

1: Identification of the Substance and Supplier

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| Product Name | ZAGRO DIAZINON 600EW |
| Recommended Use | Insecticide (Organophosphate) |
| Suppliers Details | Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 |
| Web Address | www.orionagriscience.co.nz |
| Email Address | orders@orionagriscience.co.nz |
| Telephone Number | (03) 928 2386 (office hours), 0800 674 6627 (free phone) |
| Emergency Telephone | 0800 CHEMCALL (0800 243 622) (24 hours) |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |
| Date of Issue/Revision | February 2025 |

2: Hazards Identification

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| Hazard Pictograms |  |
| Signal Words | Danger |
| Hazard Classes: | Hazard Statements: |
| Acute Oral Toxicity (Cat. 4) | H302 Harmful if swallowed |
| Acute Dermal Toxicity (Cat. 4) | H312 Harmful if in contact with skin |
| Acute Inhalation Toxicity (Cat. 4) | H332 Harmful if inhaled |
| Reproductive Toxicity (Cat. 2) | H361 Suspected of damaging fertility or the unborn child |
| Specific Target Organ Toxicity Repeat Exposure (Cat. 1) | H372 Causes damage to organs through prolonged or repeated exposure |
| Hazardous to the Aquatic Environment Acute (Cat. 1) | H400 Very toxic to aquatic life |
| Hazardous to the Aquatic Environment Chronic (Cat. 1) | H410 Very toxic to aquatic life with long lasting effects |
| Hazardous to Soil Organisms | H422 Toxic to the soil environment |
| Hazardous to Terrestrial Vertebrate | H431 Very toxic to terrestrial vertebrates |
| Hazardous to Terrestrial Invertebrate | H441 Very toxic to terrestrial invertebrates |
| Precautionary Statements: | |
| Prevention | 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 P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray P264 Wash hands thoroughly after handling P270 Do not eat, drink or smoke when using this product P271 Use only outdoors or in a well ventilated area P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection |
| Response | P301+P312 IF SWALLOWED: Call a POISON CENTER or a doctor/physician if you feel P321 Specific treatment. This statement applied if immediate administration of antidote is required. Atropine is the specific antidote P330 Rinse mouth P302+P352 IF ON SKIN: Wash with plenty of soap and water. P312 Call a POISON CENTRE or doctor/physician if you feel unwell P362+P364 Take off contaminated clothing and wash if before reuse |

Storage
Disposal

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P308+P313 IF exposed or concerned: Get medical advice/attention
P314 Get medical advice/attention if you feel unwell
P391 Collect spillage
P405 Store locked up
P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).

First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs). Read label before use. Do not use until all safety precautions have been read and understood. Avoid contact with eyes and skin. Do not breathe in the vapour or spray mist. When mixing or applying, wear personal protection as described in section 8. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water. Do not apply this substance to plants if bees are foraging, or the plants are in flower or part flower, and are likely to be visited by non-target invertebrate pollinators (including bees)

3: Composition/ Information on Ingredients

| Ingredient | CAS No | Content (% w/v) |
|------------------------------|-------------|-----------------|
| Diazinon (active ingredient) | 333-41-5 | 60 |
| Other ingredients | Proprietary | Remainder |

4: First Aid Measures

If medical advice is needed, have product container or label at hand. If exposed or concerned, get medical advice. For advice call the National Poisons Centre or a Doctor

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| Ingestion: | Rinse mouth. Seek medical advice immediately |
| Skin Contact: | Wash with plenty of soap and water. Seek medical advice immediately |
| Eye Contact: | Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists. |
| Inhalation: | Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately |
| Workplace Facilities: | Hand wash facility. Eye wash facility |
| Advice to Doctor: | Diazinon is an organophosphate insecticide, which inhibits cholinesterase activity, and interferes in nerve pulse transmission. Onset of symptoms may be delayed for several hours. Atropine is the specific antidote and may be given immediately by qualified staff, at a level of 2 - 5mg (intravenously or intramuscularly), every 20 minutes until atropinisation occurs. Considerable amounts of atropine may be necessary. Atropine must NOT be given to cyanosed patients; administer oxygen first. Do NOT use opiates or barbiturates. If convulsions occur, administer diazepam (10mg intravenously). Take venous blood sample for determination of blood cholinesterase activity. Cholinesterase reactivators (Pralidoxime) should, if possible, be given at the same time as atropine. They are not effective after 24 hours post exposure and are not substitutes for atropine. Pralidoxime should be administered at: Mild poisoning: 1g in 2 - 3ml water (intramuscularly), Severe poisoning: 2g in 30ml water (intravenously). Following ingestion, adsorbents such as charcoal may be of value. |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |

Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:

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| Ingestion: | Excessive sweating, salivation, headache, weakness, faintness, nausea, vomiting, diarrhoea, small pupils, blurred vision, convulsions, muscle twitching. |
| Skin Contact: | No data available. Can be absorbed via the skin (see 'Ingestion' above). |

Eye Contact: No data available. May cause constriction of the pupil.
Inhalation: No data available. Can be absorbed via the lungs (see 'Ingestion' above).

Note: Symptoms may be delayed for up to 24 hours or more following exposure

5: Fire-Fighting Measures

Fire/Explosion Hazard Non-Flammable
HAZCHEM Code 3Z
ERP Guide No 47
Extinguishing Media Water spray, foam, dry chemical or CO₂. Avoid water jet.
Fire Fighting Instructions During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
Specific Hazards Arising from Fire No data available

6: Accidental Release Measures

Personal Precautions Caution: Floors may be slippery if wet. Wear personal protective clothing and equipment as described in section 8. Exclude non-essential people from the area.
Environmental Precautions Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
Clean Up Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill.

7: Handling and Storage

Storage: Keep out of reach of children. Store in the original tightly closed container in a locked and secure area.
Handling and Use: Refer to Prevention statements in section 2 above. Exclude people and animals from the application area, both during application and for the duration of the REI.
REI
 – Apples, pears, mandarins, oranges 12 days
 – Avocados 10 days
 – Tomatoes 13 days
 – Strawberries 13 days
 – Forage brassicas 12 days
 – Cereals 12 days
 – Ornamentals 6 days 24 hours

8: Exposure Controls / Personal Protection

Tolerable Exposure Limit None established
Workplace Exposure Standards Diazinon 0.1 mg/m³ (8hr TWA)
Engineering Controls Select spray application equipment to minimize exposure to operator and bystanders
Biological Monitoring Regular users should undergo biological monitoring of cholinesterase activity. Consult with your GP or Occupational Health Adviser.

Personal Protection:

The following Standards provide general advice regarding safety clothing and equipment:
 Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210.

Eye Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying.

Skin Chemical resistant coveralls with hood tightly fitting at head, wrists and ankles (e.g., Tychem F suit), chemical resistant boots and chemical resistant gloves (barrier multilayer, nitrile, neoprene, butyl).

Respiratory Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

Clean protective equipment after use

9: Physical and Chemical Properties

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| Appearance | White Liquid |
| Odour | Pungent |
| Odour Threshold | Does not apply |
| pH | 5.0 – 8.0 |
| Melting Point/Freezing Point | Does not apply |
| Boiling Point | Does not apply |
| Flash Point | >93°C |
| Flammability | Not flammable |
| Upper/Lower Flammability Limits | Does not apply |
| Vapour Pressure | Does not apply |
| Vapour Density | Does not apply |
| Relative Density | 1.1 g/mL (approx.) |
| Solubility in Water | Emulsifiable |
| Partition Coefficient: n-octanol/water | See section 12 |
| Auto ignition Temperature | Does not apply |
| Decomposition Temperature | Does not apply |
| Kinematic Viscosity | Does not apply |
| Particle characteristics | Does not apply |

10: Stability and Reactivity

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| Stability | Stable under normal conditions |
| Hazardous Reactions | None Expected |
| Incompatibility | None Known |
| Hazardous Decomposition Products | None Known |

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

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| Acute Oral Toxicity | LD50 > 300 mg/kg |
| Acute Dermal Toxicity | LD50 > 1000 mg/kg |
| Acute Inhalation Toxicity | LD50 > 1 mg/L |
| Skin corrosion/irritation | Information not available |
| Serious eye damage/Eye irritation | Information not available |
| Respiratory or skin sensitisation | Information not available |
| Germ cell mutagenicity | Information not available |
| Carcinogenicity | Information not available |
| Reproductive Toxicity | Diazinon is a suspected human reproductive or developmental toxicant |
| Specific Organ Toxicity – Single exposure | Information not available |
| Specific Organ Toxicity – Repeated exposure | Diazinon interferes with cholinesterase, an enzyme essential for the correct functioning of the nervous system |
| Aspiration hazard | Information not available |

12: Ecological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

The following information is presented in respect of the active ingredient:

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| Ecotoxicity | <ul style="list-style-type: none"> • Acute Oral LD50 (Mallard duck) 2.7 mg/kg • LC50 (96 hr) (Rainbow trout) 2.6 – 3.2 mg/l • LC50 (48 hr) (Daphnia) 0.96 µg/l • Algae EC50 >1 mg/l • Acute Oral LD50 (Bee) 0.20 µg/bee |
| Persistence/degradability | Biodegradable. DT50 (soil) 9 days (typical) |
| Bioaccumulative Potential | Octanol-water partition coefficient LogP = 3.69 (high) |
| Soil Mobility | Soil organic carbon water partitioning coefficient Koc = 609 (slightly mobile) |
| Environmental Exposure Limit: | None established |

13: Disposal Considerations

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| Product | Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd. |
| Container | Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose. |

14: Transport Information

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| Dangerous Goods | |
| UN Number | 3082 |
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIAZINON 60%) |
| Class | 9 |
| Subsidiary Class | None |
| Packing Group | III |
| Additional Information | MARINE POLLUTANT |
| MTQ (Non-Commercial) | 1000 litres |
| Passenger Service Vehicle | No restriction |

15 Regulatory Information

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| EPA Approval No | HSR000180 |
| ACVM Registration No | P7870 |
| Qualified Person | Required |
| Certified Handler | Not required |
| Workplace Only | Yes |
| Tracking | Not required |
| Record Keeping | Required. Mitigation measures employed to avoid spray drift and adverse effects beyond the boundary must also be recorded. |
| Site Requirements under EPA Notice and HSWHS Regs: | <ul style="list-style-type: none"> • A hazardous substance location compliance certificate is required • A hazardous area is not required • Separation distances for class 3 and class 6 substances to protected places and public places is applicable • Fire extinguishers are not required • Signage is required for more than 100 litres • An emergency response plan is required for more than 100 litres • Secondary containment is required for more than 100 litres • Segregation from incompatible substances (classes 1 and 5) is required |
| Application Rates | Maximum application rate 4 L/ha. Maximum application frequency 2 times per crop cycle |
| Application Methods | When applied indoors, application must be carried out using automated application equipment |
| Bee Safety | This product is toxic to bees. Do not apply this product to any plant or tree likely to be visited by bees (a) |

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| Notification | at the time of application; or, (b) immediately after application until spray has dried; or (c) in areas where bees are foraging. For wide dispersive application, written notification must be given to any persons likely to be affected – this includes occupiers and owners immediately neighbouring the application area. Notification must be made 2 working days – 4 weeks ahead of the application. Notification must include the location of the application area; the proposed date and approximate duration of the application; the steps to be taken by those notified to avoid exposure (e.g., staying indoors, closing windows and doors, moving washing indoors, disconnecting roof water supply, etc.); and the notifiers details (including name and phone number for immediate contact during application) |
| Additional Requirements | Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans |

| 16: Other Information | |
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| SDS review date | 26 February 2025 |
| Glossary | |
| ADE | Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure |
| ACVM | Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries |
| Cat. | GHS category |
| Ceiling | A concentration that should not be exceeded at any time during any part of the working day |
| Certified Handler | A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B) |
| DT50 | Time (days) for 50% reduction in concentration |
| EC50 | Concentration required to produce an effect in 50% of organisms |
| Environmental Exposure Limit | Maximum concentration limit of a substance in an environmental medium, e.g., water, soil. |
| EPA Notice | Hazardous Property Controls Notice 2017 |
| ERP Guide | Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008 |
| GHS | Globally harmonized system of classification and labelling of chemicals |
| Hazardous Substance Location | For locations storing hazard substances of certain classes above threshold quantities |
| Compliance Certificate | |
| Hazardous Area | A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009 |
| HAZCHEM Code | Emergency action code for emergency services |
| HSWHS Regs | Health and Safety at Work (Hazardous Substances) Regulations 2017 |
| LC50 | Concentration that will kill 50% of organisms |
| LD50 | Dose that will kill 50% or organisms |
| MTQ | Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user |
| Notification | Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described |
| Octanol-Water Partition Coefficient | The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate |
| PDE | Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure |
| Protected Place | Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble |
| Public Place | A place frequented by the public, including roads (does not include private property) |
| Qualified Person | A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc. |

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| Record Keeping | Includes a spray diary or other record of application |
| REI | Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins. |
| Segregation | Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs |
| Separation Distances | The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places |
| Signage | Positioned at entrances to commercial premises providing information on the hazardous substances present |
| Soil Adsorption Coefficient (Kd) | The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil |
| Soil Organic Carbon-Water Partitioning Coefficient (Koc) | The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil |
| STEL | Short term exposure level – 15 minute time weighted average |
| Tolerable Exposure Limit | Maximum concentration limit of a substance above which persons must not be exposed |
| Tracking | For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product |
| TWA | Time weighted average calculated over an 8 hour working day |
| Workplace Exposure Standard | An occupational health standard limiting concentrations of specified substances to which persons are exposed |
| Workplace Only | A product that is restricted to a workplace only and under the supervision of a certified handler |

Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.