



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **DIAZOL 800 INSECTICIDE**  
Name of Active Ing: Diazinon  
Product Use: Insecticide  
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd  
Address: Level 1/93 Bolt Road  
Tahunanui, Nelson  
Telephone: +64 3 543 8275  
Email: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)  
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 12 October 2023

### Section 2. Hazards Identification

**This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020**

**HSNO Approval No:** HSR002481

#### Pictograms



Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement
Flammable liquid Category 4	H227	Combustible liquid.
Acute oral toxicity Category 4	H302	Harmful if swallowed.
Acute dermal toxicity Category 4	H312	Harmful in contact with skin.
Acute inhalation toxicity Category 4	H332	Harmful if inhaled.
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Category 1	H410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	H422	Toxic to the soil environment.
Hazardous to terrestrial vertebrates	H431	Very toxic to terrestrial vertebrates.
Hazardous to terrestrial invertebrates	H441	Very toxic to terrestrial invertebrates.

<b>Prevention Code</b>	<b>Prevention Statement</b>
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe fumes, vapours or 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 unintended release into the environment.
P280	Wear protective clothing and personal protective equipment as detailed in Section 8.

<b>Response Code</b>	<b>Response Statement</b>
P101	If medical advice is needed, have product container or label at hand.
P301 + P312 + P330	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P312 + P352	IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P312 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P308 + P313	IF otherwise exposed or concerned: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use Dry chemical, carbon dioxide, or foam for extinction.
P391	Collect spillage.

<b>Storage Code</b>	<b>Storage Statement</b>
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

<b>Disposal Code</b>	<b>Disposal Statement</b>
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

### **Section 3. Composition / Information on Ingredients**

<b>Ingredients</b>	<b>Wt %</b>	<b>CAS NUMBER.</b>
Diazinon	80%	333-41-5
Other non-hazardous ingredients	To bal	-

### **Section 4. First Aid Measures**

Routes of Exposure:

If in Eyes                      Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. If eye irritation persists: Get medical advice.

If on Skin                        Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g.

watchbands and belts) and completely decontaminate them before reuse or discard. If skin irritation occurs: Get medical advice/ attention.

**If Swallowed** If swallowed, do NOT induce vomiting. Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Call a POISON CENTER or doctor/physician if needed.

**If Inhaled** Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

**Most important symptoms and effects, both acute and delayed**

**Symptoms:**

**Ingestion:** Harmful if swallowed.

**Inhalation:** Harmful if inhaled.

**Skin:** Harmful in contact with skin.

**Eye:** Not applicable.

**Chronic:** Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

**Notes to doctor:** If ingested administer activated charcoal.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Combustible liquid
<b>Hazards from products</b>	There is a slight risk of an explosion from this product is commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distance. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.
<b>Suitable Extinguishing media</b>	Dry chemical, carbon dioxide, foam.
<b>Precautions for firefighters and special protective clothing</b>	Do not enter fire area without proper protective equipment, including splash suit with self-contained breathing apparatus.
<b>HAZCHEM CODE</b>	<b>3Z</b>

**Section 6. Accidental Release Measures**

Wear appropriate protective clothing (see section 8). Evacuate all unnecessary personnel. Extinguish all ignition sources.

**Environmental precautions**

In the event of a major spill, prevent spillage from entering into drains and water courses. Immediately call the Fire Brigade.

**Methods and material for containment and cleaning up**

Stop leak if safe to do so and contain spill and prevent material from entering waterways. Absorb onto sand, vermiculite or other suitable absorbent material and place in waste containers. Wash area with water and alkaline detergent then absorb any remaining liquid with further inert material. Dispose of the waste safely in an approved landfill.

## Section 7. Handling and Storage

### Precautions for Handling:

- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling this product.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid unintended release into the environment.
- Wear protective clothing and personal protective equipment as detailed in Section 8.

### Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs and under lock and key.
- DO NOT allow water to enter this container.
- DO NOT rinse the lid with water.
- As a substance with aquatic ecotoxicity classifications storage of Diazol 800 Insecticide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed.

### Packaging:

- Fluorinated or co-extruded polyethylene containers.
- Resin-lined metal drums.

## Section 8 Exposure Controls / Personal Protection

### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

### Engineering Controls

No special ventilation is usually needed when occasionally handling small quantities. However make sure the work environment remains clean and that vapours and mists are minimised.

### Personal Protection Equipment



<b>Eyes</b>	Chemical goggles or safety glasses.
<b>Hands and Skin</b>	When mixing and applying wear appropriate protective clothing including cotton overalls buttoned to the neck and wrist and chemical resistant boots. Wear impervious elbow-length gloves.
<b>Respiratory</b>	Respiratory protection is advised when using this product.
<b>General</b>	Wash hands, arms and face with soap and water before meals and after work. Wash protective clothing after use.

**Section 9 Physical and Chemical Properties**

<b>Appearance</b>	Yellow to Brown Liquid
<b>Odour</b>	Strong unpleasant odour
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	Not applicable
<b>Boiling Point</b>	Not applicable
<b>Melting Point</b>	Liquid at normal temperatures
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Not applicable
<b>Upper and Lower Exposure Limits</b>	Not applicable
<b>Vapour Pressure</b>	Not applicable
<b>Vapour Density</b>	Not applicable
<b>Specific Gravity</b>	Approx 1.1 at 20°C
<b>Solubilities</b>	Emulsifiable
<b>Log P Octanol/water 20 °C</b>	Not applicable
<b>Auto-ignition Temperature</b>	Not applicable
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	Not applicable
<b>Particle Characteristics</b>	Not applicable
<b>Volatiles</b>	Not applicable

**Section 10. Stability and Reactivity**

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Reactivity</b>	This product is unlikely to react or decompose under normal storage conditions.
<b>Conditions to Avoid</b>	Keep isolated from combustible materials, direct sun light. This product should be kept in a cool place, preferably below 30°C. Containers should be kept dry. Store in the closed original container in a dry, cool well-ventilated area out of direct sun light.
<b>Incompatible Materials</b>	Strong oxidising agents.
<b>Hazardous Decomposition Products</b>	Carbon dioxide, carbon monoxide, nitrogen, oxides of nitrogen. Occasionally hydrogen cyanide gas. Oxides of phosphorus and other phosphorus compounds..

**Section 11 Toxicological Information****Acute Effects:**

<b>Swallowed</b>	Harmful if swallowed.
<b>Dermal</b>	Harmful in contact with skin.
<b>Inhalation</b>	Harmful if inhaled.
<b>Skin</b>	Not applicable.
<b>Eye</b>	Not applicable.

**Chronic Effects:**

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Suspected of damaging fertility or the unborn child.
<b>Germ Cell Mutagenicity</b>	Not applicable.

<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Causes damage to organs through prolonged or repeated exposure.

Rat oral LD50 [mg/kg]: 300-400 (technical grade Diazinon)  
Rat dermal LD50 [mg/kg]: 3600  
Rabbit inhalation LC50 [mg/L/4h]: 3.5  
Chronic Toxicity [mg/kg/day]: 10mg for swine  
1000 for rats

**Acute Toxicity:** Toxic effects of Diazinon are due to the inhibition of acetyl cholinesterase, an enzyme needed for proper nervous system function. The range of doses that results in toxic effects varies widely with formulation and with the individual species being exposed. This transformation may occur in air particularly in the presence of moisture, and by ultraviolet radiation. Most modern Diazinon formulations are stable and do not degrade easily. Symptoms associated with Diazinon poisoning in humans include weakness, headaches, tightness in the chest, blurred vision. Non-reactive pinpoint pupils, salivation, sweating, nausea, vomiting, diarrhoea, abdominal cramps, and slurred speech.

**Reproductive effects:** No data currently available

**Teratogenic effects:** The data on teratogenic effects due to chronic exposure are inconclusive. One study has shown that injection of Diazinon into chicken eggs resulted in skeletal and spinal deformities in the chicks. Bobwhite quail born from eggs treated in a similar manner showed skeletal deformities but no spinal abnormalities.

Tests with dogs and pigs at higher levels (1.0-10.0 mg/kg/day) revealed gross abnormalities.

## Section 12. Ecotoxicological Information

<b>Persistence and degradability</b>	No data available on product
<b>Bioaccumulation</b>	No data available on product
<b>Mobility in Soil</b>	No data available on product
<b>Other adverse effects</b>	No data available on product
<b>Precautions</b>	Do not allow to enter waterways.

**Common name:** Diazinon

Very toxic to aquatic organisms may cause long-term adverse effects to the aquatic environment.

**Effects on birds:** Birds are significantly more susceptible to Diazinon than other wildlife.  
LD50 for birds range from 2.75 mg/kg to 40.8 mg/kg

**Effects on aquatic Organisms:** Highly toxic to fish. Some evidence shows that saltwater fish are more susceptible than freshwater fish.  
LC50 in rainbow trout is 2.6 – 3.2 mg/L  
LC50 in fathead minnow and goldfish >15 mg/L

**Effects on other Organisms:** Highly toxic to bees

**Breakdown in soil and groundwater:** Low persistence in soil. Half life is 2 to 4 weeks. Bacterial enzymes can speed the breakdown of diazinon and have been used in treating emergency situations such as spills. Diazinon seldom migrates below the top half inch in soil, but in some instances it may contaminate groundwater.

Breakdown in water: Breakdown rate is dependent on the acidity of water. At highly acidic levels, one half of the compound disappeared within 12 hours while in a neutral; solution, it took 6 months to degrade to one half of the original concentration.

Breakdown in vegetation: In plants a low temperature and high oil content tend to increase the persistence of Diazinon. Generally half life is rapid in leafy vegetables, forage crops and grass. The range is from 2 to 14 days. In rice plants only 10% of the residue was present after 9 days. Diazinon is absorbed by plant roots when applied to the soil and translocated to other parts of the plant.

### Section 13. Disposal Considerations

**Disposal Method:** Dispose of this product only by using according to the label or at an approved landfill. Container Disposal: Triple rinse container and add rinsate to spray tank. Empty containers and product should not be burnt. Dispose of container in a suitable landfill or take to an Agrecovery collection site. Do not use container for any other purpose.



**Precautions:** Do not allow product to enter waterways.

**Disposal methods to avoid:** Do not burn product or container.

### Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ; NZS 5433**



#### **Road and Rail Transport**

UN No: 3082  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Diazinon)

#### **Air Transport**

UN No: 3082  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Diazinon)

#### **Marine Transport**

UN No: 3082  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Diazinon)  
Marine Pollutant Yes

## Special Provisions:

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

## Section 15 Regulatory Information

### This substance is hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020

**HSNO Approval Code:** HSR002481

**HSNO Classification:** Flammable liquid Category 4, Acute oral toxicity Category 4, Acute dermal toxicity Category 4, Acute inhalation toxicity Category 4, Reproductive toxicity Category 2, Specific target organ toxicity (repeated exposure) Category 1, Hazardous to the aquatic environment acute Category 1, Hazardous to the aquatic environment chronic Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to terrestrial invertebrates.

Refer to EPA website [www.epa.govt.nz](http://www.epa.govt.nz) for the full controls document - HSR002481

HSW (HS) Regulations 2017	Trigger Quantity
HSW (Hazardous substance) Regulations Part 4 Certified Handlers and supervision and training of workers	HSW Reg 4.5 – 4.6 Information, instruction, training and supervision.
Location Certificate	Not required
Signage Trigger Quantities	100 L (9.1A)
Fire Extinguishers	500 L (3.1D - 2 required)
Emergency Response Plan	100 L (9.1A)
Secondary Containment	100 L (9.1A)
Tracking	Not required
HSNO Additional Controls and Variations	
Variation to Hazardous Property Controls Notice Part 4B	The maximum application rate for this substance of 2400 g diazinon/ha, with a maximum of 2 applications: (i) per crop cycle; or (ii) per year in the same application area for non-cropping situations.
Variation to Hazardous Property Controls Notice Part 4C	a person who applies this substance by a ground-based application method that is not listed in Table 2 of Schedule 10 must have one of the qualifications listed in column 1 of the last row of Table 2.
Organophosphate/carbamate - notification requirements	(1) For wide-dispersive applications, no person may apply, or engage another person to apply, the substance unless that person has given written notice of the proposed application to any person likely to be directly affected by the application, including occupiers and owners of land, dwellings or buildings or property that is immediately abutting the application area. (2) The notice referred to in subclause (1) must— (a) be given at least 2 working days but no more than 4 weeks in advance of each application; and (b) specify the following: (i) the location of application area that the



	substance will be applied to; (ii) the date and approximate duration of each application; (iii) the steps to be taken by the notified parties to avoid exposure; (iv) the name of the organisation/s undertaking the application; (v) contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application).
Use restrictions	When the substance is applied indoors, application must be carried out using automated application equipment
<b>Hazardous Property Controls Notice 2017</b>	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions
HPC Notice Part 2	Certain substances restricted to workplaces only
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Substances that are hazardous to the environment: Site and storage controls
HPC Notice Part 4 Clause 47	Equipment for environmentally hazardous substances must be appropriate
HPC Notice Part 4 Clause 48	Records of use of agrichemicals
HPC Notice Part 4 Clause 52	Agrichemicals that are hazardous to the aquatic environment must not be applied to water
HPC Notice Part 4 Subpart C	Qualifications required for application of substances that are hazardous to the environment
<b>ACVM Act and Regulations</b>	
ACVM Approval No See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration controls	P7724

## Section 16 Other Information

### Glossary

ACVM	Agricultural Compounds and Veterinary Medicines Act 1997.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms Act 1996.
HSW	Health and Safety at Work Act 2015.
HSW (HS) Regulations	Health and Safety at Work (Hazardous Substances) Regulations 2017.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level.
WES	Workplace Exposure Limit.

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

This document has been issued by Adama New Zealand Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which is held by Adama New Zealand Ltd or has been obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. While Adama New Zealand Ltd have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Adama New Zealand Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS. The information herein is given in good faith, but no warranty, express or implied is made.

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