



Infosafe No™ NU011 Issue Date : May 2010 ISSUED by NUFARM

Product Name **DIMETHOATE Systemic Insecticide**

Classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name DIMETHOATE Systemic Insecticide
Product Code 1070
Product Type Group 1B Insecticide
Company Name NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address 103-105 Pipe Road Laverton North
Victoria 3026 Australia
Emergency Tel. 1800 033 498 (24hr Australia)
Telephone/Fax Number Tel: +61 3 9282-1000
Fax: +61 3 9282-1001
Recommended Use For the control of a wide range of pests on fruit, vegetables, pastures, cotton, lucerne, peanuts and ornamentals as per the Directions for Use table.
Other Information This MSDS 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. HAZARDS IDENTIFICATION

Hazard Classification Classified as hazardous
HAZARDOUS SUBSTANCE.
DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase(s) Classified as hazardous
R10 Flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness and cracking.
R67 Vapours may cause drowsiness and dizziness
Safety Phrase(s) S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

| Ingredients | Name | CAS | Proportion |
|--------------------|--|------------|-------------------|
| | Dimethoate | 60-51-5 | 400 g/L |
| | Liquid Hydrocarbons | 64742-94-5 | 255 g/L |
| | Cyclohexanone | 108-94-1 | 30-60 % |
| | Other ingredients (considered non-hazardous) | | Balance |

Substance Chemical Family Organophosphate

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
Obtain medical assistance.
Ingestion Rinse mouth thoroughly with water.
Give a glass of water.
Seek medical advice immediately.
If swallowed do NOT induce vomiting; seek medical advice immediately and show

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this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

The above first aid instructions are mandated by the Commonwealth Department of Health and Ageing via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about one tablespoon) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.

Skin Remove contaminated clothing and wash skin thoroughly with soap and water. Obtain medical advice immediately.

Eye If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice.

First Aid Facilities If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

Advice to Doctor An anticholinesterase compound. If the material is dissolved in solvents, e.g., petroleum solvents, vomiting may cause pulmonary aspiration. Instead, the stomach should be emptied as soon as possible by careful gastric lavage (using a cuffed endotracheal tube already in place). Artificial respiration should be started at the first sign of respiratory failure. Cautious administration of fluids is advised, as well as general supportive and symptomatic pharmacological treatment and absolute rest. As early as possible, administer 2 mg of atropine sulfate i.v. and 1000-2000 mg of pralidoxime chloride or 250 mg of obidoxime chloride (adult dose) i.v. to patients suffering from severe respiratory difficulties, convulsions, and unconsciousness. Repeated doses of 2 mg of atropine sulfate should be given, as required, based on the respiration, blood pressure, pulse frequency, salivation, and convulsion conditions. The dose and the frequency of atropine varies with each patient, but the patient should remain fully atropinised (signs include dilated pupils, dry mouth, skin flushing). Diazepam should be given in all but the mildest cases in doses of 10 mg, s.c. or i.v., which may be repeated as required. For children, the doses are 0.04-0.08 mg of atropine/kg body weight, 250 mg of pralidoxime chloride per child, or 4-8 mg of obidoxime chloride/kg body weight. Morphine, barbiturates, phenothiazine derivatives, tranquillizers, and all kinds of central stimulants are contraindicated.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products If involved in a fire, it will emit dimethyl sulphide, methyl mercaptans and possibly phosphorus pentoxide.

Special Protective Equipment for fire fighters Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

Hazchem Code 2W

Emergency Action in case of Fire If exposed to fire, keep container cool by spraying with water.

Other Information STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. Do NOT flush with water.

Clean-up Methods - Large Spillages Place damaged containers in recovery bins (if available) and return to manufacturer.

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| Environmental Precautions | Contaminated earth (after a spill) can be treated with lime to hasten decomposition of the active ingredient. At pH9, approximately 50% will decompose in 12 days. |
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7. HANDLING AND STORAGE

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| Conditions for Safe Storage | Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight. Store in a locked enclosure. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs. Protect from direct sunlight and temperatures above 40°C. If storing for more than 2-3 months, avoid temperatures above 30°C. |
| Other Information | Always read the label and any attached leaflet before use. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| National Exposure Standards | No biological exposure limit allocated. No exposure standard for this product has been set, however, an exposure standard has been set for cyclohexanone at 100 mg/m ³ . The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m ³ ; 17ppm TWA, as total hydrocarbon. |
| Engineering Controls | Natural ventilation is sufficient when handling concentrate and preparing spray solution. |
| Respiratory Protection | Do not inhale spray mist. |
| Personal Protective Equipment | When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves, goggles, impervious footwear and half piece respirator with combined dust and gas cartridge (canister). Class A filter cartridge. |
| Hygiene Measures | After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment. |
| Requirements Concerning Special Training | Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Form | Liquid |
| Appearance | Amber liquid |
| Odour | Characteristic odour |
| Solubility in Water | Disperses in water. Not soluble. |
| Specific Gravity | 1.057 |
| Vapour Pressure | 0.25 mPa @ 25°C for dimethoate |
| Surface Tension | 9.5 mN/m |
| Flash Point | 52°C |
| Flammability | Flammable Liquid. |
| Flammable Limits - Lower | 1.3% for cyclohexanone |
| Flammable Limits - Upper | 9.4% for cyclohexanone |
| Kinematic Viscosity | 4.7 x 10 ⁻⁶ m ² /sec |

10. STABILITY AND REACTIVITY

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| Chemical Stability | Stable under normal conditions. Hydrolyses at pH >7. |
| Incompatible Materials | Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. |

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Hazardous Reactions Keep away from strong oxidising agents.

Hazardous Polymerization Hazardous polymerisation is not possible.

11. TOXICOLOGICAL INFORMATION

Toxicology Information No harmful effects are expected if the precautions on the label and this MSDS are followed.

Inhalation Breathing vapour can result in headaches, dizziness and possible nausea. Breathing in high concentrations of vapour can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.

Ingestion The concentrate is harmful if swallowed. Symptoms of overexposure to large quantities of product may include: nausea, vomiting, abdominal pains, diarrhea, pinpoint pupils, blurred vision, profuse sweating, salivations and muscle twitching. If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or pulmonary oedema.

Skin Prolonged contact with the concentrate may result in absorption of dimethoate in harmful amounts. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.

Eye The concentrate may cause irritation of the eyes.

Chronic Effects Regular exposure may result in lowering of cholinesterase activity which will recover within a few days after exposure ceases. Regular exposure may result in effects on the liver and blood.

Acute Toxicity - Oral LD50 (rat) 250 - 325 mg/kg for dimethoate

Acute Toxicity - Dermal LD50 (rat) >2000 mg/kg for dimethoate

Acute Toxicity - Inhalation LC50 (rat) (4hr) >1.6 mg/l for dimethoate

Skin Irritation Not a skin irritant.

Skin Sensitisation Product is not a skin sensitiser.

Other Information The Australian Acceptable Daily Intake (ADI) for dimethoate for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.2 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 2008).

12. ECOLOGICAL INFORMATION

Persistence / Degradability Not readily biodegradable.

Other Precautions Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.

Environ. Protection Marine pollutant.

Acute Toxicity - Fish The following is data for the active ingredient, dimethoate. LC50 (96hr) for bluegill sunfish is 6 mg/l. LC50 (96hr) for rainbow trout is 6.2 mg/l. EC50 (48hr) is (for dimethoate) 3.3 mg/l.

Acute Toxicity - Daphnia

Acute Toxicity - Other Organisms The following data is for the active ingredient, dimethoate. Moderately toxic to birds. LD50 for mallard ducks is 41.7 mg/kg. Bees: Toxic to bees. LD50 0.17 µg/bee.

13. DISPOSAL CONSIDERATIONS

Product Disposal On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

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Container Disposal Do not use this container for any other purpose.
 Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations.
 Returnable containers: empty contents fully into application equipment.
 Replace cap, close all valves and return to the point of supply for refill or storage.
 If recycling, replace cap and return clean containers to recycler or designated collection point.
 If not recycling, puncture or shred and bury containers in local authority landfill.
 If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.
 Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

Transport Information It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.
U.N. Number 3017
Proper Shipping Name ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE - (contains Dimethoate and cyclohexanone)
DG Class 6.1
Sub.Risk 3
Hazchem Code 2W
Packaging Method 3.8.6
Packing Group III
Storage and Transport Considered dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
EPG Number 6C3
IERG Number 17
IMO Marine Pollutant Marine Pollutant

15. REGULATORY INFORMATION

Poisons Schedule S6
National and or International Regulatory Information There is a legislative requirement in most States in Australia for workers to be medically monitored when using organophosphates, by:- 'estimation of red cell and plasma cholinesterase activity towards the end of the day on which organophosphates have been used'.
 Ref: Control of Workplace Hazardous Substances, NOHSC:1005.
Packaging & Labelling POISON
 KEEP OUT OF REACH OF CHILDREN
 READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category Harmful
AICS (Australia) All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS Revised 26/05/2010
Contact Person/Point Revisions Highlighted Normal Hours: Mr Volker Maier Phone: +61 3 9282 1000
 After Hours: Shift Supervisor Phone: 1800 033 498
 The MSDS was reviewed. Various changes were made to the information.
 References to Atropine have been removed.
 ...End Of MSDS...



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