SAFETY DATA SHEET

METAREX® INOV Snail and Slug Bait

Date of Issue: 8 December 2023

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical name of active ingredient(s): **Metaldehyde**

Recommended use: **Molluscicide - bait used for the control of snails and slugs.**

Supplier:

UPL New Zealand Limited
PO Box 51584, Pakuranga
Auckland
Phone 0800 100 325
www.upl-ltd.com/nz

Emergency telephone number: **0800 CHEM CALL (0800 243 622) 24 Hours**

2. HAZARDS IDENTIFICATION

Signal Word: Warning

GHS Classification

GHS Classification and Category	Hazard Code	Hazard Statement
Reproductive toxicity Cat. 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 terrestrial vertebrates		Hazardous to terrestrial vertebrates.

Required identification Details:

Prevention:

P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust, fumes, gas, mist, vapours or spray.
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.

Response:

P314	Get medical advice/attention if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of according to Local Regulations or Authorities. Dispose of packaging carefully. Shake container empty into application equipment. DO NOT dispose of unused product on site. Break, crush, puncture or shred and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit, specifically marked and set up for this purpose, clear of waterways desirable vegetation and tree roots. Empty containers and products should not be burnt.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Metaldehyde	108-62-3	4
Other ingredient not contributing to overall hazard	NA	To balance

4. FIRST-AID MEASURES

Description of necessary first aid measures:

General information: Clinical symptoms: Nervous and digestive disorder.

First-aid measures

Inhalation: The mixture is a non-dusty pellet. Inhalation is not applicable as a route of exposure in normal condition of use.

Ingestion: Do not induce vomiting. Rinse mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place the victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.

Skin contact: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.

Eye contact: 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.

Notes to a physician: No known antidote, apply a symptomatic treatment (pumping out of the stomach, administration of active charcoal and laxative).

5. FIRE-FIGHTING MEASURES

HAZCHEM Code: 2X

Type of Hazard: Non-Flammable solid

Extinguishing media: Use foam, dry chemical, carbon dioxide, or water spray when fighting

	fires involving this material. Foam or dry chemical fire extinguishing system is preferred to prevent excessive water run-off.
Hazardous thermal (de)composition products:	May product toxic gases of Carbon monoxide (CO), Carbon dioxide (CO_2) in a fire.
Protection of fire-fighters:	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Operators must observe precautions in handling, storage and exposure controls sections of this safety data sheet. If there is a significant chance that vapours, mists or dust are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product.
Environmental precautions:	Recover the product as much as possible, place it in a receptacle (drum), label and have it destroyed by an approved destroyer. Prevent spillage from entering drains and waterways.
Methods for cleaning up:	**Small Spill:** Wear protective clothing to prevent skin and eye contact. Collect and seal in properly labelled containers for disposal or re-use. **Large Spill**: Wear protective clothing to prevent skin and eye contact. Cover with damp absorbent (inert material, sand or soil.) Sweep or vacuum up but avoid generating dust. Collect and seal in properly labelled containers, bags or drums for disposal or re-use. If contamination of crops or waterways has occurred advise emergency services or local authorities. Dispose of packaging carefully. Shake bag empty into application equipment. DO NOT dispose of unused product on site. Puncture or shred and bury empty bags in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways desirable vegetation and tree roots. Empty containers and products should not be burnt. Observe government regulations. For any concern related to disposal consult section 13.

7. HANDLING AND STORAGE

Handling:	**Handling Precautions:** Harmful if swallowed. Harmful if inhaled. Do not inhale dust. Wash hands after use. When opening the container, preparing product for use (loading) and if applying by hand, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length rubber gloves and disposable dust mask. After each day's use, wash gloves and contaminated clothing. **Other Precautions:** Do not use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.
Conditions for safe storage, including any incompatibilities:	Store in the closed original container in a dry, cool, well-ventilated area, out of direct sunlight. Store in a locked room or place out of the reach of children, animals, food, feedstuff, seed and fertilisers. Store away from incompatible materials listed in Section 10.
Specific end use:	This product is molluscicide bait (control of snails and slugs).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Guidelines

Exposure Standards:

Substance	TWA	STEL
	ppm mg/m^3	ppm mg/m^3

None of the components have assigned exposure limits.

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 APRIL 2022 13TH EDITION.

Engineering measures

Exposure control measures: Not normally required when used as directed. No exposure limits or biological limits have been established. Use in well-ventilated areas. Keep containers closed when not in use.

Personal Protective Equipment

Detail specifications for equipment:

Respiratory system: Avoid inhalation of dust. Where a risk assessment has identified an inhalation hazard, wear a suitable respirator or organic vapours and aldehydes.

Skin and body: Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing).

Hands: Wear elbow-length rubber gloves.

Eyes: Wear eye protection.

General hygiene: Remove protective clothing and wash hands and face thoroughly before meals and after work. Do not eat, drink or smoke while using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour, etc.):	Green pellets.
Odour:	No distinguishing odour.
Odour threshold:	Not available.
pH:	5.8
Melting point/freezing point:	246°C (active substance).
Initial boiling point and boiling range:	Not available.
Flash point:	Not applicable.
Flammability (solid, gas):	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	Not applicable.
Solubility (ies):	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Kinematic viscosity:	Not available.
Particle characteristics:	Not available.

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal conditions.

Conditions to avoid:	Heat and moisture.
Materials to avoid:	None known
Hazardous Decomposition Products:	May product toxic gases of Carbon monoxide (CO), Carbon dioxide (CO_2) in a fire.
Hazardous polymerization:	
Hazardous Reactions:	The mixture is not known to undergo hazardous reactions under normal handling conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity – Oral:	Not classified.
Acute toxicity - Dermal:	Not classified.
Acute toxicity – Inhalation:	Not classified.
Skin irritation:	Not classified.
Eye irritation:	Not classified.
Respiratory or skin sensitization:	Not classified.
Germ cell mutagenicity:	Not classified.
Carcinogenicity:	Not classified.
Reproductive toxicity:	Suspected of damaging fertility or the unborn child.
Aspiration:	Not classified.
STOT-Single Exposure	Not classified.
STOT-Repeated Exposure	May cause damage to organs through prolonged or repeated exposure.

Active Ingredient information: Metaldehyde (CAS 108-62-3):

Acute toxicity
LD50 oral: Rat - 175 mg/kg
LD50-dermal: Rat - 2275 mg/kg
LC50 inhalation: 0.203mg/L
Eye irritation: Rabbit: Not an eye irritant
Skin irritation: Rabbit: Not a skin irritant
Sensitization: Mouse: Not a sensitizer

Chronic toxicity:
NOEL (21 days) – Rabbit: 1000 mg/kg
NOEL (90 days) – Rat: 21 mg/kg
NOEL (104 weeks) – Rat: 2 mg/kg

Carcinogen data:
Not carcinogenic.

Mutagenic data:
No evidence of mutagenic activity.

Reproductive toxicity:

Effect on fertility and development:
Metaldehyde, 99% pure, was administered in feed to 6 dogs/sex/group at doses of 0, 20, 60, or 90 mg/kg/day for 26 weeks. Possible ADVERSE EFFECT. NOEL = 20 mg/kg/day (testicular and prostate atrophy, spermatogenic arrest, and decreased erythroid parameters at 60 and 90 mg/kg/day; hepatotoxicity (hydropic swelling of hepatocytes and pericholangitis) in both sexes at 90 mg/kg/day.) Initially reviewed as unacceptable and not upgradeable as a chronic study (Davis, 12/1/86), the status was changed to unacceptable but upgradeable with information on histopathology, and diet preparation and analysis (Martz, 2/23/88).

Specific Target Organ Toxicity:
Oral Route
Primary Organ Effected: Hepatotoxicity (liver)
Secondary Organ(s) Effected: Neurotoxicity (nervous system)

Renal toxicity (Kidney)

Inhalation Route
Primary Organ Effected: Neurotoxicity (nervous system)

12. ECOLOGICAL INFORMATION

Ecology – general:	Hazardous to terrestrial vertebrates.
Hazardous to the aquatic environment, short-term (acute):	Not classified.
Classification procedure - Hazardous to the aquatic environment, short-term (acute):	Calculation method
Hazardous to the aquatic environment, long-term (chronic):	Not classified.
Classification procedure - Hazardous to the aquatic environment, long-term (chronic):	Calculation method
Persistence and degradability:	No additional information available
Bioaccumulative potential:	Not available.
Partition coefficient n-octanol/water (Log Kow):	Not available.
Mobility in soil:	Not available.
Other adverse effects:	None
Ecotoxicity of Active ingredient: Metaldehyde (CAS 108-62-3)	
Aquatic - Acute Toxicity	LC_{50} – Fish (96 h.): 75 mg/l (*Oncorhynchus mykiss*); > 100 mg/L (*Cyprinus carpio*). EC_{50} – Algae (72 h.): >200 mg/L (*Desmodesmus subspicatus*) EC_{50} – Daphnia (48 h.): > 90 mg/L (*Daphnia magna*)
Terrestrial Species:	Acute toxicity NOEC – Earthworms (14 days): > 1000 mg/kg (*Eisenia foetida*).
Invertebrates:	Acute oral LD_{50}: > 87.5 µg a.i./bee Acute contact LD_{50}: >113 µg a.i./bee
Birds: Acute oral LD_{50}	LD_{50} – 170 mg/kg, bw – Japanese quail (*Coturnix Coturnix*) LD_{50} – 196 mg/kg, bw – Mallard ducks (*Anas platyrhynchos*) LD_{50} – 262 mg/kg, bw – Pheasants (*Phasanius colchicus*) Dietary LD_{50} (8 day) 3460 ppm

13. DISPOSAL CONSIDERATIONS

Methods of disposal:	See Section 6 above. Dispose of packaging carefully. Shake container empty into application equipment. DO NOT dispose of unused product on site. Break, crush, puncture or shred and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways desirable vegetation and tree roots. Empty containers and products should not be burnt.
Precautions or methods to avoid:	Avoid release to the environment.

14. TRANSPORT INFORMATION - International transport regulations

This product is not classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Road, Rail, Sea and Air Transport

UN number:	Not classified
Hazchem	NA
Class or Division:	NA
Subsidiary Class:	
Packing Group:	NA
Marine Pollutant:	NA
Proper shipping name:	NA

Other Information:

15. REGULATORY INFORMATION

This substance is classified hazardous according to the EPA

ACVM Registered Number: **P009605** (See www.foodsafety.govt.nz for registration Conditions)**.**
HSNO Approval Code: **HSR101302**

Signage Trigger Quantities (Schedule 3)	Not required
Emergency Response Plan (Schedule 5)	Not required
Secondary Containment (Schedule 5)	Not required
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	
Restrictions of use (HSNO Additional Controls)	Refer to EPA website for full control details www.epa.govt.co.nz
77A	This substance must be blue or green in colour.
77A	This substance shall contain a repellent (bittering agent).
HPC Notice Part 4 Subpart B	The maximum application rate of this substance is 0.21 kg metaldehyde/ha per application, with a maximum application frequency of 10 applications per calendar year and a minimum interval between applications of 3 days.

16. OTHER INFORMATION

Additional information:

Original Issue Date: 15th April 2019
Revision Date: 8 December 2023
Replaces: ES630