

SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Name: TALON WB
Design Code: A12720B / A12720C
Recommended Use: Rodenticide
Company Details: Syngenta Crop Protection Limited
Address: Tower II, Level 7, 110 Symonds Street
Private Bag 92618,
Symonds Street
AUCKLAND
NEW ZEALAND

Telephone number: (weekdays) 09 306 1500
Emergency Telephone number: (24 Hours) 0800 734 607
National Poisons & Hazchem Information Centre : 0800 POISON (0800 764 766)

Section 2: HAZARDS IDENTIFICATION

Hazard classification: 6.1E, 6.9B, 9.1D
Priority Identifier: WARNING
KEEP OUT OF REACH OF CHILDREN

Secondary Identifiers:

- 6.1E = May be harmful if swallowed, inhaled or absorbed through the skin.
- 6.9B = May cause damage to the blood and hematopoietic system from repeated oral exposure at high doses.
- 9.1D = Harmful to aquatic organisms.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture:

Chemical Identity of ingredients:

Ingredient	CAS no.	Content (% w/w)
Brodifacoum	56073-10-0	0.005
other ingredients determined not to be hazardous	-	to 100%

Section 4: FIRST AID MEASURES

Description of First Aid measures:

General Advice: For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.

If inhaled: Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a Doctor or the National Poisons Centre immediately.

In case of skin contact: Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a doctor.
Wash contaminated clothing before re-use.

In case of eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses (if present). Immediate medical attention is required.
If swallowed:	If swallowed seek medical advice immediately and show the container or label. DO NOT induce vomiting.

Important symptoms and effects, both acute and delayed:

Symptoms:

Symptoms of poisoning are typical of anticoagulants. In severe cases there may be bruising, haematomas of the joints, blood in the faeces and urine.

No adverse health effects are 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 over exposure 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.

Indication of any immediate medical attention and special treatment needed:

This product contains anticoagulants with an effect similar to warfarin in that they act by interfering with the synthesis of prothrombin.

The specific measure of effect is the prothrombin time. Note this may not become prolonged until 12-18 hours after ingestion.

The specific antidote is vitamin K1 (Phytomenandione). Initially, antidote should be given by injection (10-20mg, or 0.25mg/kg for children), by slow intravenous infusion at a rate not exceeding 1mg/minute. In severe cases the use of fresh frozen plasma may be required.

Maintenance treatment is given orally (40mg/day in divided doses for adults; up to 20mg/day in divided doses for children).

The prothrombin time and the haemoglobin should be monitored. Patients should be kept under medical supervision until the prothrombin time has been normal for 3 consecutive days.

Oral treatment may need continuing for several months (20mg/day in divided doses for adults and up to 20mg/day in divided doses for children). (For animal cases the dose is 2-5mg/kg).

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, National Poisons Centre or Syngenta Crop Protection Ltd.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media:

Small fires:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Large Fires:

Alcohol resistant foam or water spray.

Unsuitable extinguishing media:

Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture:

Specific hazards during fire-fighting:

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10)
Exposure to decomposition products may be a hazard to health.

Advice for firefighters:

Special protective equipment for firefighters:

Wear full protective clothing and self-contained breathing apparatus.

Further information:

Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions:

Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and material for containment and cleaning up:

Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
Do not create a powder cloud by using a brush or compressed air.
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

Reference to other sections:

Refer to disposal considerations listed in Section 13.
Refer to protective measures listed in sections 7 and 8.

Section 7: HANDLING AND STORAGE

Precautions for Safe handling: Advice on safe handling:	No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.
Conditions for safe storage, including any incompatibilities: Requirements for storage area and containers:	No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.
Specific end use(s) Specific use(s)	For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Control Parameters Occupational Exposure Limits:				
Components	CAS No	Value type (form of exposure)	Control parameters	Basis
Brodifacoum	56073-10-0	TWA	0.002 mg/m ³	Syngenta
Paraffin wax fume	8002-74-2	TWA	2 mg/m ³	WES

Exposure controls Engineering measures:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.
Personal Protective Protection: Eye protection:	No special protective equipment required.
Hand protection: Material: Break through time: Glove thickness: Remarks:	Avoid skin contact. Wash hands and exposed skin after handling. Chemical resistant, such as nitrile rubber. >480 min 0.5 mm The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin and body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Dust impervious protective clothing.

Respiratory protection:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protective measures:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance:	Solid wax block
Colour:	Dark blue
Odour:	Odourless
Odour threshold:	No data
pH value	No data
Melting point / freezing point:	No data
Initial boiling point and boiling range:	No data
Flash point:	No data
Flammability (solid, gas):	May form combustible dust concentrations in air.
Burning number	5 (100°C) 2 (20°C)
Upper flammability / explosive limits:	No data
Lower flammability / explosive limits	No data
Vapour pressure:	No data
Vapour Density:	No data
Density:	0.924 g/cm ³
Solubility in other solvents:	Not soluble in water
Partition co-efficient: n-octanol / water:	No data
Autoignition temperature	252°C
Decomposition temperature:	No data
Dynamic viscosity:	No data
Explosive properties:	Not explosive
Oxidising properties:	The substance or mixture is not classified as oxidizing
Surface tension:	Solid, not relevant
Minimum ignition temperature:	350°C
Minimum ignition energy:	300 - 1,000 mJ (350°C)

Section 10: STABILITY AND REACTIVITY

Reactivity:

See Section: "Possibility of Hazardous Reactions".

Chemical Stability:

The product is stable when used in normal conditions.

Possibility of Hazardous Reactions:

Hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to Avoid

No decomposition if used as directed.

Incompatible Materials:

Materials to avoid: None known

Hazardous Decomposition Products:

Combustion or thermal decomposition will evolve toxic and irritant vapours.

Section 11: TOXICOLOGICAL INFORMATION

HSNO Classifications:

- 6.1E = May be harmful if swallowed, inhaled or absorbed through the skin.
6.9B = May cause damage to the blood and hematopoietic system from repeated oral exposure at high doses.

Acute toxicity (Similar product formulation)

Swallowed:	LD ₅₀ >5000 mg/kg (rat)
Dermal absorption:	LD ₅₀ >2000 mg/kg (rat, males/females)
Inhaled:	Due to the form of this product (solid preparation), inhalation is not considered to be a relevant route of exposure.
Aspiration hazard:	Not classified
Respiratory irritation:	Not classified
Skin corrosion / irritation:	NON IRRITANT (rabbit)
Eye damage / irritation:	NON IRRITANT (HSNO Classification) (rabbit)
Respiratory or Skin Sensitisation:	NOT A SKIN SENSITISER (guinea pigs)

Chronic / Long Term Effects (active ingredient)

Germ cell mutagenicity:	Animal testing did not show any mutagenic effects.
Carcinogenicity:	No evidence of carcinogenicity in animal studies.
Reproductive toxicity:	Some evidence of adverse effects on development, based on animal experiments.
Specific Organ toxicity:	<p><i>Single exposure:</i> The substance or mixture is not classified as specific target organ toxicant single exposure.</p> <p><i>Repeated exposure:</i> Target Organs: Blood The substance or mixture is classified as specific target organ toxicant, repeated exposure, Class 6.9B, (GHS: category 1). May cause damage to the blood and hematopoietic system from repeated oral exposure at high doses.</p>
Narcotic Effects:	Not classified
Further Information:	<p>Excessive exposure slows blood clotting time and can cause bleeding, shock and death.</p> <p>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.</p>

Section 12: ECOLOGICAL INFORMATION

HSNO Classifications:	
9.1D = Harmful to aquatic organisms.	
Ecotoxicity Effects – Aquatic (active ingredient)	
Acute toxicity to fish:	LC ₅₀ = 0.04 mg/L (<i>Oncorhynchus mykiss</i> (rainbow trout)) (active ingredient)
Toxicity to daphnia and other aquatic invertebrates:	EC ₅₀ (48h) = 0.45 mg/L (<i>Daphnia magna</i> (water flea)) (active ingredient)
Toxicity to algae:	E _r C ₅₀ (72 h) = 0.27 mg/L (<i>Pseudokirchneriella subcapitata</i> (green algae)) (active ingredient)
Ecotoxicity Effects – Terrestrial (active ingredient)	
Toxicity to Birds:	LD ₅₀ = 0.31 mg/kg (mallard duck) (active ingredient) LD ₅₀ = 11.6 mg/kg (Japanese quail) (active ingredient) LD ₅₀ = 4.5 mg/kg (chickens) (active ingredient)
Toxicity to soil dwelling organisms:	No data available.
Toxicity to Bees:	No data available.
Persistence and degradability:	
Biodegradability:	Not rapidly biodegradable.
Stability in water:	Degradation half-life (DT ₅₀): ca. 300 d Persistent in water.
Bioaccumulative potential:	
Bioaccumulation:	High bioaccumulation potential.
Mobility in soil:	
Distribution among environmental compartments:	Low mobility in soil.
Stability in soil:	DT ₅₀ : 157 d Percentage dissipation: 50% Not persistent in soil.
Other adverse effects:	
Results of PBT and vPvB assessment (product):	This substance/mixture contains no components considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB) at levels of 0.1% or higher.

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal:	DO NOT contaminate ponds, waterways or ditches with chemical or used containers. DO NOT dispose of waste into sewer. Dispose of this product only by using according to the label. Otherwise, dispose of waste at an approved landfill or other approved facility that will ensure the substance does not exceed the tolerable exposure limit (TEL) or environmental exposure limit (EEL), where relevant, or will treat the substance so that it is rendered no longer hazardous.
Container Disposal:	Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

Section 14: TRANSPORT INFORMATION

Rail / Road (NZS 5433)	Not classified as dangerous good
Sea (IMDG-Code)	Not classified as dangerous good
	MARINE POLLUTANT: No
Air (IATA)	Not classified as dangerous good

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR001594
Tolerable Exposure Limit or Environmental Exposure Limit:	No TEL or EEL values are set for this substance at this time
Required Regulatory Controls:	
Certified handler:	No
Tracking:	No
Record Keeping:	No
ACVM Registration:	V009229
ACVM Controls:	See www.foodsafety.govt.nz/industry/acvm for registration conditions.
International Agreements related to the substance (eg, Montreal Protocol, Stockholm Convention or Rotterdam Convention):	Not applicable

Section 16: OTHER INFORMATION

Date of SDS Preparation / Review:	6 March 2018
Version number of SDS:	5
Key / Legend to abbreviations and acronyms used:	
<p>AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory;</p>	<p>MARPOL - International Convention for the Prevention of Pollution from Ships; N.O.S. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure ActivityRelationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative;</p>

LC50 - Lethal Concentration to 50 % of a test population;
LD50 - Lethal Dose to 50% of a test population (Median
Lethal Dose);

WES – Workplace Exposure Standard (Worksafe NZ);
WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the test.

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