

Infosafe No™ 3NUAM	Issue Date : August 2015	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 Fax: 0-9-270 4159
Emergency phone number	0800 651 911
Email	info@nz.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 cucurbits, 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

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, FLAMMABLE Warning - combustible liquid. TOXICITY Toxic - may cause respiratory sensitisation, or sensitisation from prolonged skin contact. May cause damage to nervous and blood system from repeated oral exposure at high doses. May cause eye irritation or mild skin irritation. Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause reproductive/development damage from repeated oral exposure. ECOTOXIC Very toxic to aquatic organisms with long-lasting effects. Harmful to the soil environment. Very toxic to terrestrial vertebrates and terrestrial invertebrates. Very toxic to bees.
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3. Composition/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 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

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Ingestion	is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately. 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.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	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.

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
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	Avoid skin and eye contact and inhalation of spray mist. APPROVED HANDLER: This product must only be applied by an approved handler or under the direct supervision of an approved handler. TRACKING: Is not required. RECORD KEEPING: Records of use as described in the NZS 8409 Management of
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Conditions for safe storage, including any incompatibilities	<p>Agrichemicals must be kept. This product must not be applied onto or into water. 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.</p> <p>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.</p> <p>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
Solubility in Water	Disperses in water.
Specific Gravity	1.08
pH	5.8
Flash Point	70 °C
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

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	<p>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 persistent to 14 days.</p>
Skin Sensitisation	<p>Moderate skin sensitiser (permethrin)</p>
Reproductive Toxicity	<p>Suspected human reproductive or developmental toxicant (pirimiphos-methyl)</p>
Serious eye damage/irritation	<p>Eye irritant (rabbit)</p>
Skin corrosion/irritation	<p>Skin irritant (rabbit)</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>

12. Ecological information

Persistence and degradability	Permethrin is rapidly degradable.						
Environmental Fate	<p>Pirimiphos-methyl: The substance is sparingly soluble in water and has low mobility in soil. There is evidence of hydrolysis in water and soil.</p> <p>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.</p>						
Bioaccumulative Potential	<p>Pirimiphos-methyl and permethrin are bioaccumulative.</p> <p>Log Kow 4.2 (pirimiphos-methyl)</p> <p>BCF rainbow trout = 560 (permethrin)</p>						
Acute Toxicity - Fish	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">LC50 (96h) rainbow trout</td> <td>0.2mg/L for pirimiphos-methyl</td> </tr> <tr> <td>Chronic NOEC rainbow trout</td> <td><0.023mg/L for pirimiphos-methyl</td> </tr> <tr> <td>LC50 (96h) rainbow trout</td> <td>0.1µg/L for permethrin</td> </tr> </table>	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
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						

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Acute Toxicity - Daphnia	Chronic NOEL (28d) sheepshead minnow 10ppb for permethrin 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 lmg/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
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.
Packaging & Labelling	WARNING - flammable liquid and vapour HARMFUL * ECOTOXIC - keep out of reach of children
Hazard Rating Systems	NFPA/HMIS: 2-2-1
Hazard Category	WARNING - Combustible Liquid HARMFUL * ECOTOXIC - Keep out of reach of children

16. Other Information

Date of preparation or last revision of SDS	Supersedes SDS issued February 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



Safety Data Sheet

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Revisions Highlighted	SDS was reviewed following organophosphate and carbamate reassessment. Hazchem code changed from 2X to 2Z. ...End Of MSDS...
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