

Infosafe No™ 3NUG6	Issue Date : August 2015	ISSUED by NUFARMNZ
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 Product Name **DEW 600**

1. Identification

GHS Product Identifier	DEW 600
Product Code	03418
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	An insecticide for the control of insect pests on specified crops.
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	6.1D acute toxicant, 6.8B reproductive or developmental toxicant, 6.9A target organ toxicant, 9.1A aquatic toxicant, 9.2B soil toxicant, 9.3A terrestrial vertebrate toxicant, 9.4A terrestrial invertebrate toxicant, TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause damage to the nervous system from repeated oral exposure at high doses. May cause reproductive/development damage from repeated oral exposure. ECOTOXIC Very toxic to aquatic organisms. Toxic 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>
	Diazinon	333-41-5	600 g/L
	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.
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.

Infosafe No™ 3NUG6	Issue Date : August 2015	ISSUED by NUFARMNZ
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Product Name **DEW 600**

First Aid Facilities Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Organophosphates:
 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 Water fog, foam, carbon dioxide or dry chemical.
 Choose extinguishing media to suit the burning material.

Unsuitable Extinguishing Media Water in a jet.

Hazards from Combustion Products Hazardous thermal decomposition products may include but not limited to: various aliphatic organophosphates, substituted pyrimidine and hydrogen cyanide. S-TEPP and diazoxon may form when diazinon is reacted with trace amounts of water. Oxides of carbon, nitrogen, sulphur and phosphorus may also be formed. Sulphur dioxide is an irritant and may induce asthma. Nitrogen oxides are irritants to the lungs - may cause pulmonary oedema. Carbon dioxide causes asphyxia by displacing oxygen.

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: Not applicable

6. Accidental release measures

Spills & Disposal Wear protective clothing. Clear area of unprotected personnel. 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.
 If spill is on the ground, the affected area should be removed to a depth of 2-3cm. Collect in an appropriate sealable container for disposal in an approved landfill. Decontaminate spill surfaces and equipment with 10% sodium hydroxide.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions Prevent product or washings 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 Agrichemicals must be kept.
 Avoid contamination of any water supply with product or empty container.
 Keep ducks and hens off treated areas for 7 days after application.

Infosafe No™ 3NUG6	Issue Date : August 2015	ISSUED by NUFARMNZ
--------------------	--------------------------	--------------------

 Product Name **DEW 600**

Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 100L of DEW 600 require secondary containment and are subject to signage, and more than 100L require emergency response plans.
Other Information	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.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure standard has been established for this product. WES TWA for diazinon = 0.1 mg/m ³ (skin)
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	Avoid skin and eye contact and inhalation of spray mist. When mixing and applying wear full protective clothing such as a PVC spray suit or leggings, elbow length PVC gloves, chemical resistant boots with socks, eye protection, water proof 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.
Other Information	Persons regularly exposed in manufacturing and handling of this product should have a pre-exposure and periodic red blood cell cholinesterase level check.

9. Physical and chemical properties

Form	Liquid
Appearance	A white emulsion
Odour	Not determined
Melting Point	Not applicable
Boiling Point	Not determined (diazinon = 83-84°C @ 0.0002mm Hg)
Solubility in Water	Miscible, emulsifies
Specific Gravity	1.07
pH	6.5 - 7.5 (1%w/v)
Vapour Pressure	Not determined (diazinon = 6.6x10 ⁻⁵ mm Hg)
Vapour Density (Air=1)	Data not available
Viscosity	600 - 1200 cps
Volatile Component	Not determined
Flash Point	Not flammable
Other Information	(EW) Emulsion, oil in water

10. Stability and reactivity

Chemical Stability	Stable under normal conditions of handling and storage. Diazinon technical is stable at ambient temperatures and pressures but susceptible to oxidation above 100°C. Stable in neutral media, but slowly hydrolysed in alkaline media, and more rapidly in acidic media. Compatible with metal drums coated with epoxy resin and aluminium or co extruded polyethylene containers.
Conditions to Avoid	Avoid oxidising agents. Do not mix with copper compounds, Bordeaux mixture or lime sulphur. Avoid open flames, welding arcs or other high temperature sources which might induce thermal decomposition. Store away from sunlight or heat sources.
Hazardous Polymerization	Hazardous polymerisation is not possible.

Infosafe No™ 3NUG6	Issue Date : August 2015	ISSUED by NUFARMNZ
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11. Toxicological Information

Toxicology Information	Diazinon is a cholinesterase inhibitor. Warning symptoms include weakness, headache, tightness of chest, blurred vision, non-reactive pinpoint pupils, nausea, salivation, sweating, vomiting, diarrhoea and abdominal cramps. May aggravate pre-existing medical conditions, such as asthma and inflammatory or fibrotic lung disease.
Acute Toxicity - Oral	LD50 (rat): 300mg/kg for diazinon
Acute Toxicity - Dermal	LD50 (rat): 876mg/kg for diazinon
Acute Toxicity - Inhalation	LC50 (rat): >1,600mg/m ³ /4h for diazinon
Ingestion	Moderately toxic by oral exposure. Aspiration into the lungs may cause chemical pneumonitis, which can be fatal.
Inhalation	Harmful by inhalation. May cause headache, nausea, dizziness and narcosis.
Skin	Irritant. Harmful if absorbed through the skin.
Eye	Irritant.
Carcinogenicity	Diazinon is non-carcinogenic (in rats).
Reproductive Toxicity	Suspected reproductive/developmental toxicant (diazinon)
Serious eye damage/irritation	(rabbit) slight irritant (diazinon)
Respiratory Irritation	No data available.
Skin corrosion/irritation	(rabbit) slight irritant (diazinon)
Subchronic/Chronic Toxicity	Target organ toxicant: Nervous system (diazinon)
Other Information	The Australian Acceptable Daily Intake (ADI) for diazinon for a human is 0.001 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.02 (humans) 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', June 2012).

12. Ecological information

Persistence and degradability	Diazinon is not rapidly degradable.
Mobility	Diazinon is fairly strongly adsorbed onto soil. Mobility is low. T _{1/2} = 2-4 weeks in soil.
Environmental Fate	Non phytotoxic when used as directed. Principle metabolites in animals are diethyl thiophosphate and diethyl phosphate. Degradation in soil and water oxidises to the phosphate (diazoxon) and hydrolysis.
Bioaccumulative Potential	Diazinon does not bio-accumulate.
Other Precautions	Keep ducks, geese and hens off treated areas for 7 days after application.
Acute Toxicity - Fish	For diazinon: LC50 (96h) Zebra danio >0.8 - <1.2µg/L, Bluegill sunfish 16mg/L Rainbow trout 2.6 - 3.2mg/L Carp 7.6 - 23.4mg/L
Acute Toxicity - Daphnia	For diazinon: LC50 (48h) water flea 0.22-0.29µg/L NOEC (21d) daphnia magna 0.15µg/L
Acute Toxicity - Other Organisms	Oral LD50 mallard duck 1.44mg/kg, young pheasants 4.3mg/kg (diazinon) LD50 earthworm 130mg/kg of soil (diazinon) Highly toxic to bees LD50 (oral) 0.2µg/bee (diazinon)

13. Disposal considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill.
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Infosafe No™ 3NUG6	Issue Date : August 2015	ISSUED by NUFARMNZ
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Container Disposal Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. Transport information

U.N. Number 3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (diazinon, 60%)

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 more than 10L of DEW 600 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. P7707
See www.foodsafety.govt.nz for registration conditions
Approved pursuant to the HSNO Act 1996, Approval Code HSR000180
See www.epa.govt.nz for approval controls.

Packaging & Labelling ECOTOXIC
HARMFUL - keep out of reach of children
Marine Pollutant mark

Hazard Rating Systems HMIS/NFPA: 2-1-1

Hazard Category HARMFUL * ECOTOXIC - Keep out of reach of children

16. Other Information

Date of preparation or last revision of SDS 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

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

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