



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **VENOM INSECTICIDE**
Chemical name of active ing: Bifenthrin
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
Telephone: +64 3 543 8275
E-mail: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 25 January 2023

Section 2. Hazards Identification

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

EPA Approval No: HSR000277

Pictograms



Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Flammable Liquid Category 4	H227	Combustible liquid.
Acute oral toxicity Category 4	H302	Harmful if swallowed.
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways.
Skin sensitisation Category 1	H317	May cause an allergic skin reaction.
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Category 1	H400	Very toxic to aquatic life with long-lasting effects.
Hazardous to the aquatic environment chronic Category 1	H411	
Hazardous to soil organisms	H422	Toxic to the soil environment.
Hazardous to terrestrial vertebrates	H432	Toxic 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 before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P260	Do not breathe fumes, vapours, spray or mist.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
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 + P310 + P331	IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P302 + P313 + P333 + P352	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention.
P314	Get medical advice/attention if you feel unwell.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P370 + P378	In case of fire: Use carbon dioxide, dry chemical and foam 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	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.
Bifenthrin	10	82657-04-3
Aromatic hydrocarbons	74	26545-58-4
Non hazardous	To bal	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes Quickly and gently blot or brush away product. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water until the product is removed or until a few minutes after irritation has ceased, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice.

If on Skin Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 20

minutes or until chemical is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts). If irritation persists, repeat flushing and obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard. If skin irritation or rash occurs: Get medical advice/attention.

If Swallowed If swallowed do NOT induce vomiting. Wash out mouth thoroughly with water. 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. Immediately call a POISON CENTER or doctor/physician.

If Inhaled If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Harmful if swallowed.

Inhalation: Not applicable

Skin: May cause an allergic skin reaction.

Eye: Not applicable.

Chronic: Causes damage to organs through prolonged or repeated exposure.

Aspiration: May be fatal if swallowed and enters airways.

Section 5. Fire Fighting Measures

Hazard Type	Combustible
Hazards from combustion products	Fire decomposition products from this product may be toxic if inhaled.
Suitable Extinguishing media	Carbon dioxide, dry chemical, foam.
Precautions for firefighters and special protective clothing	When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water on hot liquids.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

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

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

Absorb remainder in sand or other inert material. Avoid using sawdust or other combustible materials. Dispose of in an authorized waste collecting point. Dispose 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, vapours, spray or mist.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- When mixing or applying wear appropriate protective clothing including impervious, elbow-length gloves and eye protection.
- Remove protective clothing and wash hands, arms and face with soap and water before meals and after work.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid unintended release into the environment.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store locked up.
- Store in a cool, well ventilated area.
- 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 Venom Insecticide must be carried out in such a manner as to prevent contamination of waterways. Stores containing more than 100L of Venom 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).

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

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

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

No special ventilation requirements are normally necessary for this product
However, make sure that the work environment remains clean and that dusts are minimized.

Personal Protection Equipment



Eyes	Safety goggles or face shield.
Hands and Skin	Prevent skin contact by wearing impervious gloves, clothes and, preferably apron. Make sure that all skin areas are covered. Chemical resistant gloves. Use protective clothing of rubber or PVC.
Respiratory	Usually, no respirator is necessary when using this product.
General	Do not eat, drink or smoke when using this product. Be careful not to contaminate yourself when removing contaminated clothing.

Section 9 Physical and Chemical Properties

Appearance	Clear-yellowish Liquid
Odour	Hydrocarbon odour
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	Solvent boils in a range above 180°C
Melting Point	Not applicable
Flash Point	67°C
Flammability	Not applicable
Upper and Lower Exposure Limits	0.6%(solvent) - 7%
Vapour Pressure	Approx 0.083 kPa at 20°C (solvent)
Bulk Density	Not applicable
Specific Gravity	Not applicable
Solubilities in water	Emulsifiable
Coeff Oil/water distribution:	Not applicable
Auto-ignition Temperature	Not applicable
Kinematic viscosity mm²/s 40 °C	Not applicable
Particle Characteristics	Not applicable
Volatiles	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reactivity	This product is unlikely to react or decompose under normal storage conditions.
Conditions to Avoid	This product should be kept in a cool place, preferable below 30 °C. Keep containers and surrounding areas well ventilated. Protect this product from light.
Incompatible Materials	Strong oxidising agents.
Hazardous Decomposition Products	carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water.

Section 11 Toxicological Information**Acute Effects:**

Swallowed	Harmful if swallowed.
Dermal	Not applicable.
Inhalation	Not applicable
Skin	Causes mild skin irritation. May cause an allergic skin irritation.
Eye	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	May be fatal if swallowed and enters airways.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure.

Individual component information:

Bifenthrin is moderately toxic to mammals when ingested. Large doses may cause in coordination, tremors, salivation, vomiting, diarrhoea and irritability to sound and touch.

Preparation **Bifenthrin**
Toxicity - Oral: LD₅₀ (Female rats) 54 mg/kg
 LD₅₀ (Male rats) 70 mg/kg

Toxicity - Dermal: LD₅₀ (rabbits) >2000 mg/kg
Eye irritation (rabbits): non- irritating
Sensitization (Guinea pigs): non- sensitizer

Common name: **Bifenthrin**
Chronic toxicity: No information available

Carcinogenicity: There was no evidence of cancer in a 2 year study of rats that ate as much as 10 mg/kg/day of Bifenthrin. However, an 87 week feeding study of mice with doses of 7, 29, 71 and 86 mg/kg showed a significantly higher, dose related trend of increased tumour incidence in the male urinary bladder. The incidence was significantly increased at 86 mg/kg/day. Also, females had higher incidences of lung cancer than the controls at does of 7 mg/kg and higher. The EPA has classified Bifenthrin as a class C carcinogen, a possible human carcinogen.

Mutagenicity: Evidence of mutagenic effects from exposure to Bifenthrin was inconclusive. Studies of mouse white blood cells were positive for gene mutation. However, other tests of bifenthrin’s mutagenic effects, including the Ames test and studies in live rat bone marrow cells, were negative.

Reproduction toxicity: The dose at which no toxic effect of Bifenthrin is observed on mother (maternal toxicity NOEL) is 1 mg/kg/day for rats and 2.67 mg/kg/day for rabbit’s. At higher doses, test animals had tremors. The dose at which no toxic effect is observed on development (developmental toxicity NOEL) is 1 mg/kg/day for rats and is greater than 8 mg/kg/day for rabbits.

Other information: Fate in Humans and Animals: Bifenthrin is absorbed through intact skin when applied topically. It undergoes similar modes of breakdown within animal systems as other pyrethroid insecticides. In mammals, Bifenthrin is rapidly broken down and promptly excreted. Rats treated with 4 to 5 mg/kg, excreted 70% in the urine and 20% in the faeces within 7 days. After 7 days, the remaining Bifenthrin was found accumulated in tissues with high fat content such as the skin and fat in males and females and the ovaries of females. Bifenthrin is less toxic to warm-blooded animals, such as mammals, than to cold-blooded animals.

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
Precautions	Do not allow to enter waterways.

Individual component information (Please refer to www.epa.govt.co.nz for full details):

Ecotoxicity:

Fish Bifenthrin is very highly toxic to fish, crustaceans and aquatic animals.

LC ₅₀ (96 hours)	Rainbow trout	= 0.00015 mg/L
	Bluegill	= 0.00035 mg/L
	Daphnia	= 0.00016 mg/L

Because of its low water solubility and high affinity for soil, Bifenthrin is not likely to be found in aquatic systems.

Bees Bifenthrin is toxic to bees.

Birds Bifenthrin is moderately toxic to many species of birds.

LC ₅₀	Mallard ducks	= 1280 ppm
	Bobwhite quail	= 4450 ppm
LD50 Acute oral	Mallard ducks	= 2150 mg/kg
	Bobwhite quail	= 1800 mg/kg

There is concern about possible bioaccumulation in birds.

ENVIRONMENTAL FATE:

Breakdown in soil and ground water: Bifenthrin does not move in soils with large amounts of organic matter, clay and silt. It also has a low mobility in sandy soils that are low in organic matter. Bifenthrin is relatively insoluble in water, so there are no concerns about groundwater contamination through leaching. Its half-life in soil, the amount of time it takes to degrade to half of its original concentration, is 7 days to 8 months depending on soil type and the amount of silt in the soil.

Breakdown in vegetation: Bifenthrin is not absorbed by plant foliage, nor does it translocate in the plant.

Section 13. Disposal Considerations

Disposal Method: 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 before puncturing and offering for recycling or landfill.



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, (Bifenthrin)

Air Transport

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

Marine Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Bifenthrin)
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: HSR000277

HSNO Classification: Flammable Liquid Category 4, Acute oral toxicity Category 4, Aspiration hazard Category 1, Skin sensitisation Category 1, Specific target organ toxicity (repeated exposure) Category 1, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to terrestrial invertebrates.

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100 L
Emergency Response Plan (Schedule 5)	100 L
Secondary Containment (Schedule 5)	100 L
Tracking (Schedule 26)	Not required
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	Records of application of ecotoxic pesticides

Product Name: VENOM INSECTICIDE
Date of SDS: 25 January 2023

Issued by: Adama New Zealand Ltd
Tel: 64 3 543 8275

www.adama.com

	and plant growth regulators
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	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P007421

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
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

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