Rentokil Initial

Products

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 at the address below by telephone, fax or in writing. In order to confirm the latest version of the SDS for this product see web: www.ri-research.com and click on Technical Information / Product Safety.

REVISION (see box 16)

Issue : 09 18 : 10 : 2006

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name	**DEADLINE LIQUID CONCENTRATE**
Description	A blue rodenticidal, liquid-concentrate with no perceptible odour and a bittering additive. For use by professional operators for the control of rats and mice, after appropriate dilution with either water or other suitable bait bases.
Company	Rentokil Initial Supplies, Liverpool, L33 7SR. Product advice line: 0151 548 5050 Emergency line: 0800 731 6 731

2 HAZARD IDENTIFICATION

Classification (Supply – Use) : In compliance with EC Directive 1999/45.

X_n HARMFUL R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

Adverse Physical, Chemical, Significant Human Health and Environmental Effects (See also box 11):

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.

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
0.1	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
>50 ≤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

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

Inhalation	Remove patient to fresh air, keep warm and at rest. Apply supportive measures if necessary and seek medical attention.
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. 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.

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	Combustion or thermal decomposition may evolve toxic and irritant vapours.

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)	Absorb spill with an inert material such as sand, earth or sawdust. Transfer to a suitable container for subsequent disposal. DO NOT contaminate watercourses or ground.

7 HANDLING AND STORAGE (SEE ALSO BOX 8)

Handling	Avoid all contact by mouth. Wash hands and exposed skin before meals and after use.
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)	Workplace Exposure Limit (WEL) for monopropylene glycol is 474 mg/m^3 long-term exposure (8 hour Time Weighted Average) and for particulates is 10 mg/m^3 long-term exposure (8 hour Time Weighted Average). Monopropylene glycol is referred to as propane-1,2-diol in Directive EC/98/24 (1St IOELV Directive).
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	None necessary during normal handling and use.
Hand Protection	Suitable hand protection such as gloves.
Skin Protection	Suitable skin protection such as coveralls.
Breathing Protection	None necessary during normal handling and use.
Environmental Exposure Controls	Use only in accordance with instructions given.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	A blue rodenticidal, liquid-concentrate with no perceptible odour and a bittering additive.		
pH	Not determined.	**Solubility in Water**	Miscible.
Specific Gravity	1.1	**Solubility in Other Solvents**	Miscible.
Flash Point	Not applicable.	**Explosive Properties**	Not determined.
Flammability	Non-flammable.	**Combustibility**	Combustible.
Boiling Point/Range	Starts at ca. 150°C	**Oxidising Properties**	Not determined.
Vapour Density	Not applicable.	**Evaporation Rate**	Not determined.
Vapour Pressure	Not applicable.	**Partition Coefficient**	Not applicable.
Viscosity	Not determined.	**Other Data**	None known.

10 STABILITY AND REACTIVITY

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

11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)

Acute Toxicity	**Oral**	LD_{50} (rat) : Males: 979 mg/kg Females: 65 mg/kg
	Inhalation	Harmful by inhalation.
	Dermal	LD_{50} (rat) : Males: 1421 mg/kg Females: >2000 mg/kg
Corrosivity/ Irritation	**Skin**	No skin irritation expected.
	Eyes	No eye irritation expected.
	Respiratory tract	No respiratory tract irritation expected.
Sensitisation	**Skin**	Not expected to be a sensitiser.
	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 known to have a mutagenic effect.
Carcinogenicity		Product does not contain any components known to have a carcinogenic effect.
Reproductive Toxicity		Product does not contain any components known to have effects on fertility. Product does not contain any components known to be toxic to the reproductive system.
Other Information		None known.

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 Bitrex® 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} (96h) (Bluegill sunfish): 3.0 mg/L LC_{50} (96h) (Rainbow trout): 1.4 mg/L EC_{50} (48h) (*Daphnia*): 2.0 mg/L E_bC_{50} (73h) (Algae: *Scenedesmus subspicatus*): 0.17 mg/L For Bitrex® : LC_{50} (96h) (Rainbow trout): >1000 mg/L EC_{50} (48h) (*Daphnia magna*): 13 mg/L LC_{50} (96h) (Shrimp): 400 mg/L
Mobility	For Bitrex®: Water solubility: 45 g/L.
Persistence and Degradability	For bromadiolone: Bromadiolone is not considered volatile and is not expected to volatilise to air in significant quantities. For Bitrex®: Abiotic degradation: 10% after 5 days at 50°C at all pHs. Abiotic degradation: 10% after 30 days at 25°C at all pHs.
Bioaccumulative Potential	For bromadiolone: Log Pow is greater than 3, which indicates a potential to bioaccumulate.
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	Ensure this product is disposed of as hazardous waste, in accordance with the appropriate regulations.	
Classification	Hazard Code: H5 - Harmful	
(Council Directive 91/689/EC, Commission Decision 2000/532/EC (amended) Commission Decision 2001/118/EC))	Components making the waste hazardous	Concentrations (%):
	Bromadiolone	0.1
Note for Disposal	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.	PSD56
ADR 2005 (International Road)	**Class** Not required.	**ADR HIN**	Not required.	**Labels**
Proper Shipping Name	Not required.			Not required.
Limited Quantity Exemptions	Not required.			
Special Requirements	Not required.	**Packing Group**	Not required.	
IMDG 2004 (Sea)	**Class** Not required.	**IMDG EMS**	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	S35 This material and its container must be disposed of in a safe way. S36/37 Wear suitable protective clothing and gloves.
Additional Label Phrases	To avoid risks to man and the environment, comply with the instructions for use.
Legislation	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. Outside the UK, the registration of this product may be necessary before use and any additional local requirements must be observed at all times. 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. Other National measures or guidance should be followed where appropriate.

16 **Other Information** and indication of revisions

Bitrex® is a registered trademark of Macfarlan Smith Ltd.

Packaging Information	150ml high density polyethylene bottle with a screw top lid supplied in packs of 12.
Revisions	Changes have been made to the content of boxes 1, 2, 3, 4, 5, 8, 9, 11, 12, 13, 14, 15 & 16 (as indicated by the thick lines on the left-hand side of the boxes) compared with issue 08.
Risk phrase text (From box 3 - These refer to the ingredients only. See box 2 for the product risk phrases)	R20/22 : Harmful in contact with skin and if swallowed. R26/27/28 : Very toxic by inhalation, 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.

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