



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **Invert EW**  
Chemical name of active Ing: Abamectin C<sub>48</sub>H<sub>72</sub>O<sub>14</sub>; C<sub>47</sub>H<sub>70</sub>O<sub>14</sub>  
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  
Fax Number: +64 3 543 8274

**Emergency Telephone: 0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 4 October 2018

### Section 2. Hazards Identification

**This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017***

**EPA Approval No:** HSR100729

#### Pictograms



Toxic/Irritant    Chronic    Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.3A	H315	Causes skin irritation.	Skin Irrit. 2
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.8B	H361	Suspected of damaging fertility or the unborn child.	Repr. 2
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1A	H400	Very toxic to aquatic life.	Aquatic Acute 1
9.2C	H423	Harmful to the soil environment.	-
9.3C	H433	Harmful to terrestrial vertebrates.	-
9.4A	H441	Very toxic to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
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 fumes, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

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.
P362	Take off contaminated clothing and wash before re-use.
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.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

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. <b>DO NOT induce vomiting.</b> 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:

<b>Inhaled:</b>	Not applicable.
<b>Ingestion:</b>	Harmful if swallowed.
<b>Skin:</b>	Causes skin irritation.
<b>Eyes:</b>	Causes serious eye irritation.
<b>Chronic:</b>	Suspected of damaging fertility or the unborn child. May cause damage to organs through repeated or prolonged contact.

## Section 5. Fire Fighting Measures

<b>Hazard Type</b>	Non Flammable.
<b>Hazards from combustion products</b>	Carbon dioxide, carbon monoxide, smoke.
<b>Suitable Extinguishing media</b>	Water spray, carbon dioxide, foam, sand.
<b>Precautions for firefighters and special protective clothing</b>	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.
<b>HAZCHEM CODE</b>	<b>3Z</b>

## 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.
- Obtain special instructions 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 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.
- 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 <sup>3</sup>	ppm	mg/m <sup>3</sup>

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 9<sup>TH</sup> EDITION.

#### Engineering Controls

Provide local exhaust or general room ventilation.

#### Personal Protection Equipment



<b>Eyes</b>	Safety goggles or face shield.
<b>Hands and Skin</b>	Wear nitrile rubber gloves and suitable protective clothing with chemical resistant boots.
<b>Respiratory</b>	Suitable respiratory equipment.
<b>General</b>	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

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

<b>Relative Density</b>	1.00-1.06
<b>Specific Gravity</b>	Not applicable
<b>Solubilities</b>	Emulsifiable
<b>Auto ignition temp</b>	430°C
<b>Viscosity:</b>	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)}
<b>Surface tension:</b>	28.0 mN/m (25°C)
<b>Log P octanol water @ 20°C:</b>	4.4 Abamectin

### Section 10. Stability and Reactivity

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

### Section 11 Toxicological Information

#### Acute Effects:

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

#### Chronic Effects:

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

### Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.  
9.2C = Harmful to the soil environment.  
9.3C = Harmful to terrestrial vertebrates.  
9.4A = Very toxic to terrestrial invertebrates.

<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available

#### **Common name: Abamectin**

96 H-LC<sub>50</sub> – Rainbow trout [µg/l]: 154  
48 H-LC<sub>50</sub> – Daphnia magna [µg/l]: 38  
72 H – EC<sub>50</sub> Algae [mg/l]: 41.7  
LD<sub>50</sub> – Birds [mg/kg]: Abamectin: < = 77  
Bees LD<sub>50</sub> [µ/Bee]: Abamectin: Toxic to bees

Persistence – degradability:  
Mobility:

Soil: Not readily biodegradable  
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 5433:2012**



#### **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 (Classification) Notice 2017***

EPA Approval Code: HSR100729

Product Name: Invert EW  
Date of SDS: 4 October 2018

Issued by: Technical Compliance Consultants (NZ) Ltd  
Tel: 64 9 475 5240 www.techcomp.co.nz

<b>HSW (HS) Regulations 2017</b>		<b>Trigger Quantity</b>
Certified Handlers		Not required
Location Certificate		Not required
Signage Trigger Quantities (Schedule 3)		100L(9.1A)
Emergency Response Plan (Schedule 5)		100L(9.1A)
Secondary Containment (Schedule 5)		100L(9.1A)
Tracking (Schedule 26)		Not required
Record Keeping		Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details.
<b>HSNO Additional Controls (Restrictions of use)</b>		
77A		a). This substance must not be applied onto or into water.
<b>Hazardous Property Controls Notice 2017</b>		
HPC Notice Part 4 Clause 47		Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48		Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3		Hazardous substances in a place other than a workplace.
HPC Notice Part 4 Subpart A		Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C		Qualifications required for application of class 9 pesticides
For all further controls:		Refer to EPA website <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for controls document - HSR100729
<b>ACVM Act and Regulations</b>		
ACVM Approval No		P8661
See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions.		

<b>Section 16</b>	<b>Other Information</b>
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**Glossary**

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
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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Please contact the New Zealand distributor, if further information is required.

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