



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **BALLISTIC INSECTICIDE**
Chemical name of active: Deltamethrin, C₂₂H₁₉Br₂NO₃
Product Use: Insecticide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson 7011
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: 19 July 2023

Section 2. Hazards Identification

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

HSNO Approval No: HSR002440

Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement
Flammable liquid Category 4	H227	Combustible liquid.
Acute oral toxicity Category 4	H302	Harmful if swallowed.
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 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.
P103	Read label carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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 unintended release into 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.
P301 + P312 + P330	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P314	If otherwise exposed or concerned: Get medical advice/attention if you feel unwell.
P370 + P378	In case of fire: Use dry chemical, water spray, foam or carbon dioxide for extinction.
P391	Collect spillage.

Storage Code	Storage Statement
P403	Store in a well-ventilated place.

Disposal Code	Disposal Statement
P501	Refer to Section 13

Section 3. Composition / Information on Ingredients

Ingredients	Weight %	CAS NUMBER.
Deltamethrin (ISO)	2.73	52918-63-5
Aromatic C-10 solvent	73	64742-94-5
Alkylpolyglycoether	13	Proprietary
Alkylaryl sulfonates	2	Proprietary

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Continue rinsing. If eye irritation occurs: Get medical advice/attention.
If on Skin	Wash off immediately with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Wash out mouth with plenty of water. 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 of:

Ingestion:	Harmful if swallowed.
Skin:	Not applicable.
Inhalation:	Not applicable.
Eyes:	Not applicable.
Chronic:	May cause damage to organs through prolonged or repeated exposure.

Notes to physician: There is no specific antidote. Treat symptomatically and give supportive therapy.

Section 5. Fire Fighting Measures

Hazard Type	Combustible Liquid
Hazards from combustion products	Thermal decomposition generates: carbon monoxide, carbon dioxide, nitrogen oxides, bromides, hydrogen bromide.
Suitable Extinguishing media	In case of fire use: water spray, water fog, foam.
Precautions for firefighters and special protective clothing	Wear proper protective equipment. Self-contained breathing apparatus, rubber boots and thick rubber gloves. Move containers away from fire without risk. Dike fire control water for later disposal, cool exposed containers with water spray.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel. During cleaning activity, shut off ignition sources.

Environmental precautions

Dispose of this material and its container at hazardous or special waste collection point, in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. Contaminated soil layers have to be dug out.

Methods and material for containment and cleaning up

Minor spillage: 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.

Dispose of in an authorised waste collecting point like Agrecovery or as per Local Regulations.

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, 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 as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in a well-ventilated place. Keep cool.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a substance with Aquatic Ecotoxicity Classifications, storage of Ballistic Insecticide must be carried out in such a manner as to prevent contamination of waterways. Stores containing more than 100L of Ballistic Insecticide require bunding and are subject to signage. Storage must generally be in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409).
- Suitable Packing Materials: Multi-layer high density polyethylene extrusion blow containers. Drums with polyethylene liner.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

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

None of the ingredients have workplace exposure limits listed on WES.

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.

Engineering Controls

Ventilation required.

Personal Protection Equipment



Eyes	Safety goggles or face shield. Avoid wearing contact lenses.
Hands and Skin	Chemical resistant gloves. Wear suitable protective clothing. Chemical resistant boots.
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	Yellow (clear) Liquid
Odour	Characteristic
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Not applicable
Freezing/Melting Point	Deltamethrin: 98-102°C
Flash Point	65.5°C (closed cup)
Flammability	Combustible
Upper and Lower Exposure Limits	0.08% to 6.5% Aromatic solvent (C-10)
Explosive properties	Naphta (vapours) may form explosive mixture with air.
Vapour Pressure	Not applicable
Density	Not applicable
Specific Gravity	Not applicable
Solubility in water	Deltamethrin: 2 ppb
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not applicable
Viscosity, dynamic	Not applicable
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Protect from (sun) light open flame and sources of heat. Decomposes upon heating.
Incompatible Materials	Avoid contact with: strong acids, strong bases.
Hazardous Decomposition Products	Thermal decomposition generates: carbon monoxide, carbon dioxide, nitrogen oxides, bromides, hydrogen bromide.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. LD50 (rat)= 430 mg/kg
Dermal	Not applicable. LD50 (rabbit) > 2,000 mg/kg
Inhalation	Not applicable. LC50 (rat)1.25mg/l/4h
Eye	Not applicable.
Skin	Not applicable.

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.

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: Deltamethrin

Ecological effects information

LD50 Birds [mg/kg]	> 5000 (Mallard Duck)
Birds LC50 [mg/kg]	10000 (Bobwhite quail)
LC50 - Fish [mg/l]	0.001-0.01

Section 13. Disposal Considerations

Disposal Method: Dispose of this product only by using according to the label or at an approved landfill.

Container Disposal: Triple rinse container and add rinsate to spray tank. Empty containers and product should not be burnt. Dispose of container in a suitable landfill or take to an Agrecovery collection site. Do not use container for any other purpose.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not burn product or container.

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, (DELTAMETHRIN)

Air Transport

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

Marine Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (DELTAMETHRIN)
 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 hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020****HSNO Approval Code:** HSR002440

HSNO Classification: Flammable liquid Category 4, Acute oral toxicity Category 4, 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 terrestrial vertebrates, Hazardous to terrestrial invertebrates.

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100 L
Emergency Response Plan	100 L
Secondary Containment	100 L
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	No. P7509
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR002440

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.
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 issued by Adama New Zealand Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which is held by Adama New Zealand Ltd or has been 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. While Adama New Zealand Ltd 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, Adama New Zealand 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. The information herein is given in good faith, but no warranty, express or implied is made.

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Product Name: Ballistic Insecticide
Date of SDS: 19 July 2023

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