SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product:	**Verdex 18 EC**
Product Use:	Insecticide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Adria Crop Protection Solutions**
Address:	407 State Highway 16 Kumeu 0841, Auckland
Telephone:	+64 9 412 9817
Website:	www.adria.nz
Emergency No:	**0800 734 607 (24hr)** **0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	26 April 2023 v2

Section 2. Hazards Identification

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

EPA Approval No: HSR000734

Pictograms

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Flammable Liquids Cat. 4	H227	Combustible liquid.
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Acute inhalation toxicity Cat. 4	H332	Harmful if inhaled.
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Reproductive toxicity Cat. 1	H360	May damage fertility or the unborn child.
Effects on or via lactation	H362	May cause harm to breast-fed children.
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Cat. 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Cat. 1	H410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	H423	Hazardous to soil organisms

Hazardous to terrestrial vertebrates	H432	Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates	H441	Hazardous 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.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe fumes, mist, vapours or spray.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
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.
P312	Call a POISON CENTER or doctor/physician 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.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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.
P370 + P378	In case of fire: Use dry chemical, foam, water fog or water spray for extinction.

Storage Code	Storage Statement
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal Code	Disposal Statement
P501	Refer to Section 13.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/v)	CAS NUMBER.
Abamectin	1.5 - 2	71751-41-2
Non-hazardous ingredients	To bal	-

Section 4. First Aid Measures

Routes of Exposure:

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.
If on Skin	Take off contaminated clothing and wash before re-use. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. 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. Call a POISON CENTRE or doctor/physician if you feel unwell.
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:

Ingestion:	Harmful if swallowed.
Inhalation:	Harmful if inhaled.
Skin:	Causes skin irritation.
Eye:	Causes serious eye irritation.
Chronic:	May cause damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child. May cause harm to breast-fed children.
Treatment:	Treat according to symptoms (decontamination, vital functions). No known specific antidote.

Section 5. Fire Fighting Measures

Hazard Type	This product is combustible.
Hazards from products	Thermal decomposition generates: Carbon dioxide. Carbon monoxide. Nitrogen oxides.
Suitable Extinguishing media	Dry chemical. Foam. Water fog. Water spray. Do not use a heavy water stream.
Recommended protective clothing & Precautions for firefighters	Wear SCBA and chemical-protective clothing. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

Personal precautions:
Use protective clothing as per Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Spill and Disposal procedures:
Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely, according to Local Council regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Do not breathe fumes, mist, vapours or spray.
- Avoid contact during pregnancy/while nursing.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Keep away from children.
- Store locked up.
- Store in a cool, dry area, out of direct sunlight.
- Protect against freezing.
- Store away from incompatible materials listed in Section 10.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³

No ingredient has 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 Controls / Industrial Hygiene

Provide local exhaust or general room ventilation to minimize dust and/or vapour concentrations.

Personal Protection Equipment

Eyes	Safety goggles with side-shields.
Skin	Suitable chemical resistant safety gloves (e.g. nitrile rubber (.4mm)). Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.
Respiratory	Respirator (organic vapour and particulate matter) should be used if airborne particles are generated when handling this material.
General	Keep away from heat, sparks, flames, and hot surfaces. No smoking. Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use. Wash hands and face before breaks and after work. **Females nursing or of childbearing age should not come into contact with the product. Use personal protection if required.**

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Yellow
Odour	Alcohol
Odour Threshold	Not available
pH	3.8
Melting Point/Boiling Point	Not available
Freezing Point	Not available
Flash Point	>61°C
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Density	0.981 at 20°C
Water Solubility	Not available
Octanol/water partition coefficient:	Not available
Auto Ignition Temperature	Not available
Decomposition Temperature	Not available
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	None known.
Conditions to Avoid	None known.
Incompatible Materials	Strong acids. Strong bases. Finely divided metals.
Hazardous Decomposition Products	Thermal decomposition generates: Carbon dioxide. Carbon monoxide.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. LD50 (Rat): 310 mg/kg
Dermal	Not applicable.
Inhalation	Harmful if inhaled.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Many damage fertility or the unborn child. May cause harm to breast-fed children.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Individual component information:

Acute Toxicity:

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
Abamectin (71751-41-2)	8.7 – 1.28 mg/kg (rat)	-	-

Section 12. Ecotoxicological Information

Ecological effects information	Very toxic to aquatic life with long lasting effects. Hazardous to soil organisms. Hazardous to terrestrial vertebrates. Hazardous to terrestrial invertebrates.
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available
Acute fish toxicity:	Abamectin: Acute: Rainbow Trout (96hr) = LC50 = 0.0036mg/l Chronic: Rainbow Trout = LOEC = 0.0000093mg/l
Toxicity for crustacean:	Abamectin: Acute: Daphnia Magna (48hr) = EC50 = 0.00034mg/l Chronic: Daphnia Magna (21 days) = NOEC = 0.00003mg/l
Toxicity to algae:	Abamectin:
Very ecotoxic in the soil environment	Abamectin is highly toxic to dung beetle larvae, with adult emergence reduced by 55 to 65% from dung collected two- and four-weeks post-treatment respectively. Abamectin is not toxic to mature egg-laying adults at concentration likely to be found in dung. However, there is increased mortality and impaired development of larvae with sub-lethal effects on the morphology of some species in dung voided within 2-3 weeks of treatment, and increased mortality and delayed reproductive development in newly emerged adults of some species feeding on dung voided within 1 to 2 weeks of treatment. Dung of treated animals is highly toxic to dipteran larvae, inhibiting development for periods of 2 to 8 weeks post-treatment. The duration of these toxic effects on dung insects is consistent with the profile of excretion of the substance in faeces. The substance is also toxic to earthworms (14 day LC50 33 mg/kg soil). **Soil DT 50 > 30 days: yes** Avernectin B1a was degraded in soil with half-lives of 20-40 days at lab temperatures. Up to 13 degradation products were detected. Two were identified as 8 alpha hydoxy and corresponding ring opened aldehyde derivatives. On soil exposed to sunlight avermectin B1a was degraded in a half-life of 21 hours.
Very ecotoxic to terrestrial invertebrates	Species: Bee = LD50 = 0.002ug/bee
Precautions:	Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:
Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.

Empty container precautions:
Avoid contamination of any water supply with chemical or empty container.
Precautions or methods to avoid: Avoid release to the environment.

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	2902
Class - Primary	6.1
Packing Group	III
Proper Shipping Name	**PESTICIDE, LIQUID, TOXIC, N.O.S. (ABAMECTIN)**
Marine Pollutant	Yes
Special Provisions-Limited Quantities	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.

Section 15 Regulatory Information

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

EPA Approval Code: HSR000734

HSW (HS) Regulations 2017	**Trigger Quantity**
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100L
Fire Extinguishers (Schedule 4)	500L – 2 extinguishers
Emergency Response Plan (Schedule 5)	100L
Secondary Containment (Schedule 5)	100L
Tracking (Schedule 26)	Not required
HSNO Additional Controls (Restrictions of use)	**Refer to EPA www.epa.govt.nz for controls document - HSR000734**
77A	This substance must not be applied onto or into water.
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P5747

Section 16 Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label. The data contained in this safety data sheet is based on our current knowledge and describes the product only with regard to safety requirements. The data does not describe the products properties. Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.

HSW	Health and Safety at Work.
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 April 2022 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

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Please contact Adria, if further information is required.

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