

MATERIAL SAFETY DATA SHEET

STATEMENT OF HAZARDOUS NATURE:

Not classified as hazardous according to the criteria of NOHSC Australia

COMPANY DETAILS:

Syngenta Crop Protection Pty Limited
ABN 33 002 933 717
140-150 Bungaree Rd.,
PENDLE HILL, NSW, 2145

Telephone No.: (02) 9688 0444
24 Hours Emergency No.: 1 800 033 111

IDENTIFICATION

PRODUCT NAME: TALON Rodenticide Wax Blocks

Formulation type:	wax blocks	UN number:	none allocated
Active ingredient:	brodifacoum	Dangerous goods class:	none allocated
Product code:		Subsidiary risk:	none allocated
Chemical type:	hydroxycoumarin	Hazchem code:	none allocated
Poisons schedule:	6	Packing group:	none allocated
		EPG/IERG:	none allocated

USE: Rodenticide

PHYSICAL DESCRIPTION/PROPERTIES

Appearance:	blue wax block	Flash Point:	not applicable
Odour:	odourless	Flammability:	not applicable
Melting point:	> 40°C	Combustibility:	combustible
Vapour pressure:	not available	Solubility in water:	insoluble
Bulk density:	1.15 g/cm ³		

INGREDIENTS

	CAS No.	Content (%w/v)
Brodifacoum	56073-10-0	0.005
Food base (wheat)		> 60
Bitrex (bittering agent)		< 1

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

ACUTE TOXICITY

This product is not harmful according to NOHSC Australia when handled as directed.

Swallowed: **VERY TOXIC**
Tests on rats indicate this product is VERY TOXIC following single doses of the active ingredient.
(LD₅₀ = 0.27 mg/kg)

Dermal absorption: **NOT HARMFUL**
Tests on rabbits indicate that the product is not harmful following a single dermal application of a similar formulation.
(LD₅₀ = 2000 mg/kg)

Inhaled: Due to the form of this product (solid preparation), inhalation is not considered to be a relevant route of exposure.

Irritation

Eye: **SLIGHT IRRITANT**
Skin: **NON IRRITANT**

Sensitisation

Skin: **NOT AVAILABLE**

Poisoning symptoms: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled and overexposure occurs are:

MILD EXPOSURE: reduction in the clotting power of blood, detectable only by laboratory analysis.

MODERATE EXPOSURE: symptoms include bleeding gums, increased tendency to bruise, blood in faeces and urine or excessive bleeding from minor cuts or abrasions.

SEVERE EXPOSURE: severe gastrointestinal bleeding, massive internal bleeding resulting in shock, coma and death in very severe cases.

CHRONIC TOXICITY (Active Ingredient)

Brodifacoum technical has been extensively tested in mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, neurotoxic, teratogenic or reproductive effects was obtained. Studies in rats and rabbits indicate that this material accumulates in body tissues, principally the liver, and has a very long half-life (150 – 200 days in rats dosed with 0.25 mg/kg). Thus, in humans there is a potential for accumulation of small amounts over a long period of continued exposure leading to toxic levels within the body.

FIRST AID

In case of poisoning by any exposure route contact a doctor or Poisons Information Centre. Phone 13 11 26.

- Swallowed: HUMANS: Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give further water. Seek medical advice.
DOMESTIC ANIMALS: If severe signs of poisoning – immediately transport to veterinarian.
For early signs of poisoning – transport to veterinarian.
No signs but suspected bait consumption – induce vomiting only if ingestion is recent (less than six hours). Make up a solution of salty water (2-3 tablespoons salt in a cup of water), place in a soft drink bottle and squirt down animal's throat. Vomiting should take place in approximately 10 minutes. Seek veterinarian's advice.
- Eye: If product gets in eyes wash it out immediately with water.
- Skin: If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water. Wash contaminated clothing before re-use. If irritation occurs seek medical advice.
- Inhaled: Move person to fresh air and keep at rest until recovered. If any signs or symptoms occur or persist, get medical attention.

ADVICE TO DOCTOR

Brodifacoum is a coumarin anticoagulant. Like warfarin it interferes with the synthesis of prothrombin, disturbing the normal clotting mechanisms and causing an increased tendency to bleed. As a result the effect may be delayed.

HUMANS: Continued administration of Vitamin K1 for periods of several weeks with regular monitoring of the coagulation parameters is necessary. In the early phase of the poisoning, infusion of fresh-frozen plasma is advisable.

DOMESTIC ANIMALS EXHIBITING SIGNS OF INTOXICATION:

1. Carry out a prothrombin test. Administer parentally 2-5mg/kg of Vitamin K1. Use the smallest diameter needle feasible and avoid the intravenous route in severely haemorrhagic animals.
2. Repeat prothrombin test about four hours after injection. Provided that the prothrombin time has normalised start daily oral vitamin K1 treatment and continue for three to four weeks.
3. Carry out a prothrombin test 24-48 hours after end of treatment. Continue treatment if signs of poisoning reappear or if prothrombin time is still abnormal.

DOMESTIC ANIMALS SUSPECTED OF CONSUMING BAIT:

1. Test prothrombin time daily for up to three days after suspected date of ingestion.
2. Treat with Vitamin K1 if signs of poisoning appear or if prothrombin time increases.
3. Prophylactic oral Vitamin K1 treatment could be carried out.

Refer to the document "The Treatment of Anticoagulant Rodenticide Poisoning" (1998 or later edition) available at most major treatment hospitals, Poisons Information Centre or Syngenta Crop Protection Pty Ltd.

PRECAUTIONS FOR USE**ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS****EXPOSURE STANDARDS**

No values have been assigned for this specific material by NOHSC. However, supplier recommended hygiene standard:

	TWA	
	ppm	mg/m ³
Brodifacoum	---	0.002

TWA = time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

Exposure Potential - Swallowing and inhalation are unlikely under normal conditions of usage. Significant skin uptake does not occur.

ENGINEERING CONTROLS

IN THE WORKPLACE: Natural ventilation should be adequate under normal conditions. Keep containers closed when not in use.

PERSONAL PROTECTION

MANUFACTURE, PACKAGING AND TRANSPORT: Avoid skin and eye contact. Wear overalls, safety glasses and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet.

PREPARATION AND USE OF THE PRODUCT: Do not inhale dust. Do not touch the bait, use scoop or measure. If on skin and after each baiting, wash thoroughly with soap and water.

Only use protective equipment bearing the mark of the Standards Association of Australia.

FLAMMABILITY

This product is combustible.

SAFE HANDLING INFORMATION**STORAGE AND TRANSPORT**

Containers which have held bait should not be used for any other purpose. Store in tightly sealed original containers in a dry secure place away from fertilisers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals.

Store and transport according to the requirements for a Schedule 6 poison. Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

SPILLS AND DISPOSAL

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways.

Procedure for spill:

- (1) Keep all bystanders away.
- (2) Wear full length clothing and PVC gloves.
- (3) Re-position any leaking containers so as to minimise further leakage.
- (4) Sweep wax blocks into a pile.
- (5) Shovel the material into drums.
- (6) Disposal of the material will depend upon the extent of the spill.
 - For quantities up to 50kg of product bury in a secure landfill site.
 - For quantities greater than 50kg seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate the spill area with detergent and water and rinse with water.

Dispose of empty, used containers by:

Dispose of empty container, used bait stations and spilt bait by wrapping in paper, placing in plastic bag and putting in garbage.

FIRE/EXPLOSION HAZARD

This product is combustible. Extinguish warehouse and factory fires using fine water-spray, foam or dry agent. During a fire this product may release smoke and hazardous decomposition products. When fighting a major fire wear SCBA and structural firefighters uniform. Do not allow fire-water to enter drains.

OTHER INFORMATION

The active ingredient **brodifacoum** is very toxic to aquatic organisms. Contamination of waterways should be strictly avoided. Rainbow Trout, *Oncorhynchus mykiss*, LC_{50} (96 h) = 0.051 mg/L, Bluegill sunfish LC_{50} (96 h) = 0.165 mg/L, Water flea *Daphnia magna*, LC_{50} (48 h) = 0.34 mg/L. LogPOW is 8.5, risk of bioaccumulation in an aquatic species is high.

Brodifacoum is highly toxic to birds and wildlife. Oral LD_{50} (chickens) = 4.5 mg/kg, oral LD_{50} (mallard duck) = 0.31 mg/kg, dietary LC_{50} (40 day) mallard ducks = 2.7 ppm, dietary LC_{50} (40 day) Bobwhite quail = 0.8 ppm.

Brodifacoum degrades slowly in soils under aerobic and flooded conditions. The half life in soil is greater than 12 weeks. It is unlikely to leach to groundwater.

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Federal health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

CONTACT POINT: Regulatory Affairs Manager - Crop Protection - (02) 9688 0444
24 HOURS EMERGENCY CONTACT: 1 800 033 111

This Material Safety Data Sheet 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.

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