

Safety Data Sheet

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REVISION (see box 16)

Issue : 05 29 : 03 : 2007

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY	
Product Name	Fentrol Concentrate (with Bitrex™)
Description	A rodenticidal liquid concentrate which is a manufacturing intermediate used to manufacture a range of difenacoum-based products. A blue liquid with no perceptible odour. The product has a bittering additive.
Company	Rentokil Initial Supplies, Liverpool, L33 7SR. Product advice line: +44 (0) 151 548 5050 Emergency line: +44 (0) 1342 833022 e-mail: techinfo@r-d.rentokil-initial.co.uk

2 HAZARD IDENTIFICATION	
Classification (Supply – Use) : In compliance with EC Directive 1999/45.	
X_n Harmful	R22 Harmful if swallowed.
Adverse Physical, Chemical, Significant Human Health and Environmental Effects (See also box 11):	
No significant adverse physical or chemical effects expected. 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. Adverse effects on the environment are unlikely, provided that the product is used as intended.	

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	Difenacoum*/ 3-(biphenyl-1,2,3,4-tetrahydro-1-naphthyl)-4- hydroxycoumarin. EINECS : 259-978-4 CAS : 56073-07-5	T+ : R28 T : R48/25 N : R50/53
≤ 1.0	Bitrex™*/ denatonium benzoate. EINECS : 223-095-2 CAS : 3734-33-6	X _n : R20/22 X _i : R38, R41 R52/53
>50.0 ≤ 100.0	Monopropylene glycol*/propane-1,2-diol. EINECS : 200-338-0 CAS : 57-55-6	Not classified.

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4 FIRST-AID MEASURES (SEE ALSO “ADVERSE EFFECTS” IN BOX 2)	
Inhalation	Unlikely route of exposure. 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	Vitamin K1 is antidotal. Further information on all Rentokil Initial formulations is lodged with the National Poisons Information Service in the UK.

5 FIRE FIGHTING MEASURES	
Fire Extinguisher Type	Use carbon dioxide, water, alcohol resistant foam, or dry powder extinguishers. Use water to keep exposed containers cool and disperse vapours.
Special Fire-Fighting Procedures	Wear suitable personal protective equipment. Wear suitable respiratory protection when dealing with a fire.
Special Exposure Hazards	May produce acid smoke/fumes of carbonyl compounds, acetic acid and other toxic fumes in a fire.

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.

7 HANDLING AND STORAGE (SEE ALSO BOX 8)	
Handling	Avoid contact with skin and eyes. Avoid all contact by mouth. Wash hands and exposed skin before eating, drinking or smoking and after use.
Storage	Store in the 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: total vapour and particulates is 474mg/m ³ and particulates 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 (1 st 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, PPE may be required.
Eye Protection	Wear eye/face protection.
Hand Protection	Wear suitable gloves.
Skin Protection	Wear suitable protective clothing.
Breathing Protection	None necessary under normal working conditions.
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	Approx. 7.	Solubility in Water	Miscible.
Density	1.0 – 1.5 at 20 – 25 °C.	Solubility in Other Solvents	Not determined.
Flash Point	Closed cup. 99 – 109 °C.	Explosive Properties	None.
Flammability	Non-flammable.	Combustibility	Non-combustible.
Boiling Point/Range	Starts at ca. 188°C.	Oxidising Properties	None.
Vapour Density	Approximately 2.6.	Evaporation Rate	Not determined.
Vapour Pressure	0.1 – 0.2 mbar (20 – 21 °C).	Partition Coefficient	Not applicable.
Viscosity	46 mPas – 60.5 cps (20 °C).	Other Data	None.

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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	May produce acid smoke/fumes of carbonyl compounds, acetic acid and other toxic fumes in a fire.

11 TOXICOLOGICAL INFORMATION (SEE ALSO BOX 2)

Acute Toxicity	Oral Inhalation Dermal	LD ₅₀ (rat): 2192 mg/kg. Monopropylene glycol may form harmful vapours when heated. LD ₅₀ (rat): > 2000 mg/kg.
Corrosivity/Irritation	Skin Eyes Respiratory tract	Fentrol Concentrate is non-irritant to rabbit skin. Fentrol Concentrate is slightly irritant to rabbit eyes. Not determined.
Sensitisation	Skin Respiratory	Contains no known skin sensitisers. 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	Fertility Development	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		Difenacoum 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	When used in accordance with instructions given, controlled release of this product is not expected to cause environmental contamination.
Ecotoxicity Data	For Difenacoum: LC ₅₀ (96h) Rainbow trout: 0.10mg/L. LC ₅₀ (48h) Daphnia: 0.52 mg/L. For monopropylene glycol: LC ₅₀ (96h): Fathead Minnow – 51,400mg/L LC ₅₀ (96h): Salmon – 51,600mg/l. LC ₅₀ (96h): <i>Oncorhynchus mykiss</i> >1000mg/kg. EC ₅₀ (48h): Daphnia – >34,400 - 43,500mg/L EC ₅₀ (48h): Saltwater myid – 27,300mg/L. EC ₅₀ (72h): Algae – 19,300mg/L (Marine), 24,200mg/L (Freshwater).
Mobility	Monopropylene glycol: soluble in water, mobile. Bitrex™: Water solubility: 45g/l.
Persistence and Degradability	For monopropylene glycol: BOD: 87-92% ThOD (28 day). Inhibition of degradation in activated sludge not anticipated if correct introduction of low concentration. Readily biodegradable. For Bitrex™ Abiotic degradation: 10% after 5 days, 50 °C, all pH levels. 10% after 30 days, 25 °C, all pH levels.
Bioaccumulative Potential	For monopropylene glycol: BCF <1.5 Not expected to bioaccumulate. 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))	<u>Hazard Code:</u> H5 Harmful.				
Note for Disposal	<table border="0"> <tr> <td><u>Components making the waste hazardous</u></td> <td><u>Concentrations (%):</u></td> </tr> <tr> <td>Difenacoum</td> <td>0.1</td> </tr> </table> <p>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.</p>	<u>Components making the waste hazardous</u>	<u>Concentrations (%):</u>	Difenacoum	0.1
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Difenacoum	0.1				

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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.	PSF13
ADR 2005 (International Road)	Class Not required.	ADR HIN	Not required.	Labels
Proper Shipping Name	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.	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	S24/25 Avoid contact with skin and eyes. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S46 If swallowed, seek medical advice immediately and show this container or label. S60 This material and its container must be disposed of as hazardous waste.
Additional Label Phrases	None required.
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	UN Approved 25 L steel drum.
Revisions	Changes have been made to the content of boxes 1, 3, 4, 5, 8, 9, 10, 11, 12, 13, 15, 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. R28: Very toxic if swallowed. R38: Irritating to skin. R41: Risk of serious damage to eyes. R48/25: Toxic: danger of serious damage to health by prolonged exposure if swallowed. R50/53: Very toxic to aquatic organisms, May cause long term 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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Before using any product, ensure that you read and understand its label.

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