<b>Emergency Equipment Suggested</b>	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".
<b>Note To Doctor</b>	Further information on all Rentokil Initial formulations is lodged with the National Poisons Information Service in the UK. Vitamin K1 is a known antidote.

## 5 FIRE FIGHTING MEASURES

<b>Fire Extinguisher Type</b>	Use carbon dioxide, foam, water, or dry powder extinguishers.
<b>Special Fire-Fighting Procedures</b>	Wear self-contained breathing apparatus and suitable personal protective clothing.
<b>Special Exposure Hazards</b>	Combustion or thermal decomposition may evolve toxic and irritant vapours.

## 6 ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions (See also box 8)</b>	Wear suitable personal protective equipment.
<b>Environmental Precautions</b>	Keep away from drains, surface and ground water, and soil.
<b>Clean-up Procedure (See also box 13)</b>	Collect up spilt material and transfer to a suitable container for re-use or subsequent disposal. DO NOT contaminate watercourses or ground.

## 7 HANDLING AND STORAGE (SEE ALSO BOX 8)

<b>Handling</b>	Avoid all contact by mouth. Wash hands and exposed skin before meals and after use.
<b>Storage</b>	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

<b>Exposure Standard - Directive EC/98/24 (1<sup>st</sup> IOELV Directive)</b>	Workplace Exposure Limit (WEL) for monopropylene glycol is 474 mg/m <sup>3</sup> long-term exposure (8 hour Time Weighted Average) and for particulates is 10 mg/m <sup>3</sup> long-term exposure (8 hour Time Weighted Average). Monopropylene glycol is referred to as propane-1,2-diol in Directive EC/98/24 (1 <sup>st</sup> IOELV Directive).
<b>Engineering Controls</b>	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:
<b>Eye Protection</b>	None necessary during normal handling and use.
<b>Hand Protection</b>	Suitable hand protection such as gloves.
<b>Skin Protection</b>	Suitable skin protection such as coveralls.
<b>Breathing Protection</b>	None necessary during normal handling and use.
<b>Environmental Exposure Controls</b>	Use only in accordance with instructions given.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance and Odour</b>	A blue, whole-grain bait, with no perceptible odour and a bittering additive.		
<b>pH</b>	Not applicable.	<b>Solubility in Water</b>	Insoluble.
<b>Density</b>	0.7 g/cm <sup>3</sup>	<b>Solubility in Other Solvents</b>	Not determined.
<b>Flash Point</b>	Not applicable.	<b>Explosive Properties</b>	None known.
<b>Flammability</b>	Non-flammable.	<b>Combustibility</b>	Combustible.
<b>Boiling Point/Range</b>	Not applicable.	<b>Oxidising Properties</b>	None known.
<b>Vapour Density</b>	Not applicable.	<b>Evaporation Rate</b>	Not applicable.
<b>Vapour Pressure</b>	Not applicable.	<b>Partition Coefficient</b>	Not applicable.
<b>Viscosity</b>	Not applicable.	<b>Other Data</b>	None known.

### BROMATROL (with Bitrex®)

## 10 STABILITY AND REACTIVITY

<b>Conditions to avoid</b>	Avoid extremes of temperature, e.g. below 0°C and above 40°C.
<b>Materials to avoid</b>	None.
<b>Hazardous Breakdown Products</b>	Combustion or thermal decomposition may evolve toxic and irritant vapours.

## 11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)

<b>Acute Toxicity</b>	Oral	For similar product: LD <sub>50</sub> (rat): >2000 mg/kg.
	Inhalation	Unlikely route of exposure.
	Dermal	Not determined.
<b>Corrosivity/Irritation</b>	Skin	No skin irritation expected.
	Eyes	No eye irritation expected.
	Respiratory tract	No respiratory tract irritation potential expected.
<b>Sensitisation</b>	Skin	Contains no known skin sensitisers.
	Respiratory	Contains no known respiratory sensitisers.
<b>Repeat-Dose Toxicity</b>		Product does not contain any components known to have any effects relating to repeated-dose toxicity.
<b>Mutagenicity</b>		Product does not contain any components known to have a mutagenic effect.
<b>Carcinogenicity</b>		Product does not contain any components known to have a carcinogenic effect.
<b>Reproductive Toxicity</b>	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.
<b>Other Information</b>		Bromadiolone is an indirect anticoagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin times not less than 18 hours after consumption. If elevated, administer Vitamin K1 and continue until prothrombin time normalises. Continue determination of prothrombin time for two weeks after withdrawal of the antidote and resume treatment if elevation occurs in that time.

## 12 ECOLOGICAL INFORMATION

<b>General Information</b>	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 Bitrex <sup>®</sup> 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.
<b>Ecotoxicity Data</b>	<u>For bromadiolone:</u> LC <sub>50</sub> (96h) (Bluegill sunfish): 3.0 mg/L LC <sub>50</sub> (96h) (Rainbow trout): 1.4 mg/L EC <sub>50</sub> (48h) ( <i>Daphnia</i> ): 2.0 mg/L E <sub>b</sub> C <sub>50</sub> (73h) (Algae: <i>Scenedesmus subspicatus</i> ): 0.17 mg/L <u>For Bitrex<sup>®</sup>:</u> LC <sub>50</sub> (96h) (Rainbow trout): >1000 mg/L EC <sub>50</sub> (48h) ( <i>Daphnia magna</i> ): 13 mg/L LC <sub>50</sub> (96h) (Shrimp): 400 mg/L <u>For Bitrex<sup>®</sup>:</u> Water solubility: 45 g/L.
<b>Mobility</b>	<u>For bromadiolone:</u> Bromadiolone is not considered volatile and is not expected to volatilise to air in significant quantities.
<b>Persistence and Degradability</b>	<u>For Bitrex<sup>®</sup>:</u> Abiotic degradation: 10% after 5 days at 50°C at all pH's. Abiotic degradation: 10% after 30 days at 25°C at all pH's.
<b>Bioaccumulative Potential</b>	<u>For bromadiolone:</u> Log Pow is greater than 3, which indicates a potential to bioaccumulate.
<b>Other Adverse Effects</b>	<u>For Bitrex<sup>®</sup>:</u> 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

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

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.	PSB21
ADR 2005 (International Road) Proper Shipping Name	Class Not required.	ADR HIN	Not required.	Labels  Not required.
Limited Quantity Exemptions	Not required.			
Special Requirements	Not required.	Packing Group	Not required.	
IMDG 2004 (Sea) Proper Shipping Name	Class Not required.	IMDG EMS	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	Safety data sheet available for professional user on request. 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) <b>does not</b> constitute an assessment in accordance with Control of Substances Hazardous to Health (COSHH) Regulations 2002, in the UK. 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	25 kg in a polypropylene sack
Revisions	Changes have been made to the content of boxes 01, 02, 03, 04, 06, 08, 09, 11, 12, 13, 14, 15 & 16 (as indicated by the thick lines on the left-hand side of the boxes) compared with issue 09.
Risk phrase text (From box 3 - These refer to the ingredients only. See box 2 for the product risk phrases)	R26/27/28 : Very toxic by inhalation, in contact with skin and if swallowed. R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R20/22 : Harmful by inhalation and if swallowed. R38 : Irritating to skin. R41 : Risk of serious damage to eyes. R52/53 : Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

## BROMATROL (with Bitrex®)

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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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