



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Invert EW Insecticide/Miticide**
Chemical name of active Ing: Abamectin C₄₈H₇₂O₁₄; C₄₇H₇₀O₁₄
Product Use: Insecticide/Miticide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson
Telephone: +64 3 543 8275
Email: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 18 September 2023

Section 2. Hazards Identification

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

HSNO Approval No: HSR100729

Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement
Acute oral toxicity Category 4	H302	Harmful if swallowed.
Skin irritation Category 2	H315	Causes skin irritation.
Eye irritation Category 2	H319	Causes serious eye irritation.
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child.
Reproductive toxicity - additional effects on or via lactation	H362	May cause harm to breast-fed children.
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Category 1	H410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	H423	Harmful to the soil environment.
Hazardous to terrestrial vertebrates	H433	Harmful to terrestrial vertebrates.
Hazardous to terrestrial invertebrates	H441	Very toxic to terrestrial invertebrates.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, mist, vapours or spray.
P263	Avoid contact during pregnancy and while nursing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid unintended release into the environment.
P280	Wear protective clothing and use equipment as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P301 + P312 + P330	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P313 + P332 + P352	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.
P305 + P313 + P337 + P338 + P351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
P308 + P313	IF otherwise exposed or concerned: Get medical advice/ attention.
P314	Get medical advice/attention if you feel unwell.
P362 + P364	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Abamectin	18	71751-41-2
Acetophenone	<20	98-86-2
1,2-Benisothiazol-3(2H)-one	<0.5	2634-33-5
Non-hazardous	To bal	

Section 4. First Aid Measures

Routes of Exposure:

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

If on Skin Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation occurs: get medical advice/attention.

If Swallowed	Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place 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.
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. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Inhaled:	Not applicable.
Ingestion:	Harmful if swallowed.
Skin:	Causes skin irritation.
Eyes:	Causes serious eye irritation.
Chronic:	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. May cause damage to organs through repeated or prolonged contact.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from combustion products	Carbon dioxide, carbon monoxide, smoke.
Suitable Extinguishing media	Water spray, carbon dioxide, foam, sand.
Precautions for firefighters and special protective clothing	Use self-contained breathing apparatus when in close proximity to fire. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Dike to prevent contaminated runoff into drains or the environment or coming into contact with class 1, 2, 3.2, 4 & 5 substances.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Collect and contain as much free liquid as possible. Absorb remainder in sand or other inert material. Place into a clean container and cover the container loosely for later disposal. Dispose of according to Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, mist, vapours or spray.
- Wash hands thoroughly after handling.

- Do not eat, drink or smoke when using this product.
- Avoid unintended release into the environment.
- Wear protective clothing and use protective equipment as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in original container, tightly closed and in a locked, dry, cool area away from sources of ignition and foodstuffs, avoiding direct sunlight and temperatures above 30°C.
- Store in accordance with NZS 8409 Management of Agrichemicals.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

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

No ingredients have 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 NOV 2017 9TH EDITION.

Engineering Controls

Provide local exhaust or general room ventilation.

Personal Protection Equipment



Eyes	Safety goggles or face shield.
Hands and Skin	Wear nitrile rubber gloves and suitable protective clothing with chemical resistant boots.
Respiratory	Suitable respiratory equipment.
General	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Wash clothing before re-use.

Section 9 Physical and Chemical Properties

Appearance	White – non transparent liquid
Odour	Organic
Odour Threshold	Not applicable
pH	6 - 8 (1% solution)
Boiling Point	Not applicable
Melting Point	Not applicable
Flash Point	>95°C
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Abamectin: <3.7 x 10 ⁽⁻⁶⁾ mPa (25°C)
Vapour Density (air=1)	Not applicable

Product Name: Invert EW Insecticide/Miticide
Date of SDS: 18 September 2023

Issued by: Adama New Zealand Ltd
Tel: 64 3 543 8275

www.adama.com

Relative Density	1.00-1.06
Specific Gravity	Not applicable
Solubilities	Emulsifiable
Auto ignition temp	430°C
Viscosity:	20°C: 864 – 187.1 mPa.s {shear rate 5-100s (-1)} 40°C: 687.4-123.5 mPa.s {shear rate 5-100s (-1)}
Surface tension:	28.0 mN/m (25°C)
Log P octanol water @ 20°C:	4.4 Abamectin

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Direct sunlight, heat, open flame.
Incompatible Materials	None known.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, smoke.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Abamectin = 8.7 – 12.8mg/kg (Rat)
Dermal	Not triggered. LD50 (rat) > 2,000 mg/kg
Inhalation	Not triggered. LC50 (rat) > 5.5 mg/L (4 hours)
Eye	Causes serious eye irritation.
Skin	Causes skin irritation.

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.

Section 12. Ecotoxicological Information

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Common name: Abamectin

96 H-LC ₅₀ – Rainbow trout [µg/l]:	154
48 H-LC ₅₀ – Daphnia magna [µg/l]:	38
72 H – EC ₅₀ Algae [mg/l]:	41.7
LD ₅₀ – Birds [mg/kg]:	Abamectin: < = 77
Bees LD ₅₀ [µ/Bee]:	Abamectin: Toxic to bees
Persistence – degradability:	Soil: Not readily biodegradable
Mobility:	Low mobility; KOC = 1495-7893 mg/l

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Triple rinse empty container and add rinsate to the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot. Alternatively crush and bury in a suitable landfill. Dispose of product only by using according to the label, or at an approved landfill.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not allow product to enter waterways.

Section 14 Transport Information

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



Road and Rail Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin)

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin)
Marine Pollutant	Yes

Special Provisions:

If the product's individual container is below 5L, it can be transported as a non-DG as long as 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.

National transport regulations: Do not carry this product on a passenger service vehicle.

Section 15 Regulatory Information

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

HSNO Approval Code: HSR100729

HSNO Classification: Acute oral toxicity Category 4, Skin irritation Category 2, Eye irritation Category 2, Reproductive toxicity Category 2, Reproductive toxicity - additional effects on or via lactation, Specific target organ toxicity (repeated exposure) Category 2, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to terrestrial invertebrates.

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100 L (9.1A)
Emergency Response Plan (Schedule 5)	100 L (9.1A)
Secondary Containment (Schedule 5)	100 L (9.1A)
Tracking (Schedule 26)	Not required
Hazardous Property Controls Notice 2017	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Substances that are hazardous to the environment: Site and storage controls
HPC Notice Part 4 Subpart B	Use of substances that are hazardous to the environment
HPC Notice Part 4 Clause 47	Equipment for environmentally hazardous substances must be appropriate
HPC Notice Part 4 Clause 48	Record of application of agrichemicals
HPC Notice Part 4 Clause 52	Agrichemicals that are hazardous to the aquatic environment must not be applied to water
HPC Notice Part 4 Subpart C	Qualifications required for the application of substances that are hazardous to the environment
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	P8661

Section 16 Other Information**Glossary**

ACVM	Agricultural Compounds and Veterinary Medicines Act 1997.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms Act 1996.
HSW	Health and Safety at Work Act 2015.
HSW (HS) Regulations	Health and Safety at Work (Hazardous Substances) Regulations 2017.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	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 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

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