SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product:	**Feratox Bio Bag 12**
Manufacturer Code:	Feratox pellet (240mg) containing 475g/kg Potassium Cyanide in 12g of Ferafeed 213 Paste in a Bio Bag Bait Station for the control of possums. Feratox for control of possums and Dama Wallaby
Product Use:	Vertebrate Toxic Agent for use as per label instructions.
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Connovation Limited**
Address:	36 B Sir William Drive East Tamaki, Auckland PO Box 58613 Botany, Auckland, 2163
Telephone:	+64 9 273 4333
Fax:	+64 9 374 4334
Emergency No:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	21 January 2025 v3

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR100752

Pictograms

Toxic Chronic Ecotoxic

Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Acute oral toxicity Category 4	H302	Harmful if swallowed.
Skin sensitisation Category 1	H317	May cause an allergic skin reaction.
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment chronic Category 2	H411	Toxic to aquatic life with long lasting effects.

Hazardous to soil organisms	H423	Harmful to the soil environment.
Hazardous to terrestrial vertebrates	H432	Toxic to terrestrial vertebrates.
Hazardous to terrestrial invertebrates	H443	Harmful to terrestrial invertebrates.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash before reuse.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Potassium Cyanide	<1.0%	151-50-8
Non-toxic paste	100	Proprietary
Each 12g bait contains 0.1g Potassium cyanide in the form of a pellet.		

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

If on Skin — Take off contaminated clothing and wash before reuse. Wash with plenty of soap and water. If skin irritation or rash occurs: get medical advice/attention.

If Swallowed — Obtain immediate medical attention if ingested.
Call 111 FOR AMBULANCE AND USE KEYWORDS 'Cyanide Poisoning'.

Use emergency blanket to protect patient from heat loss. A doctor can slowly administer 50 ml 25% sodium thiosulphate intravenously if indicated (patient unconscious or incoherent, breathing irregular, possibly vomiting and/or with convulsions).
If person is losing consciousness after ingestion, or is unconscious or convulsing, then do NOT give anything by mouth.
Rinse mouth thoroughly with water. Do NOT give anything to drink. Do NOT induce vomiting. If vomiting occurs naturally, rinse mouth thoroughly again with water.
If patient is conscious, breathing regularly and able to say what has happened, keep under observation. Get medical assistance.
Do NOT use mouth to mouth or mouth to nose resuscitation, but instead use a suitable device or apparatus to give artificial respiration if breathing has stopped. Administer oxygen if breathing is shallow or irregular and cardiopulmonary resuscitation (CPR) if heart has stopped.

If Inhaled — Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: Symptoms of cyanide poisoning include difficulty breathing (dyspnea), rapid breathing (tachypnea), nausea, dizziness, vomiting, headache, sweating and convulsions. In all cases seek immediate medical attention. Refer to Section 11 for full details.

Notes to Doctor: Product contains cyanide. If indicated, slowly inject 50 ml 25% sodium thiosulphate intravenously and administer oxygen.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Avoid breathing smoke. Combustion products include hydrogen cyanide, carbon monoxide, carbon dioxide, nitrogen oxides and ammonia.
Suitable Extinguishing media	Water spray, or alkali power only. Do NOT use acidic foam or powder or CO2 extinguishers.
Precautions for firefighters and special protective clothing	Wear self-contained breathing apparatus and personal protection clothing (gas tight suit, helmet).
HAZCHEM CODE	**2Z CONTAIN SPILLAGE**

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel.

Do not allow pellets to contaminate watercourses or the ground.

Contain spill. Keep dry. Sweep up and transfer to suitable labeled container for re-use if suitable (unbroken, dry) or for disposal. In event of major spill, inform Fire Service via 111 and then local Health Protection Officer at the Public Health Unit or hospital . Dispose of as hazardous waste to an approved waste management company in accordance with local regulations.

Section 7. Handling and Storage

Precautions for Handling:

Feratox Bio Bags with 12g Ferafeed 213 requires a Certified Handlers/Controlled Substance Licence and records for tracking of product.
Refer to Feratox Bio Bags product label for use and application.

During bait preparation, bait deployment, bait retrieval or opening sealed containers that hold Feratox®:

- Do not handle or consume food, drink or smoke.
- After handling and before meals, rest breaks, smoking and at the completion of work, remove protective clothing.
- Wash hands and any exposed skin thoroughly with soap and water, or wipes.
- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing dust.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Store in original packaging in a cool dry place out of reach of children and pets and away from any food, drink and animal foodstuffs.
- Do not store with Class 1 (Explosives), 3 (Flammables), 5.1 (Oxidisers), 5.2 (Organic Peroxide Oxidizers), or 8 (Corrosive) products.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
Cyanides, as CN [151-50-8]		5		

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2023 14TH EDITION.

Engineering Controls
None set.

Personal Protective Equipment

Safety Equipment	Non-porous gloves	Safety Glasses	Multi-gas resipirator 97000 series (half mask)	Trousers outside boots or gaiters	Comments
Bait Handling					
	Recommended	Not required	Not required	Not required	Wearing gloves minimises any moisture transfer to baits

Safety Equipment	Non-porous gloves	Safety Glasses	Multi-gas resipirator 97000 series (half mask)	Trousers outside boots or gaiters	Comments
Deployment in Field					
	Recommended	Not required	Not required	Not required	Wearing gloves minimises any moisture transfer to baits
Bait retrieval: possibly broken or degrading Feratox Pellets (Feratox Bio Bag 12 damaged)					
Bury Feratox BioBags 12 on site	Required	Not required	Required	Required	
Removal of Feratox Biobags 12 in an open air environment	Required	Recommended	Recommended	Required	
Bait retrieval: Feratox pellets intact (Feratox Bio Bag 12 not damaged)					
Bury Feratox BioBags 12 on site	Required	Not required	Required	Required	
Removal of Feratox Biobags 12 in an open air environment	Required	Recommended	Recommended	Required	
Placement of Feratox Bio Bag 12 in sealed container in open environment with free air flow.	Required	Recommended	Recommended	Required	
Opening Sealed Container that contains retrieved baits					
	Required	Recommended	Required	Not required	Always open any sealed container in a well ventilated area. DO NOT breathe any fumes that may have accumulated in sealed container.

Section 9 Physical and Chemical Properties

Appearance	Hard round pellet, ~7mm diameter contained in 12 grams of Ferafeed paste inside a sealed bag.
Colour	Green
Odour	Not available
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	Not available
Water Solubility	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Not available
Conditions to Avoid	Keep dry. Avoid contact with moisture, water, acidic conditions.
Incompatible Materials	Acids, acid salts, strong oxidising compounds, carbon dioxide, water.
Hazardous Decomposition Products	Hydrogen cyanide, ammonia, potassium hydroxide.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Can be fatal if swallowed when pellets damaged/broken or cracked in the mouth. Pellets swallowed whole may pass through digestive system unbroken. Symptoms of cyanide poisoning include difficulty breathing (dyspnea), rapid breathing (tachypnea), nausea, dizziness, vomiting, headache, sweating and convulsions. In all cases seek immediate medical attention.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable however, if pellets broken and core exposed symptoms could include stinging, burning, extreme redness,

	tearing and dizziness. Flushing eye promptly with water is required to avoid ill-effects.
Skin	May cause an allergic skin reaction. May cause mild irritation. Unbroken, dry pellets are safe to handle. Broken or decomposing pellets if contacting skin may sting especially if skin has cuts or abrasions. If the potassium cyanide pellet core contacts skin, then burns/ulceration might result so it is important to immediately wash any contaminated skin.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through repeated or prolonged exposure.

Individual component information:
Acute Toxicity:

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
Potassium cyanide	5 mg/kg (rabbit)	13.3 – 33.3 mg/kg (rabbit)	0.015mg/l/4hr (rat)

Other information:

The potassium cyanide active ingredient is encapsulated in a hard inert coating so provide protection from incidental contact. Ill-effects require the pellet to be broken or decomposing. Exposure to moisture/water will cause decomposition. This is accelerated under acidic conditions.

In humans, ingestion of 200 to 300 mg cyanide by an adult can result in unconsciousness and death.

Section 12. Ecotoxicological Information

Hazardous to the aquatic environment chronic Category 2
Hazardous to soil organisms
Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates

Ecotoxicity
Product is a Vertebrate Toxic Agent (VTA) so there is potential for harm to non-target terrestrial vertebrates. Avoid exposure to non-target species including domestic pets. If poisoning is suspected of domestic animals or livestock, consult a veterinarian immediately. Advice to Veterinarians Product is a Vertebrate Toxic Agent (VTA) so there is potential for harm to non-target terrestrial vertebrates. Avoid exposure to non-target species including domestic pets. If poisoning is suspected of domestic animals or livestock, consult a veterinarian immediately.

Active Ingredient is Potassium cyanide
General
Symptoms are generalized and include frothing at the mouth, slobbering, increased respiratory rate, mouth breathing, rapid but weak heart rate, and muscle twitching. Mucous membranes are bright red, indicating the lack of oxygen transfer throughout the body that is necessary for survival at the cellular level. Death from respiratory paralysis occurs during severe convulsions. The heart continues to beat for several minutes after struggling ceases and breathing stops. Bright red blood often comes out of the nostrils and mouth.

Treatment

Administration of an IV solution of sodium thiosulfate, or sodium nitrite and sodium thiosulfate to "neutralise" the production of hydrocyanic acid may be appropriate. Note clinical signs of cyanide poisoning and nitrate poisoning are similar. Ensure nitrate poisoning is not cause first. Blood from nitrate poisoning will be chocolate brown compared to cherry red for cyanide poisoning.

Toxicity to aquatic organisms
The product has identified as being very toxic in the aquatic environment.

Toxicity to terrestrial vertebrates
The product has identified as being very toxic to terrestrial vertebrates. Product is registered as a Vertebrate Toxic Agent for possum and Dama wallaby control.

Toxicity to terrestrial invertebrates
The product has identified as being very toxic to terrestrial invertebrates.

Persistence and degradability	Pellets will breakdown within days of becoming wet. The potassium cyanide in the core of the pellet will react to liberate hydrogen cyanide gas which will dissipate into the atmosphere. Pellets will degrade more rapidly in contact with mist acidic conditions.
Bioaccumulation	No data available
Mobility in Soil	Pellets will breakdown within hours of becoming wet. The potassium cyanide in the core of the pellet is soluble in water. Threshold Effects Level TEL water Cyanides as CN, 0.08 mg/L TEL air Cyanides as CN, 0.009mg/m3
Other adverse effects	Environmental Exposure Standards EEL freshwater 18 µg/L EEL marine 14 µg/L

Section 13. Disposal Considerations

Disposal Method:
Dispose of product (pellets) and waste as hazardous materials by burying with organic matter on active tip face of managed landfill, or bury with biologically active layer of soil in landfill, in accordance with Regional Authority or local Council bylaws. Ensure to dispose of empty containers safely to an approved landfill.

Precautions or methods to avoid: Avoid unintended release to the environment. Do not use empty containers for storing other products.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020

Road, Rail, Sea and Air Transport

UN No	3077
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID N.O.S (Contains <1% potassium cyanide)
Marine Pollutant	Yes

Limited Quantities **DGLQ Limit**	If the product's individual container is below 5L/kg, it can be transported as a DGLQ (Dangerous Goods In Limited Quantities) provided the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.
Segregation requirements	Segregate from Food or Feedstuffs and incompatible substances.
Incompatibilities	Do not store with Class 1 (Explosives), 3 (Flammables), 5.1 (Oxidisers), 5.2 (Organic Peroxide Oxidizers), or 8 (Corrosive) products.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: HSR100752

Refer to www.epa.govt.co.nz for full control document

HSW (HS) Regulations 2017 and EPA Notices	**Trigger Quantity**
Certified Handler	Yes
Controlled Substance License	Yes
Location Certificate	Not required
Tracking Trigger Quantities	Yes
Signage Trigger Quantities	1000kg
Emergency Response Plan	1000kg
Secondary Containment	1000kg

Restrictions of Use	
77A - The controls relating to Vertebrate Toxic Agents, set out in Schedule 3 of the Hazardous Substances (Vertebrate Toxic Agents) Transfer Notice 2004, (Supplement to the New Zealand Gazette, 29 October 2004, No. 141, page 3495, as amended by New Zealand Gazette, 28 April 2005, no. 73, page 1739 and New Zealand Gazette, 26 June 2006, no. 68, page 1593) shall apply.	**Variation: Clause 2:** Packaging of substances for sale for vertebrate pest control (1) No person may pack this substance for sale for vertebrate pest control unless the package is marked with a unique identifier. (2) The unique identifier marked on the container must comply with regulation 35 and regulation 36 of the Hazardous Substance (Identification) Regulations 2001. (3) For the purposes of regulation 35(3)(c) of those regulations, the unique identifier is a secondary identifier. (4) In this clause package means the smallest package in which the substance is sold. **Variation: Clause 3:** Permissions required for application or use of certain substances (1) No person may apply or otherwise use this substance on land administered or managed by the Department of Conservation unless the person first obtains permission from the EPA. (2) No person may apply or otherwise use this substance in a catchment area from which water is drawn for human consumption or in any other area

	where a risk to public health may be created if the substance is applied or used unless the person first obtains a permission from the EPA. Note: The EPA has delegated the giving of such a permission in the case of subclause (1) to the Department of Conservation (DOC), and, in the case of subclause (2) to the Ministry of Health. Persons wishing to apply this substance where a permission is required should contact the regional DOC office or the Ministry of Health. **Variation: Clause 7:** Lost, spilt, or unintended application of substance If this substance is applied other than in the intended application area, or is lost or spilt, the person who is in possession of the substance at the time that it was misapplied, lost, or spilt must report the nature and quantity of the substance within 24 hours of the substance being misapplied, lost, or spilt to— (a) if a permission was granted in accordance with clause 3 (above) to apply or otherwise use the substance, the person who granted the permission; and (b) the officer in charge of the nearest police station to which the person has access; and (c) the nearest Medical Officer of Health or the Medical Officer of Health in whose region the substance was misapplied, lost, or spilt; and (d) each owner or occupier of land on which the substance may have been misapplied, lost, or spilt; and (e) the person on whose behalf the substance is being applied.
77A - Environmental Exposure Limits (EEL)	Environmental Exposure Limits (EEL) An EEL freshwater has been set for cyanide. The EEL value is 18 µg/L. An EEL marine has been set for cyanide. The EEL value is 14 µg/L.
77A - Tolerable Exposure Limits (TEL)	Tolerable Exposure Limits (TEL) A TELwater has been set for cyanide. The TEL value is 0.08 mg/L.A TEL air has been set for cyanide. The TEL value is 0.009 mg/m3.

ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	V009622

Section 16 Other Information

Glossary

Cat	Category
EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority

HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2023 14th edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact the New Zealand distributor, if further information is required.

Issue Date: 21 January 2025 Review Date: 21 January 2030