



## SAFETY DATA SHEET

### Brodifacoum 2.5% Red

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Revision No. 2

Issue date: 09 January 2007

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

<b>Product name</b>	Brodifacoum 2.5%
<b>Company</b>	PelGar International Ltd Unit 13, Newman Lane Industrial Estate, Newman Lane, Alton, Hampshire GU34 2QR Tel +44 (0) 1420 80744, Fax +44 (0) 1420 80733

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Hazardous components</b>	Brodifacoum 2.5% CAS: 56073-10-0 EINECS: 259-980-5 T+;R27 T+;R28 T;R48/24 T;R48/25 N;R50/53  Denatonium benzoate 0.5% CAS: 3734-33-6 Xn;R20 Xn;R22 Xi;R38 Xi;R41 -;R52/53  Triethanolamine 20-30% Xi;R36 Xi;R38  Propylene glycol 30-40% CAS: 57-55-6
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#### 3. HAZARDS IDENTIFICATION

<b>Most important hazards</b>	Toxic in contact with skin and if swallowed. Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. Irritating to eyes and skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. If ingested or in contact with the skin, 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.
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#### 4. FIRST AID MEASURES

<b>Skin contact</b>	Toxic in contact with skin Harmful: danger of serious damage to health by prolonged exposure in contact with skin. Irritating to skin. Remove contaminated clothing Wash off immediately with soap and plenty of water. If irritation persists obtain medical attention Contaminated clothing should be washed and dried before re-use
<b>Eye contact</b>	Irritating to eyes. Rinse immediately with plenty of water and seek medical advice.
<b>Inhalation</b>	Move to fresh air. Obtain medical advice immediately.
<b>Ingestion</b>	Toxic if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed. If swallowed, seek medical advice immediately and show this container or label.
<b>General advice</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). ADVICE FOR DOCTORS: Brodifacoum is an indirect anticoagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin times not less than 18 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

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<b>Suitable extinguishing media</b>	Keep fire exposed containers cool by spraying with water if exposed to fire. Carbon dioxide (CO <sub>2</sub> ) alcohol-resistant foam, dry powder, water spray, mist or foam.
<b>Extinguishing media which must not be used for safety reasons</b>	Do not use water jets
<b>Specific hazards</b>	Toxic fumes will be produced in a fire.
<b>Special protective equipment for firefighters</b>	In the event of fire, wear self-contained breathing apparatus, chemical protection suit, suitable gloves and boots.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Wear suitable protective clothing, gloves and eye/face protection. See section 8.
<b>Environmental precautions</b>	Contain or absorb leaking liquid with earth or sand. Prevent further leakage or spillage if safe to do so. Prevent liquid entering watercourses, sewers or basements. If substance has entered a watercourse or sewer or contaminated soil or vegetation, inform the appropriate authority.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material. Transfer to a suitably labelled container. Subsequently, wash the contaminated area with water, taking care to prevent the washings entering sewers or drains.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Keep away from sources of ignition - No smoking. Do not smoke eat or drink while handling this product. Always use good personal hygiene procedures when handling chemicals. Wash hands and face before eating, drinking or smoking.
<b>Storage</b>	Keep in a cool, well-ventilated place. Keep out of the reach of children. Keep away from food and animal feedstuffs Keep away from oxidising agents Store in accordance with Health and Safety Executive's Guidance Note HSG71.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure limit(s)</b>	Propylene glycol TWA(ppm):150 TWA(mg/m <sup>3</sup> ):470
<b>Engineering measures</b>	Ensure adequate ventilation, especially in confined areas.
<b>Respiratory protection</b>	Suitable respiratory equipment:
<b>Hand protection</b>	Impervious gloves
<b>Eye protection</b>	Tightly fitting safety goggles
<b>Skin and body protection</b>	Impervious clothing, boots

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Description</b>	Liquid
<b>Colour</b>	Red
<b>Odour</b>	Characteristic
<b>pH</b>	9.5
<b>Boiling point/range</b>	~187°C
<b>Flash point</b>	90°C
<b>Oxidising properties</b>	Not applicable
<b>Relative density</b>	~1.13
<b>Water solubility</b>	Miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available

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## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Materials to avoid</b>	Keep away from oxidising agents, strongly alkaline and strongly acidic materials in order to avoid exothermic reactions.
<b>Hazardous decomposition products</b>	Combustion or thermal decomposition will produce toxic and irritant fumes

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>	Toxic in contact with skin and if swallowed. ORL RAT LD50 0.27 mg/kg (rat) of Technical Material. Calculated as approx. 11 mg/kg (rat) for a 2.5 % Liquid Concentrate DERMAL RAT LD50 7.48 mg/kg for technical brodifacoum.
<b>Primary irritation</b>	Irritating to eyes and skin.
<b>Sensitisation</b>	May cause sensitisation of susceptible persons by skin contact.
<b>Repeated or prolonged exposure</b>	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
<b>mutagenic effects</b>	Not available
<b>carcinogenic effects</b>	Not available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity effects</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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## 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	Dispose of as special waste in compliance with local and national regulations.
<b>Contaminated packaging</b>	Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### ADR/RID

<b>UN-No</b>	3026	<b>Packing group</b>	II
<b>Class</b>	6.1	<b>Hazard ID</b>	60
<b>Proper shipping name</b>	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC (contains Brodifacoum)		

### IMO

<b>UN-No</b>	3026	<b>Packing group</b>	II
<b>Class</b>	6.1	<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A S-A		

### IATA-DGR

<b>UN-No</b>	3026	<b>Packing group</b>	II
<b>Class</b>	6.1	<b>packaging</b>	611

## 15. REGULATORY INFORMATION

**Symbol(s):** T - Toxic; N - Dangerous for the environment



**R-phrases(s)**

R24/25 - Toxic in contact with skin and if swallowed.  
R36/38 - Irritating to eyes and skin.  
R48/21/22 - Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.  
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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<b>S-phrases(s)</b>	S 1/2 - Keep locked up and out of the reach of children. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S29 - Do not empty into drains. S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S60 - This material and its container must be disposed of as hazardous waste. S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.
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## 16. OTHER INFORMATION

<b>Text of R phrases mentioned in Section 2</b>	R27 - Very toxic in contact with skin. R28 - Very toxic if swallowed. R48/24 - Toxic: danger of serious damage to health by prolonged exposure in contact with skin. 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 adverse effects in the aquatic environment. R20 - Harmful by inhalation. R22 - Harmful 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. R36 - Irritating to eyes.
<b>Recommended restrictions</b>	Concentrate for producing ready for use anti coagulant rodenticides. For use by professional operators only.
<b>Sources of key data used to compile the datasheet</b>	CHIP 2002 EH40 Raw material suppliers Safety Data Sheets.
<b>Replaces</b>	Revision No. 1  This SDS has been revised in sections, 3 Symptoms added, 11 (dermal LD50 rat changed) 14 Marine Pollutant Status.