SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product:	**ABBA**
Product Use:	Insecticide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Agrisource 2000 Ltd**
Address:	45 Kitchener Road Pukekohe, Auckland
Telephone:	+64 9 237 0422
Emergency No:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	27 July 2021

Section 2. Hazards Identification

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

EPA Approval No: HSR101144

Pictograms

Signal Word: **DANGER**

GHS Classification and Category	HSNO Classification	Hazard Code	Hazard Statement
Flammable Liquids Cat. 4	3.1D	H227	Combustible liquid.
Acute oral toxicity Cat. 4	6.1D (oral)	H302	Harmful if swallowed.
Aspiration hazard Cat. 1	6.1E (aspiration hazard)	H304	May be fatal if swallowed and enters airways.
Skin irritation Cat. 2	6.3A	H315	Causes skin irritation.
Eye irritation Cat. 2	6.4A	H319	Causes serious eye irritation.
Reproductive toxicity Cat. 1	6.8A	H360	May damage fertility or the unborn child.
Effects on or via lactation	6.8C	H362	May cause harm to breast-fed children.
Specific target organ toxicity – repeated exposure Cat. 2	6.9B (Repeated exposure)	H373	May cause damage to organs through prolonged or repeated exposure.

Hazardous to the aquatic environment acute Cat. 1	9.1A	H410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	9.2C	H423	Hazardous to soil organisms.
Hazardous to terrestrial vertebrates	9.3C	H433	Hazardous to terrestrial vertebrates.
Hazardous to terrestrial invertebrates	9.4A	H441	Hazardous 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.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe dust, fumes, gas, 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.
P331	Do NOT induce vomiting.
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P370 + P378	In case of fire: Use water spray, foam, dry chemical, carbon dioxide or sand 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	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt	CAS NUMBER.
Abamectin	1.8%	71751-41-2
Hydrocarbon Solvent	30 - 60%	64742-95-6
N-methylpyrrolidone	30 - 40%	872-50-4
BHT	1-5%	138-37-0
Other ingredients	Balance	

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/attention.
If on Skin	In case of skin contact, immediately flush skin with plenty of water and soap. Remove contaminated clothing. Cold water may be used. Wash clothing before reuse. Get medical attention if irritation persists.
If Swallowed	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Immediately call a POISON CENTER or doctor/physician.
If Inhaled	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. May cause damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	This product is combustible.
Hazards from combustion products	Carbon monoxide, carbon dioxide, hydrogen chloride, sulfur oxide, nitrogen oxides, phosphorus oxides, chlorides sulphide.
Suitable Extinguishing media	Water spray, foam, dry chemical, Carbon dioxide.
Precautions for firefighters and special protective clothing	Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or gases.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

Avoid contact with skin and eyes. Do not inhale spray. Wear Full Personal Protective Equipment **(PPE)**. Chemical resistant coveralls, chemical resistant gloves, chemical resistant footwear plus socks, chemical resistant headgear and chemical resistant eyewear. Respiratory protection equipment **(RPE)** appropriate to protect against respiratory exposure to this substance in mist or vapour forms. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing after work.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

In the case of spillage, contain spilled material. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum or shovel waste into a drum. To decontaminate spill area, tools and equipment, wash with water. Dispose of drummed wastes in accordance with the requirements of Local Authorities. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local Authorities detailed in 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.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Do not breathe aerosols or vapours.
- When mixing or applying, avoid breathing dust and contact with skin and eyes.
- Wash hands and face before meals and after work.
- Wash protective clothing after work.
- 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:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in original container tightly closed and in a locked, dry, cool, well ventilated area, away from feed, seeds and foodstuffs.
- Store in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
1-Methyl-2-pyrrolidone [872-50-4]	25	103	75	309

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 2020 12TH EDITION.

Engineering Controls

Ensure ventilation is adequate, as product is used outdoors generally natural ventilation is adequate.

Personal Protection Equipment

Eyes	Wear chemical goggles or face shield.
Hands	Elbow-length and PVC gloves

Skin	When opening the container, preparing spray and using prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
Respiratory	Where insufficient ventilation, use suitable respiratory protection.
General	Avoid inhaling aerosols and vapours. Avoid contact with eyes and skin. Store work clothes and street clothes separately. Wash hand before breaks and at the end of work. Change contaminated protective clothing. Keep away from food, drinks and tobacco.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Clear yellow
Odour	Aromatic solvent12
Odour Threshold	Not available
pH	4.5 – 7.0 (CIPAC MT 75.1)
Boiling Point	Decomposes >90°C
Melting Point	Not available
Freezing Point	Not available
Flash Point	60-90°C.
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity/ Density	Approx. 0.95 (20°C) (refer to specific batch COA)
Solubility	Not available
Octanol/water partition coefficient	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Decomposes >90°C
Kinematic Viscosity	Not available
Octanol/Water Particle Coefficient	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal ambient and anticipated storage conditions (0° - 30° C.)
Possibility of hazardous reactions	At high temperatures, oxides of carbon may be formed which can be toxic, flammable or even corrosive.
Conditions to Avoid	Extreme heat.
Incompatible Materials	Strong acids, alkalis and other oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition generates: carbon monoxide, carbon dioxide, hydrogen chloride, sulfur oxide, nitrogen oxides, phosphorus oxides, chlorides, sulfides.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. LD_{50} 10 mg/kg (rat)
Dermal	Toxic if in contact with skin. LD_{50} >2000 mg/kg (rat)
Inhalation	Harmful if inhaled. LC50 >5000 mg/kg (rat)
Eye	Causes eye irritation.

Skin	Cause skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	May cause reproductive damage from repeated oral exposure at high doses. May cause harm to breastfed children.
Germ Cell Mutagenicity	Not applicable.
Aspiration	May be fatal if swallowed and enters airways.
STOT/SE	Not applicable.
STOT/RE	May cause organ damage from repeated oral exposure at high doses.

Section 12. Ecotoxicological Information

Very toxic to aquatic life.
Hazardous to soil organisms
Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates

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

Toxicity to fish: LC_{50} = 3.2 mg/l ,96 hr(Rainbow trout)
LC_{50} = 9.6mg/l, 96hr (bluefill sunfish)

Toxicity to daphnia LC_{50} (48h) 0.34mg/l daphnia magna

Toxcity to algae: EC_{50} >100mg/l

Toxcity to birds: LD_{50} 84.6mg/kg Mallard duck
LD_{50} >2000mg/kg Bobwhite quail

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:
Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, follow the recommendations in NZS 8409.
Container disposal: Triple rinse container and add rinsate to spray tank. Dispose of cleaned container at your local AGRECOVERY container collection site. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

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 5433:2012

Road, Rail, Sea and Air 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/kg, 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: HSR101144

HSW (HS) Regulations 2017	**Trigger Quantity**
Signage Trigger Quantities (Schedule 3)	100L (aquatic Acute Cat. 1)
Emergency Response Plan (Schedule 5)	100L (aquatic Acute Cat. 1)
Secondary Containment (Schedule 5)	100L (aquatic Acute Cat. 1)
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	Not required
HSNO Additional Controls (Restrictions of use)	
HSW Reg 13.23 - 13.25	Restricted Entry Interval (REI) 1) The person in charge of the application area must ensure that, from the end of application until the end of the REI, no person who is authorised to be there enters the application area. (2) The REI for this substance is 24 hours from the time of completion of the application. (3) Despite (1) a person may enter the application area within the REI provided they are wearing protective gloves. LABEL STATEMENT

	(4) A person must not supply this substance to any other person unless the substance label shows the requirements for the REI and corresponding PPE, in accordance with (1) to (3); and (5) A person who is in charge of this substance must ensure that the substance label shows the information required by (4).
77A	The substance must not be applied onto or into water.
77A - Maximum application rates	**APPLICATION PARAMETERS** (1) The person in charge of the application of this substance and any person applying this substance must ensure that the application is carried out in accordance with the following application restrictions: (a) the substance must not be applied at rates exceeding 1.5 L of formulated product/ha per application (equivalent to 27 g abamectin/ha); and (b) the substance must not be applied to the same area more than four times per calendar year; and (c) an interval of at least seven full days must be observed before the substance is reapplied to the same area.
77A - Restrictions on the method of application for a substance	**RESTRICTION ON METHOD OF APPLICATION** (1) No person may apply this substance using aerial application methods. (2) A person applying this substance must ensure that the substance spray is delivered as a coarse quality spray (or coarser).
77A - Buffer zone requirements	Refer to controls doc on EPA website.
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 pesticide.
ACVM Act and Regulations	
See www.foodsafety.govt.nz for registration Conditions	**P8448**

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 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

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 the Agrisource 2000 Ltd, if further information is required.

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