01. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Trade Name	Sorexa Pro Rodenticide Gel
Product Code	DIFE84410
Recommended Use	A ready to use bait for the control of rats and mice.
Manufacturer	Sorex Limited
Address	St Michael's Industrial Estate, Widnes, Cheshire WA8 8TJ United Kingdom
Marketed by	Sorex International
Address	31 Dover Street, Red Hill, QLD, 4059 Australia
Phone Number	0412 251 016
Fax Number	07 3368 3494
Emergency Contact	0412 251 016

02. HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of NOHSC.
Not classified as a Dangerous Good according to the ADG Code

Although classified as hazardous, no Risk phrases are assigned.

Safety Phrases:

S2	Keep out of reach of children.
S13	Keep away from food, drink and animal feeding stuffs.
S25	Avoid contact with eyes.

03. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Component Name	CAS No.	Concentration
Difenacoum	56073-07-5	0.005%
Triethanolamine	102-71-6	< 2%
Precipitated silica	112926-00-8	< 1%
Other ingredients not classified as hazardous		Balance

04. FIRST AID MEASURES

Eyes	Hold eyes open and flood with clean water. If irritation occurs and persists, seek medical advice.
Skin	Remove contaminated clothing. Wash skin with soap and water. If skin is irritated and persists, seek medical advice.
Ingestion	If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126. Vitamin K1 (Phytomenadione) is antidotal. Due to the anticoagulant nature of the active ingredient, symptoms of poisoning are neither rapid nor readily apparent.
Inhalation	Remove to fresh air and observe until recovered. If irritation or symptoms persists, seek medical advice.

First Aid Measures (continued …)

Advice to Physicians

Difenacoum is an indirect anticoagulant. Vitamin K1 (Phytomenadione) is antidotal. Other forms of Vitamin K are not effective.

In the case of suspected poisoning, determine prothrombin time up to 48 hours after exposure. If elevated, administer Vitamin K1, 10-20 mg (0.25mg/kg for children) by slow intravenous injection, and continue until prothrombin time stabilises. Continue treatment with an oral Vitamin K1 dose of 10 mg four times per day until the prothrombin time has remained normal for three days. Further treatment, an oral dose of 10 mg twice daily, may be required for up to several months. Prothrombin time should be checked 24-hours, 3 days and 1 week after the last dose of Vitamin K1 before a decision is made to stop treatment.

05. FIRE-FIGHTING MEASURES

This product is non-flammable, but is combustible.

Suitable Extinguishing Media: Use water spray, foam, dry chemical or carbon dioxide. Cool the smouldering material with water spray to minimise the possibility of re-ignition. Keep containers and surroundings cool with water spray.

Hazards from combustion products: Carbon monoxide and carbon dioxide and other potentially toxic gases and vapours.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

06. ACCIDENTAL RELEASE MEASURES

Emergence procedures: Any spillages should be cleared up immediately and disposed of safely. Keep unprotected people and animals away from area. Clean up area and wash contaminated surfaces with detergent solution.

Material and methods for containment and cleanup procedures: Pellets can be shovelled, vacuumed or picked up using chemical resistant gloves. If Pellets cannot be used as per the label directions they should be disposed of as per Section 13.

07. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes and skin. Use caulking gun to dispense bait.

Conditions for Safe Storage: Store in original container under cool and dry conditions in a secure, well ventilated place, inaccessible to children and away from food, animal feedstuffs and products which may have an odour.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards:

1. Difenacoum Technical Material	None assigned.
2. Triethanolamine	TWA - 5 mg/m³
3. Amorphous precipitated silica	TWA - 10 mg/m³
4. Sucrose	TWA - 10 mg/m³

Exposure control/personal protection (continued …)

Due to the low concentrations of Triethanolamine, amorphous precipitated silica and sucrose in the formulation, concentrations above the TWA are very unlikely in the work place environment.

Exposure controls should be implemented with due regard to the hierarchy of controls (elimination, substitution, local exhaust ventilation, operating procedures and Personal Protective Equipment (PPE)). PPE should only be used as a last resort where exposure cannot be controlled by other means.

Biological limit values:	No biological limit allocated.
Engineering controls:	Keep containers closed when not in use. No special engineering controls are required.
Personal protection equipment:	When opening the container and using the product, it is advised to wear chemical resistant gloves. Avoid contact with eyes, skin and clothing.

09. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	A semi-solid paste.
Colour:	Blue-green.
Odour:	No significant odour.
Relative Density:	Approximately 1.3.
Flammability:	Not flammable.
Solubility in Water:	Insoluble.
Explosive Properties:	None.
Oxidising Properties:	None.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of use. Product is considered stable for a period of at least 2 years after manufacture.
Conditions to avoid:	No known conditions to avoid.
Incompatible materials:	No known materials to avoid.
Hazardous Decomposition Products:	Hazardous decomposition products are not expected to be formed during normal storage. When the product is heated to high temperatures, the product is likely to decompose and emit toxic fumes.
Hazardous Reactions:	No particular hazard reactions are known.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity:	Oral LD_{50} (rat) 36000 mg/kg.
Acute Dermal Toxicity:	Oral LD_{50} (rat) > 2000 mg/kg.

Toxicological Information (continued …)

Acute Eye Irritation: May irritate the eyes.

Acute Skin Irritation: Not a skin irritant.

Acute Skin Sensitisation: Studies have not revealed any evidence of skin sensitisation effects.

Long Term Exposure: No mutagenicity, teratogenicity or reproductive effects has been have been observed in long term studies conducted with laboratory animals.

Avoid all contact by mouth. Large quantities would need to be ingested to produce a toxic effect. Practically non-hazardous by skin contact.

This product contains Difenacoum, an indirect anticoagulant. Any signs of poisoning are unlikely to occur until 12-18 hours after exposure. Thereafter, they will develop progressively and may rapidly appear. Clinical signs result from an increased bleeding tendency and include: an increase in prothrombin time, bruising easily with occasional gum bleeding, blood in the stool or urine, excessive bleeding from minor cuts and abrasions, pale mouth and cold gums, anorexia and general weakness. More severe cases of poisoning include haemorrhage (usually internal) and shock.

12. ECOLOGICAL INFORMATION

Ecotoxicity: The bait is hazardous to pigs, cats, dogs, poultry, birds, and wildlife and care should be exercised in its use. DO NOT place baits in locations that are accessible to domestic animals, livestock, birds or other animals.

Whilst initial indications are that Difenacoum may have a relatively high toxicity to fish, (threshold level 0.5 mg/L), this concentration far exceeds any level of Difenacoum which could be expected to accidentally contaminate water in normal usage of this product. DO NOT contaminate dams, waterways and drains with bait or its used containers.

Persistence and degradability: A preliminary biodegradation study has shown that Difenacoum in a water/soil/bait system inoculated with microflora taken from a compost heap was degraded by 25% over a 4 week period at 27°C.

Mobility: The concentration of Difenacoum (0.005%) in rodenticidal baits and their manner of use, preclude significant soil contamination.

13. DISPOSAL CONSIDERATIONS

Product Disposal: The best means of disposal of any product is through proper use according to the label.
Dispose of empty containers and unused or untaken bait by burying in an approved dump.

Container Disposal: Containers that have held bait should not be used for any other purpose. Dispose of empty containers by burying in an approved dump.

14. TRANSPORT INFORMATION

This product is not classified as a Dangerous Good. This product does not require any special

transport requirements. This product is a S6 poison and all regulations applicable to the storage, transport and sale of S6 poisons must be observed.

15. REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Drugs and Poisons (SUSDP), this product is a schedule 6 poison.
This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 58751.
This product is classified as a Hazardous Substance under the criteria of NOHSC Australia, but there are no risk criteria established (risk phrases).
This product is not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

16. OTHER INFORMATION

Issue Date: 2 August 2007. (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code	Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
Carcinogen	An agent which is responsible for the formation of a cancer.
Genotoxic	Capable of causing damage to genetic material, such as DNA.
Mutagenic	Able to produce a mutation (a change in the genetic material of cells).
NOHSC	National Occupational Health and Safety Commission.
PPE	Personal protective equipment.
TWA	Exposure standards are generally expressed as a Time-weighted Average (TWA) concentration of a substance over an eight-hour working shift, and apply to an eight hour day for a five day working week over an entire working lifetime. Where unusual work patterns, such as overtime are adopted, caution should be exercised in the application of exposure standards.

References:

1. "Search Hazardous Substances". HSIS NOHSC Australia website. (2005).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End MSDS