

Infosafe No™ 3NUAM	Issue Date : February 2024	ISSUED by NUFARMNZ
Product Name ATTACK®		

Section 1 - Identification

Product Identifier	ATTACK®
Product Code	03305
Product Type	Organophosphate Insecticide
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	A broad-spectrum insecticide for use on avocados, citrus, flowers and ornamentals, glasshouse tomatoes and cucurbits, grapes, persimmons, vegetable and forage brassicas and fodder beet.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Flammable liquids: Category 4 Aspiration hazard: Category 1 Skin corrosion/irritation: Category 2 Eye irritation Category 2 Respiratory sensitization: Category 1 Skin sensitization: Category 1 Reproductive toxicity: Category 2 Specific target organ toxicity - repeated exposure: Category 1 Hazardous to the terrestrial environment: Hazardous to soil organisms Hazardous to the terrestrial environment: Hazardous to terrestrial vertebrates Hazardous to the terrestrial environment: Hazardous to terrestrial invertebrates Hazardous to the aquatic environment acute Category 1 Hazardous to the aquatic environment chronic Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H227 Combustible liquid H303 May be harmful if swallowed H313 May be harmful in contact with skin H333 May be harmful if inhaled H315 Causes skin irritation H320 Causes eye irritation H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled H317 May cause an allergic skin reaction H361 Suspected of damaging fertility or the unborn child H372 Causes damage to the nervous system through prolonged or repeated exposure H400/H410 Very toxic to aquatic life with long lasting effects H423 Harmful to the soil environment H431 Very toxic to terrestrial vertebrates H441 Very toxic to terrestrial invertebrates
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions.
Pictogram (s)	Exclamation mark, Health hazard, Environment

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Precautionary Statement – Prevention

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash 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 release to the environment.
 P280(f) Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement – Response

P284 [In case of inadequate ventilation] wear respiratory protection.
 P370+P378 In case of fire: Use water fog, foam, carbon dioxide or dry chemical for extinction. Do not use water in a jet.
 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.
 P304+ P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of water
 P321 Specific treatment
 P332+P313 If skin irritation occurs: Get medical advice
 P362+P364 take of contaminated clothing and wash before reuse
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention
 P304 + P341 IF INHALED: If breathing is difficult , remove to fresh air and keep at rest in a position comfortable for breathing.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P302+P352 IF ON SKIN: Wash with plenty of water
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention
 P321 Specific treatment
 P363 Wash contaminated clothing before reuse.
 P308+P313 IF exposed or concerned: Get medical advice/attention
 P314 Get medical advice/attention if you feel unwell
 P391 Collect spillage

Precautionary Statement – Storage

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

Precautionary Statement – Disposal

P501 Dispose of contents/container to an approved landfill.

Section 3 - Composition and Information on Ingredients

Chemical Characterization Liquid

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Pirimiphos-methyl	29232-93-7	475 g/L
	Permethrin	52645-53-1	25 g/L
	Calcium dodecylbenzene sulphionate	Blend/mixture	0-10%
	Hydrocarbon Liquid	64742-94-5	30-60%
	Ingredients determined to be non-hazardous	-	To volume

Section 4 - First Aid Measures

First-aid Measures For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not

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Inhalation	breathing. Use mouth-to-nose rather than mouth-to mouth. Obtain medical attention.
Ingestion	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Skin	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Eye	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance. Do not scrub the skin.
First-aid Facilities	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and easy to do.
Advice to Doctor	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
	Initial Treatment: Atropine is the specific antidote. Large amounts are required in organophosphate poisoning. An initial trial dose of atropine 2mg intravenously should be given and repeated every 15 minutes until an atropine effect is noted (dilated pupils, dry mouth, flushing of the skin). Reduce to a schedule that maintains full atropinisation for at least 24 hours. The dose and frequency of atropine will vary from case to case.
	Medical: Take blood samples for cholinesterase levels before starting treatment. Stomach washout if organophosphate has been ingested. Pralidoxime enhances the reactivation of acetyl cholinesterase. It is most effective if given early, but can still be started up to 48 hours after poisoning. Pralidoxime is given at a dose of 1-2mg by slow I.V. infusion at a maximum rate of 0.5gm/min. It is used as an adjunct to, not a replacement for atropine.
	Respiratory Difficulty - Carefully monitor for 24 hours.
	Convulsions - Control with Diazepam (Valium) 5-10mg by slow I.V. or I.M. repeat as necessary.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	Foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	On burning will emit toxic fumes.
Special protective equipment for fire-fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Hazchem Code	2Z
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: 2 for 500L or more

Section 6 - Accidental Release Measures

Spills and Disposal	Wear protective clothing. Clear area of unprotected personnel. Eliminate all ignition sources and naked lights. Use non-sparking utensils. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. Prevent material from coming into contact with Class 1, 2, 3.2, 4 or 5 substances. Wash area with water and detergent and absorb with inert material. Dispose of waste safely in an approved landfill.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.

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Environmental Precautions Prevent from entering drains, waterways or sewers.

Section 7 - Handling and Storage

Precautions for Safe Handling Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. The person mixing or applying ATTACK must be a 'Qualified Contractor' or 'Qualified Loader'. For more information refer to the Hazardous Substances Property Controls Notice 2017. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017. Avoid skin and eye contact and inhalation of spray mist. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept. This product must not be applied onto or into water.

Conditions for safe storage, including any incompatibilities Store in original container tightly closed and in a locked, dry, cool area away from sources of ignition and foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Do not store with HSNO Class 1, 2, 3.2, 4 or 5 substances. Stores containing 100L of ATTACK require secondary containment and are subject to signage, and more than 100L require emergency response plans. Stores exceeding 500 litres of this substance must have at least 2 fire extinguishers. Do not store near heat or flame.

Other Information Always read the label and any attached leaflet before use. Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL) No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.

Appropriate Engineering Controls Handle in well ventilated areas, generally natural ventilation is adequate.

Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear full protective clothing such as a PVC spray suit or leggings, elbow length PVC gloves, chemical resistant boots with socks, eye protection, waterproof headgear and a NIOSH approved respirator with combination filter for vapour/particles.

Hygiene Measures 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 daily after work.

Section 9 - Physical and Chemical Properties

Form Liquid

Appearance Amber liquid

Odour Information is not available.

Decomposition Temperature Information is not available.

Melting Point Pirimiphos-methyl active ingredient = 20.8°C (tech.)
Permethrin active ingredient = 34-35°C; cis-isomers 63-65°C; trans-isomers 44-47°C.

Solubility in Water Disperses in water.

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Specific Gravity	1.08
pH	5.8
Vapour Pressure	2mPa (20°C) for pirimiphos methyl 2.9 x 10 ⁻³ mPa (25°C) (cis-isomer) for permethrin 9.2 x 10 ⁻⁴ Pa (25°C) (trans-isomer) for permethrin
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Partition Coefficient: n-octanol/water	Kow logP= 4.2 (20°C, unionised) for Pirimiphos methyl. Kow logP= 6.1 (20°C) for Permethrin.
Flash Point	70 °C
Flammability	Combustible liquid.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Initial Boiling Point and Boiling Range	Permethrin active ingredient = 200°C/0.1mmHg; >290°C/760mmHg.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Relative Density	Pirimiphos-methyl active ingredient = S.g./density 1.17 (20°C); 1.157 (30°C) Permethrin active ingredient = S.g./density 1.29 (20°C)
Other Information	(EC) Emulsifiable concentrate

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal conditions of handling and storage.
Conditions to Avoid	Avoid strong acid or alkali. Avoid oxidising agents. Slightly corrosive to tin plate and mild steel. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Vapour may travel a considerable distance to source of ignition and flash back.
Incompatible Materials	Avoid contact with strongly alkaline materials such as Bordeaux mixture and lime sulphur.
Hazardous Polymerization	Hazardous polymerisation will not occur.

Section 11 - Toxicological Information

Acute Toxicity - Oral	Pirimiphos-methyl active ingredient = LD50 (rat) = 1414 mg/kg, (mice) = 1,180mg/kg. Permethrin active ingredient = LD50 values for a cis/trans ratio of c.40:60 are 430-4000mg/kg (rats), 540-2690mg/kg (mice); with a 20:80 ratio, the LD50 is c.6000 mg/kg.
Acute Toxicity - Inhalation	Pirimiphos-methyl active ingredient = LC50 (rat) >5.04mg/L/4hr (gravimetric) Permethrin active ingredient = LC50 (rat & mice) >685mg/m ³ air/3hr; (separate study gives >13,800mg/m ³).
Acute Toxicity - Dermal	Pirimiphos-methyl active ingredient = Acute percutaneous LD50 (rats) >2,000mg/kg. Permethrin active ingredient = Acute percutaneous LD50 (rats) >2500mg/kg, (rabbits) >2000mg/kg.

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Ingestion	<p>Symptoms of ingestion begin within 30 - 60 minutes of exposure and are at a maximum in 2-8 hours.</p> <p>MILD - Anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue and eyelids, contraction of the pupil and impairment of visual acuity.</p> <p>MODERATE - Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular fasciculation's.</p> <p>SEVERE - Diarrhoea, pinpoint and non reactive pupils, respiratory difficulty, pulmonary oedema, cyanosis, loss of sphincter control, convulsions, coma and heart block. Hyperglycaemia and possible acute pancreatitis have occurred. (pirimiphos-methyl)</p>
Inhalation	<p>Vapour, mist and aerosols may be irritant to mucous membranes and respiratory tract. Inhalation of vapour, mist and aerosols may result in headaches, dizziness and possible nausea. Inhalation of high concentrations can produce central nervous system depression which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.</p>
Skin	<p>Pirimiphos-methyl is toxic if absorbed through the skin.</p> <p>Contact with skin may result in irritation. May cause tingling, burning, itching or numbness in exposed areas which is transient, that can last up to 36 hours.</p> <p>A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis. Can be absorbed through the skin. Effects can include those seen if 'ingested'.</p>
Eye	<p>An eye irritant. May cause constriction of the pupil. Corneal opacity persistant to 14 days.</p>
Skin Corrosion/Irritation	<p>Skin irritant (rabbit)</p>
Serious Eye Damage/Irritation	<p>Eye irritant (rabbit)</p>
Skin Sensitisation	<p>Moderate skin sensitiser (permethrin)</p>
Germ Cell Mutagenicity	<p>Information is not available.</p>
Carcinogenicity	<p>Information is not available.</p>
Reproductive Toxicity	<p>Suspected human reproductive or developmental toxicant (pirimiphos-methyl)</p>
STOT - Single Exposure	<p>Information is not available.</p>
STOT - Repeated Exposure	<p>Causes damage to nervous system through prolonged or repeated exposure.</p>
Aspiration Hazard	<p>May be harmful if swallowed, inhaled or in contact with skin.</p>
Subchronic/Chronic Toxicity	<p>Pirimiphos-methyl is an organophosphorus insecticide which inhibits interference with nerve transmission. Onset of symptoms may be delayed for several hours. Studies in animals show that repeated exposures produce no significant effects except for cholinesterase inhibition. Short term tests have shown that permethrin is unlikely to be genotoxic. Animal studies have shown that repeated or prolonged doses produce no significant effects.</p>
Other Information	<p>The Australian Acceptable Daily Intake (ADI) for pirimiphos-methyl for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.25 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', December 2011). The Australian Acceptable Daily Intake (ADI) for permethrin for a human is 0.05 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 5 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2011).</p>

Section 12 - Ecological Information

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Ecotoxicity	Product is expected to be very toxic to aquatic organisms, LL/EL50 < 1 mg/l.
Persistence and Degradability	Pirimiphos-methyl is rapidly degradable in water under acid conditions and relatively slow degradation under neutral and alkaline conditions. Permethrin is rapidly degradable in soil and water.
Mobility	Information is not available.
Environmental Fate	Pirimiphos-methyl: The substance is sparingly soluble in water and has low mobility in soil. There is evidence of hydrolysis in water and soil. Permethrin: This substance has low mobility in soil. It has a high potential for bioaccumulation but is rapidly eliminated from fish (about 80% in 14 days). There is evidence of degradation in soil and water. The half life in soil is less than 38 days.
Bioaccumulative Potential	Pirimiphos-methyl and permethrin are bioaccumulative. Log Kow 4.2 (pirimiphos-methyl) BCF rainbow trout = 560 (permethrin)
Acute Toxicity - Fish	Pirimiphos-methyl active ingredient = LC50 (96h) for rainbow trout 0.64mg/L, (48h) for mirror carp 1.4mg/L. Permethrin active ingredient = LC50 (96h) for rainbow trout 2.5µg/L, (48h) for rainbow trout 5.4µg/L, bluegill sunfish 1.8µg/L.
Acute Toxicity - Daphnia	Pirimiphos-methyl active ingredient = EC50 (48h) 0.21µg/L; (421d) 0.08µg/L. Permethrin active ingredient = LC50 (48h) 0.6µg/L
Acute Toxicity - Algae	Pirimiphos-methyl active ingredient = EC50 1.0 mg/L
Acute Toxicity - Other Organisms	Pirimiphos-methyl active ingredient = Acute Oral LD50 for bobwhite quail 40, Japanese quail 140, mallard ducks 1695mg/kg. For bees (oral) 0.22µg/bee; bees (contact) 0.12µg/bee, for worms LC50 (14d) 419mg/kg Permethrin active ingredient = Typical oral LD50 (cis/trans ratio of c.40:60) for chickens >3000, mallard ducks >9800, Japanese quail 13500mg/kg. Toxic to bees, LD50 (24h) for bees (oral) 0.098µg/bee; (topical) 0.029µg/bee.

Section 13 - Disposal Considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill. Do not burn.
Container Disposal	Triple rinse empty container and add rinsate to the spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

Section 14 - Transport Information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (pirimiphos-methyl, permethrin)
Hazard Class	9
Hazchem Code	2Z
Packaging Method	-
Packing Group	III
EPG Number	-
IERG Number	47
IMO Marine Pollutant	Yes. Environmentally Hazardous Substance mark required.
IMDG EMS	F-A, S-F
Other Information	Do not carry this product on a passenger service vehicle. Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

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Section 15 - Regulatory Information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P2912 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR100602 See www.epa.govt.nz for approval controls.
Packaging and Labelling	READ SAFETY DIRECTIONS BEFORE OPENING OR USING KEEP OUT OF REACH OF CHILDREN

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS September 2020.

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766

Revisions Highlighted Various changes and updates made to the document to comply with GHS7.

...End Of MSDS...

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