

# PRODUCT SAFETY DATA SHEET

## DANADIM

### 1. 1. Identification of the Preparation and the Company:

#### Identification of the Preparation:

Trade Name: DANADIM®

An insecticide for use in agriculture and horticulture

#### Company Identification:

Headland Agrochemicals Ltd.

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### 2. 2. Composition and Information on Ingredients:

Ingredient	CAS No	Conc'n	Class'n	Risk Phrases
Dimethoate	60-51-5	39% w/w	Harmful Xn	R21/22
Cyclohexanone		43% w/w	Harmful Xn Flammable	R20 R10
Xylene		13% w/w	Harmful Xn Irritating Xi Flammable	R20/21 R38 R10
Emulsifiers		5% w/w		
(Product code no. 3A6-3619-02)				

### 3. Hazards:

Harmful if swallowed. May cause sensitisation by skin contact. Harmful to aquatic organisms.

EU Classification: Flammable R10, Harmful Xn R22, Irritant Xi R43, Harmful to aquatic organisms R52

IMPORTANT: This product contains an anticholinesterase organophosphorus compound, dimethoate. DO NOT USE if under medical advice NOT to work with such compounds.

### 4. First Aid Measures:

Eyes: Irrigate gently with clean water for at least 15 minutes. Seek medical attention without delay.

Skin: Remove contaminated clothing. Wash exposed skin and hair thoroughly with soap and water and seek medical attention without delay.

Ingestion: Keep patient cool and at rest. If conscious, give 1 or 2 glasses of water to drink and induce vomiting. Repeat until vomit is

clear. Call a doctor AT ONCE and show him this leaflet or the product container label.

Inhalation: Remove from exposure and provide maximum ventilation.  
If unconscious, secure airway and place in recovery position  
If heart-beat is absent, give external cardiac compression  
If there is coughing or difficulty breathing, keep at rest in a position of maximum comfort. Call a doctor without delay.

Symptoms of

Poisoning These may include: excessive sweating, headache, weakness, faintness and giddiness, nausea, stomach pains, vomiting, blurred vision, muscle twitching.  
If any of the above symptoms occur, particularly when there is known contamination, STOP WORK. Remove contaminated clothing. Wash exposed skin and hair. Prevent all exertion. Call a doctor AT ONCE and show him this label.

Guide to

Doctor: This product contains an anticholinesterase organophosphorus compound, dimethoate. It also contains petroleum distillates which may present an aspiration hazard.

IN ALL CASES AND AS EARLY AS POSSIBLE inject atropine sulphate 2mg or *pro rata* for children and repeat (if necessary) until fully atropinised.

IF AVAILABLE administer pralidoxime 1 gramme by intramuscular injection. Repeat after 3-4 hours.

Other measures:

Keep airway clear.

Watch respiration – intubation with endotracheal tube or tracheotomy may be necessary in conjunction with artificial ventilation. Put patient at complete rest under observation in hospital for 24 hours at least.

Confirmation of

Diagnosis: By estimating cholinesterase activity (5ml blood, unhaemolysed, collected in an anticoagulant).

## 5. 5. Fire Fighting Measures

Danadim will burn. If involved in a fire, decomposition fumes and vapours will be toxic and malodorous, and include dimethyl sulphide, phosphorus pentoxide and oxides of nitrogen, carbon and sulphur. Fire fighters should wear breathing apparatus.

Use dry chemical, foam, water spray, carbon dioxide, sand or earth. Use water spray to keep fire-exposed containers cool.

Prevent entry of the product or contaminated water into watercourses ditches or drains by bunding the area with sand or earth if possible.

## 6. Accidental Release (Spillage)

Wear suitable protective clothing (see Section 8). Remove contaminated clothing immediately. Do not eat drink or smoke. Keep bystanders away. Provide maximum ventilation.

Spillages on impervious surfaces should be absorbed with an inert absorbent material such as sawdust, Fullers earth or other absorbent clay, or sand. Shovel into labelled containers for later transfer to a safe place for disposal. Large spillages should be banded to prevent spread.

Rinse the area with soda lye when all traces of spillage have been removed.

Large spillages which soak into the ground should be dug up and shovelled into labelled containers for later transfer to a safe place for disposal.

Prevent spillages from entering watercourses sewers or drains. Inform the authorities if contamination of waterways, sewers or drains is threatened or occurs.

Dimethoate can be hydrolysed in water by heating and by adjusting the pH (alkaline) It may also be disposed of by controlled incineration with flue gas scrubbing.

## **7. Storage and Handling**

Keep in original container, tightly closed.

Keep cool and dry in a suitable agricultural chemical store under lock and key. Keep out of bright sunshine and away from sources of heat. Do not store at temperatures above 25°C. Above 35°C the product will begin to decompose, increasing the risk of explosion.

Keep away from food, drink and animal feedingstuffs and out of reach of children.

Avoid contact with skin, eyes or clothing. Avoid breathing vapours.

## **8. Personal Protection**

Wear coveralls, suitable protective gloves (barrier-laminate, butyl or nitrile rubber or viton) and face-shield to BS2092 when handling the concentrated product or contaminated surfaces and dealing with spillages. Wear suitable respiratory equipment in cases of insufficient ventilation. Avoid breathing the spray mist when using.

Decontaminate all personal protective equipment after use.

Occupational Exposure Limits: TLV (Cyclohexanone): 100 mg/m<sup>3</sup>  
TLV (Xylene): 100 ppm.

## **9. Physical and Chemical Properties**

Appearance: a clear liquid with a faint peach colour

Odour: faint characteristic mercaptanic odour

Boiling point/range: Decomposes at 117°C

Vapour pressure: Dimethoate: 1.85 x 10<sup>-6</sup> mm Hg at 25°C

Cyclohexanone: 3.5 mm Hg at 20°C

Xylene: 3.9 mm Hg at 20°C

Solubility: Completely emulsifies in water

Specific Gravity: 1.055  
PH: 2.5 (5% aqueous solution)  
Octanol/water  
Partition coefficient: Log Kow = 0.704  
Flashpoint: 39°C (Pensky-Martens CC)  
Autoignition temp.: 314°C  
Flammable limits: Xylene 1-7 vol %  
Cyclohexanone 1.3-9.4 vol %

#### 10. 10. Stability and Reactivity

Stability: Stable. Stores for at least 2 years in original containers in normal agricultural chemical storage conditions. Do not store at temperatures above 25°C. Decomposes rapidly at temperatures above 80°C.

Reactivity: Avoid contact with strong alkalis, amines and oxidising agents. Corrosive to copper, iron, steel and tinplate. Dimethoate is rapidly hydrolysed at pH>8

Decomposition: decomposition reactions involve rearrangements and polymerisations, releasing toxic, malodorous and inflammable compounds such as dimethyl sulfide and methyl mercaptan.

#### 11. 11. Toxicological Information

##### Acute Toxicity:

Acute oral LD50: 550 mg/kg.bw (rat)  
Acute dermal LD50: >2000 mg/kg.bw (rat)  
Inhalation LC50: Not determined  
Irritancy: Not classified as an irritant  
Sensitisation: May cause sensitisation by skin contact

##### Chronic toxicity:

Carcinogenicity: None detected  
Reproductive effects: None detected  
Mutagenic effects: Detected in bacterial tests but not in mammalian cells or in *in-vivo* tests.  
Teratogenic effects: Not teratogenic

#### 12. Environmental Protection

Harmful to fish and aquatic invertebrates:

96-hour LC50s: Rainbow trout – 61.3 ppm  
48-hour EC50: Daphnia – 5.4 ppm

Toxic to bees:

Topical LD50: Honeybees – <1µg/bee  
Acute oral LD50: Honeybees – <1µg/bee

Biodegradation: Readily and rapidly biodegradable in the environment. Negligible bio-accumulation potential. Degradation occurs in both aerobic and anaerobic conditions, and both biologically and abiologically. Half-life in soil is 4-10 weeks.

**13. Disposal of Unwanted Product and Used Containers**

Consult the local authorities before disposing of unwanted chemical.  
Triple-rinse containers and dispose of as permitted by local authorities. Do not re-use containers for any purpose.

**14. 14. Transport Information**

Road Transport: Hazardous (Toxic)  
UN Number: 3017  
Proper Shipping Name: Organophosphorus pesticide, Liquid, Toxic, Flammable (Dimethoate + organic solvents)  
UN Class: 6.1  
CPL Packing Group: III  
ADR/RID Description: Toxic  
IMDG Code: Marine pollutant

**15. 15. Regulatory Information**

Hazard Symbol: Primary symbol: Harmful Xn  
Secondary symbol: flammable  
Risk Phrases: R20 / 22 Harmful by inhalation and if swallowed  
R43 May cause sensitisation by skin contact  
R10 Flammable  
R52 Harmful to aquatic organisms.  
Safety Phrases: S2 Keep out of reach of children  
S25 Avoid contact with eyes  
S36/37 Wear suitable protective clothing and gloves  
S60 This material and its container must be disposed of as hazardous waste  
S61 Avoid release into the environment.  
Refer to special instructions / safety data sheets.

**16. Other Information**

The above information is intended to give health and safety guidance on the storage and transport of the substance or product to which it relates. It is not intended to apply to the use of the product, for which purpose the product label and any appropriate technical usage literature available should be consulted and any relevant licences, consents or approvals complied with. The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given. The information provided in this safety data sheet is accurate to the best of the issuer's available knowledge at the date of publication, and will be updated as and when appropriate. No liability will be accepted for any loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Danadim is approved by the Pesticides Safety Directorate for use as an agricultural and horticultural insecticide. Registration No. MAPP 11550

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