SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**ALPHA-SCUD 100 EC**
Chemical name of active	Alpha-cypermethrin (active ingredient is a pyrethroid derivative)
Product Use:	Insecticide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	ADAMA New Zealand Ltd
Address:	Level 1/93 Bolt Road Tahunanui, 7011, Nelson
Telephone:	+64 3 543 8275
Fax Number:	+64 3 543 8274
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	10 July 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000293

Pictograms

Toxic/Irritant Chronic Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1D	H227	Combustible liquid.	Flam. Liq. 4
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
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
9.3B	H432	Toxic 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.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe fumes, 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.

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.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P370 + P378	In case of fire: Use dry chemical, water spray, foam or carbon dioxide for extinction.

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

Disposal Code	Disposal Statement
P501	Refer to Section 13

Section 3. Composition / Information on Ingredients

Ingredients	Wt %	CAS NUMBER.
Alpha-cypermethrin	10	67375-30-8
Non Hazardous carbon	76	Proprietary
Other ingredients not contributing to the overall classification of the substance or non hazardous	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice/attention.

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

If Swallowed — Wash out mouth with plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER 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. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed
Symptoms:
Ingestion: Harmful if swallowed.

Skin: May be harmful if in contact with skin. Causes mild skin irritation.
Inhalation: Harmful if inhaled.
Eyes: Not applicable.
Chronic: May cause damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	Combustible Liquid
Hazardous thermal (de)composition products	Carbon dioxide, and if combustion is incomplete, carbon monoxide, smoke and water. Fire decomposition products from this product may be toxic if inhaled.
Suitable Extinguishing media	For small fire: Dry chemical, carbon dioxide, foam, water fog. For medium-Large fire: Fine spray, or water fog.
Precautions for firefighters and special protective clothing	Wear proper protective equipment. Use Self-contained breathing apparatus when in close proximity to fire. There is a slight risk of an explosion from this product if commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low lying spaces, forming potentially explosive mixture. They may also flash back considerable distances.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

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

Environmental precautions
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
Absorb in sand or other inert material. Use appropriate container to avoid environmental contamination. Major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal.

Section 7. Handling and Storage

Precautions for Handling:
- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Do not breathe fumes, 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.

Precautions for Storage:
- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store product in a cool, dry place preferably below 30◦C in original container.
- Fluoro lined HDPE containers are the suitable packing material.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA	**STEL**

Substance	ppm	mg/m3	ppm	mg/m3

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
Ensure adequate ventilation.

Personal Protection Equipment

Eyes	Safety goggles or face shield.
Hands and Skin	Wear chemical resistant gloves. Wear suitable protective clothing made from rubber, PVC. Make sure all skin area is covered.
Respiratory	During spraying wear suitable respiratory equipment.
General	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Light straw colour liquid
Odour	Charactistic (solvent)
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Not applicable
Melting Point	Not applicable
Flash Point	>60°C ≤ 90°C
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Explosive properties	Not applicable
Vapour Pressure	Not applicable
Density	Not applicable
Bulk Density	Not applicable
Relative Density	Not applicable
Solubilities in water	Emulsifiable
Auto-ignition Temperature	C1
Octanol/water partition coefficient	Not applicable
Volatiles	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	This product should be kept in a cool place, preferably below 30°C. Containers should be kept dry.
Incompatible Materials	Reacts with: strong oxidizing agents.
Hazardous Decomposition Products	Carbon dioxide, and if combustion is incomplete, carbon monoxide, smoke and water.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed.
Dermal	May be harmful if in contact with skin.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Causes mild skin irritation.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Common name: **Pyrethrin**
Acute toxicity - Oral: LD50 (rat)= >2,600mg/kg mg/kg
Skin irritation: Non irritating to Rats and Rabbits

Common name: **Pyrethrin or Pyrethroid**
Carcinogenicity: Not carcinogenic
Mutagenicity: Not mutagenic
Reproduction toxicity: Not teratogenic in animal experiments

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.
9.3B= Toxic to terrestrial vertebrates.
9.4A = Very toxic 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

Pyrethrin is extremely toxic to aquatic life, such as bluegill and lake trout while it is slightly toxic to bird species, such as mallards. Toxicity increases with higher water temperatures and acidity. Natural Pyrethrins are highly fat soluble but are easily degraded and thus do not accumulate in the body. These compounds are toxic to bees also. Because Pyrethrins-I, Pyrethrin –II, and allethrin have multiple sites in their structure that can be readily attacked by biological systems, it is unlikely that they will concentrate in the food chain.
ENVIRONMENTAL FATE:
Cypermethrin breaks down in plants to produce a variety of products. Pyrethrins have little residual effect. In stored grain, 50% or more of the applied Pyrethrins disappear during the first three or four months of storage. At least 80% of what remains is removed by handling, processing and cooking. Pyrethrins alone provide limited crop protection because they are not stable. As a result, they are often combined with small amounts of antioxidants to prolong their effectiveness. Pyrethrum compounds are broken down in water to nontoxic products. Pyrethrins are inactivated and decomposed by exposure to light and air. Pyrethrins are also rapidly decomposed by mild acids and alkalis. Stored Pyrethrin powders lose about 20% of their potency in one year. As the Pyrethrins are purified, their stability decreases; thus, pure

Pyrethrin-I and Pyrethrin-II are the least stable of the Pyrethrins. Purified Pyrethrins are very expensive and are only available for laboratory uses.

Section 13. Disposal **Considerations**

Disposal Method: Triple rinse empty container and add rinsate to spray tank. Do not burn empty containers that have not been rinsed. Burn in appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill or if appropriate, recycle or take to an Agrecovery collection site.

Precautions or methods to avoid:
Avoid contamination of any water supply with product or empty container.

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:	ENVIROMENTALLY HAZARDOUS SUBSTANCE LIQUID N.O.S. (100g/L ALPHA-CYPERMETHRIN)

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

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIROMENTALLY HAZARDOUS SUBSTANCE LIQUID N.O.S. (100g/L ALPHA-CYPERMETHRIN)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIROMENTALLY HAZARDOUS SUBSTANCE LIQUID N.O.S. (100g/L ALPHA-CYPERMETHRIN)
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.

Segregation:
Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

Section 15 Regulatory Information

EPA Approval Code: HSR000293
HSNO Classification: 3.1D, 6.1D(oral), 6.1E(dermal), 6.3B, 6.9B, 9.1A, 9.3B, 9.4A

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L(9.1A)
Emergency Response Plan	100L(9.1A)
Secondary Containment	100L(9.1A)
HSNO Additional Controls (Restrictions of use)	
77A	This substance must not be applied onto or into water.
Hazardous Property Controls Notice 2017	
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 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
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.nzfsa.govt.nz/acvm for registration conditions	No. P7380
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR000293

Section 16 Other Information

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

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

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Please contact the Adama, if further information is required.

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