

Infosafe No™ 3NUAM	Issue Date : September 2020	ISSUED by NUFARMNZ
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 Product Name **ATTACK®**

1. Identification

GHS Product Identifier	ATTACK®
Product Code	03305
Product Type	Organophosphate Insecticide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
E-mail Address	nzinfo@nufarm.com
Recommended use of the chemical and restrictions on use	A broad spectrum insecticide for use on avocados, citrus, flowers and ornamentals, glasshouse tomatoes and curcubits, grapes, kiwifruit, persimmons, vegetable and fodder 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.

2. Hazard Identification

GHS classification of the substance/mixture	Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.
Signal Word (s)	DANGER
Hazard Statement (s)	H227 Combustible liquid. H303 May be harmful if swallowed. H313 May be harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H320 Causes eye irritation. H333 May be harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H361 Suspected of damaging fertility or the unborn child . H372 Causes damage to organs nervous system through prolonged or repeated exposure . 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 label before use.
Pictogram (s)	Health hazard, Environment



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/sparks/open flames/hot surfaces. - No smoking. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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Precautionary statement – Response	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P281 Use personal protective equipment as required.</p> <p>P285 In case of inadequate ventilation wear respiratory protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p> <p>P370+P378 In case of fire: Use water fog, foam, carbon dioxide or dry chemical for extinction.</p> <p>P391 Collect spillage.</p>
Precautionary statement – Storage	P403+P235 Store in a well-ventilated place. Keep cool.
Precautionary statement – Disposal	P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.
Other Information	3.1D flammable liquid, 6.1E acute toxicant, 6.3A skin irritant, 6.4A eye irritant, 6.5A sensitiser, 6.5B sensitiser, 6.8B reproductive or developmental toxicant, 6.9A target organ toxicant, 9.1A aquatic toxicant, 9.2D soil toxicant, 9.3A terrestrial vertebrate toxicant, 9.4A terrestrial invertebrate toxicant,

3. Composition/information on ingredients

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

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 breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.
Inhalation	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.
Ingestion	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.
Skin	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.
Eye contact	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.

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First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	<p>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.</p> <p>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.</p> <p>Respiratory Difficulty - Carefully monitor for 24 hours.</p> <p>Convulsions - Control with Diazepam (Valium) 5-10mg by slow I.V. or I.M. repeat as necessary.</p>

5. Fire-fighting 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 Temp.	Information not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: 2 for 500L or more

6. Accidental release measures

Spills & 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.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling	Do not handle until all safety precautions have been read and understood. 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.
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Conditions for safe storage, including any incompatibilities	<p>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.</p> <p>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.</p>
Other Information	<p>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.</p>

8. Exposure controls/personal protection

Occupational exposure limit values	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.

9. Physical and chemical properties

Form	Liquid
Appearance	Amber liquid
Decomposition Temperature	Information not available.
Melting/Freezing Point	Information not available.
Solubility in Water	Disperses in water.
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
Odour Threshold	Information not available.
Partition Coefficient: n-octanol/water	Kow logP= 4.2 (20°C) for Pirimiphos methyl. Kow logP= 6.1 (20°C) for Permethrin.
Flash Point	70 °C
Flammability	Combustible liquid.
Auto-Ignition Temperature	Information not available.
Flammable Limits - Lower	Information not available.
Flammable Limits - Upper	Information not available.

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Initial boiling point and boiling range Information not available.
Kinematic Viscosity Information not available.
Other Information (EC) Emulsifiable concentrate

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.

11. Toxicological Information

Acute Toxicity - Oral LD50 (rat) = 1414 mg/kg, (mice) = 1,180mg/kg for pirimiphos-methyl
 LD50 (rat) = 806 - 814 mg/kg for permethrin
Acute Toxicity - Dermal LD50 (rat) = >2,000mg/kg pirimiphos-methyl
 LD50 (rat) = >2,000mg/kg permethrin
Acute Toxicity - Inhalation LC50 (rat) = >5.04mg/L/4hr for pirimiphos-methyl
 LC50 (rat) = 2.3mg/L/4hr for permethrin
Ingestion Symptoms of ingestion begin within 30 - 60 minutes of exposure and are at a maximum in 2-8 hours.
 MILD - Anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue and eyelids, contraction of the pupil and impairment of visual acuity.
 MODERATE - Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular fasciculation's.
 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)
Inhalation 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.
Skin Pirimiphos-methyl is toxic if absorbed through the skin. 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.
 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'.
Eye An eye irritant. May cause constriction of the pupil. Corneal opacity persistent to 14 days.
Skin Sensitisation Moderate skin sensitiser (permethrin)
Carcinogenicity Information is not available.
Reproductive Toxicity Suspected human reproductive or developmental toxicant (pirimiphos-methyl)
STOT-repeated exposure Causes damage to nervous system through prolonged or repeated exposure.
Serious eye damage/irritation Eye irritant (rabbit)

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Mutagenicity	Information is not available.
Skin corrosion/irritation	Skin irritant (rabbit)
Subchronic/Chronic Toxicity	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.
Other Information	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).

12. Ecological information

Persistence and degradability	Permethrin is rapidly degradable.
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	LC50 (96h) rainbow trout 0.2mg/L for pirimiphos-methyl Chronic NOEC rainbow trout <0.023mg/L for pirimiphos-methyl LC50 (96h) rainbow trout 0.1µg/L for permethrin Chronic NOEL (28d) sheepshead minnow 10ppb for permethrin
Acute Toxicity - Daphnia	EC50 (48h) Daphnia magna 0.21ppb for pirimiphos-methyl Chronic NOEC (reproduction) daphnid 0.05µg/L for pirimiphos-methyl EC50 (48h) ceriodaphnia dubia 0.55µg/L for permethrin Chronic NOEC (21d) daphnia magna 0.039ppb for permethrin
Acute Toxicity - Algae	EC50 (72h) green alga 1mg/L for pirimiphos-methyl
Acute Toxicity - Other Organisms	Oral LD50 Bobwhite quail 207ppm for pirimiphos-methyl Oral LD50 Chicken >3000mg/kg for permethrin LD50 (48h) honey bee 0.36µg/bee for pirimiphos-methyl LD50 (48h) honey bee 0.024µg/bee for permethrin

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.

14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
U.N. Number	3082

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UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (pirimiphos-methyl 47.5%, permethrin 2.5%)
Transport hazard class(es)	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.

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.
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16. Other Information

Date of preparation or last revision of SDS	Supersedes SDS issued August 2015
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	5 yearly review carried out. Various changes and updates made to document. ...End Of MSDS...

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