



## MATERIAL SAFETY DATA SHEET

### TITAN DIMETHOATE 400 SYSTEMIC INSECTICIDE

#### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	Titan Dimethoate 400 Systemic Insecticide
<b>Product Code</b>	-
<b>Other Names</b>	-
<b>Product Use</b>	Agricultural Insecticide
<b>Company Name</b>	Titan Ag Pty Ltd
<b>Address</b>	15/16 Princes Street Newport NSW 2106
<b>Telephone Number</b>	02 9999 6655
<b>Emergency Telephone</b>	02 9999 6655

#### 2. HAZARDS IDENTIFICATION

##### HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Classified as hazardous according to the criteria of Safe Work Australia.

<b>Hazards</b>	Xn - Harmful
<b>Risk Phrases</b>	R10 - Flammable R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed. R65 - Harmful: May cause lung damage if swallowed.
<b>Safety Phrases</b>	S2 - Keep out of reach of children. S24/25 - Avoid contact with skin and eyes. S36/37 - Wear suitable protective clothing and gloves.

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<b>Ingredient (common name)</b>	<b>CAS Number</b>	<b>Proportion</b>
dimethoate	60-51-5	40%
cyclohexanone	108-94-1	12%
other ingredients deemed not to be hazardous	proprietary	48%

#### 4. FIRST AID MEASURES

<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure. See instructions about treatment with atropine.
<b>Ingestion</b>	If swallowed, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention. Give activated charcoal if instructed. See instructions below about treatment with atropine.
<b>Skin</b>	Remove contaminated clothing and wash affected areas with soap

<b>Eyes</b>	and water. Seek immediate medical attention. Launder clothing before reuse.
<b>Medical Advice</b>	In case of eye contact, check for and remove any contact lenses. Immediately irrigate eyes with plenty of running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention. Atropine tablets 0.6mg and activated charcoal should be available in the area where this product is used. The usual instruction is to give one atropine tablet every 5 minutes until dryness of the mouth occurs.

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	For major fires call the Fire Brigade. Ensure that an escape path is available from any fire. Carbon dioxide, dry chemical, foam and water fog. Foam is the preferred medium for large fires.
<b>Hazardous Combustion Products</b>	Oxides of carbon, nitrogen and sulphur.
<b>Firefighting Equipment</b>	Wear ASCC approved self-contained breathing apparatus and full protective clothing.
<b>Unusual Fire or Explosion Hazards</b>	This product is classified as a flammable product. There is a moderate risk of an explosion if commercial quantities of this product are involved in a fire. Violent steam generation or eruption may occur if direct water stream is applied 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 distances.
<b>Hazchem Code</b>	2W

### 6. ACCIDENTAL RELEASE MEASURES

<b>Spills</b>	In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing. Contain spill and absorb with earth, clay, sand, or other absorbent material. Collect recoverable product into labelled containers for disposal. Do not flush with water. Launder protective clothing before re-use.
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### 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with eyes and skin. Do not inhale spray mist. Use of safe work practices is recommended. Observe good personal hygiene.
<b>Storage</b>	Store in the closed, original container in a dry, well ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs. Make sure that the product does not come into contact with strong oxidising agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Standards (Safe Work Australia)</b>	<b>Cyclohexanone:</b> TWA: 25 ppm / 100 mg/m <sup>3</sup> STEL: - ppm / - mg/m <sup>3</sup>
<b>Engineering Controls</b>	Local exhaust ventilation is recommended when vapours and mists can be released in excess of established airborne exposure limits.
<b>Respiratory Protection</b>	Use an ASCC approved full face supplied air respirator if high airborne concentrations of the material are present. See Australian Standards AS/NZS 1715 and 1716 for more information.
<b>Eye Protection</b>	Protective glasses or goggles and face shield.
<b>Skin Protection</b>	Elbow-length gloves and protective clothing.
<b>Hygienic Practices</b>	Food, beverages and tobacco products should not be stored or consumed where this material is in use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Colourless to yellow liquid.
<b>Odour</b>	Sulfurous, mercaptan like odour.
<b>Solubility in Water</b>	Emulsifiable.
<b>Boiling Point</b>	No information available
<b>Freezing Point</b>	No information available
<b>Vapour Pressure</b>	2.37kPa at 20°C (water vapour pressure)
<b>Vapour Density (Air = 1)</b>	No information available
<b>Specific Gravity</b>	Approximately 1.1
<b>pH</b>	No information available
<b>Volatility</b>	No information available
<b>Odour Threshold</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Flash Point</b>	39°C
<b>Upper Flammability Limit</b>	No information available
<b>Lower Flammability Limit</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal storage conditions.
<b>Incompatible Materials</b>	Strong acids and oxidising agents.
<b>Hazardous Decomposition Products</b>	Oxides of carbon, nitrogen and sulphur.
<b>Hazardous Polymerization Conditions to Avoid</b>	Will not occur. Heat, flames and spark. Keep away from sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicity</b>	<b>Dimethoate (technical):</b> Oral LD <sub>50</sub> (rat) = 180-330mg/kg Oral LD <sub>50</sub> (mice) = 160mg/kg Oral LD <sub>50</sub> (rabbit) = 400-500mg/kg
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<p><b>Routes of Exposure</b></p> <p><b>Acute Health Effects</b></p>	<p>Oral LD<sub>50</sub> (guinea pig) = 550-600mg/kg          Dermal LD<sub>50</sub> (rat) = 100-600mg/kg          Inhalation LC<sub>50</sub> (human) &gt; 2.0mg/L – 4 hour  <b>Cyclohexanone:</b>          Oral LD<sub>50</sub> (rat) = 1620mg/kg          Dermal LD<sub>50</sub> (rabbit) = 1000mg/kg          Inhalation, ingestion, eye and skin          Inhalation: Breathing vapour can cause headaches, dizziness and nausea. Breathing in high concentrations can cause central nervous system depression, loss of coordination, impaired judgement and unconsciousness.          Ingestion: Harmful if swallowed. Can cause nausea, vomiting, abdominal pain, diarrhea, blurred vision, profuse sweating and muscle twitching. Aspiration into the lung from vomiting may cause chemical pneumonitis or pulmonary oedema.          Eye: May cause eye irritation.          Skin: May cause skin irritation.</p>
<p><b>Chronic Health Effects</b></p>	<p>Prolonged skin contact with the concentrate can cause deffating of the skin and may result in dermatitis.          Regular exposure may result in lowering of cholinesterase activity.          Regular exposure may result in effects on the liver and blood.          Symptoms of acute exposure to organophosphate or cholinesterase-inhibiting compounds may include numbness, tingling sensations, in-coordination, headache, dizziness, tremor, nausea, abdominal cramps, sweating, blurred vision, difficulty breathing or respiratory depression, and slow heartbeat. Very high doses may result in unconsciousness, incontinence, and convulsions or fatality.</p>
<p><b>Existing Conditions Aggravated by Exposure</b></p>	<p>Persons with respiratory ailments, recent exposure to cholinesterase inhibitors, impaired cholinesterase production, or liver malfunction may be at increased risk from exposure to dimethoate. High environmental temperatures or exposure of dimethoate to visible or UV light may enhance its toxicity.</p>
<p><b>Carcinogenicity</b></p>	<p>No (ASCC, NTP, IARC)</p>

**12. ECOLOGICAL INFORMATION**

<p><b>Ecotoxicity</b></p>	<p><b>Dimethoate (technical):</b>  <b>Aquatic organisms:</b>          LC<sub>50</sub> (rainbow trout) = 6.2mg/L          LC<sub>50</sub> (bluegill sunfish) = 6 mg/L          LC<sub>50</sub> (catfish) &gt; 5000 mg/L  <b>Birds:</b>          Lc<sub>50</sub> (Japanese quail) = 341ppm – 5 day          LD<sub>50</sub> (mallard) = 41.7 – 63.5mg/kg          LD<sub>50</sub> (pheasant) = 20mg/kg  <b>Bees:</b>          LD<sub>50</sub> = 12µg/bee</p>
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**Mobility** Dimethoate is moderately toxic to fish and highly toxic to birds and honeybees.  
This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

### 13. DISPOSAL CONSIDERATIONS

**Disposal methods and containers** Instructions concerning the disposal of this product and its containers are given on the product label.  
Dispose according to applicable local and state government regulations.

**Special precautions for landfill or incineration** Please consult your state Land Waste Management Authority for more information

### 14. TRANSPORT INFORMATION

Classified as a dangerous good according to the Australian Code for the Transport of Dangerous goods by road or rail.

**UN Number** 3017  
**Proper Shipping Name** ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C  
**Dangerous Goods Class** 6.1  
**Subsidiary Risk** 3  
**Hazchem Code** 2W  
**Packing Group** III  
**Special Precautions** Not applicable

### 15. REGULATORY INFORMATION

Dimethoate and cyclohexanone are listed in the Australian Inventory of Chemical Substances (AICS).

**SUSDP Classification:** 6

### 16. OTHER INFORMATION

**Last Revision of MSDS** Rev 1.1 (07/09/2009)  
**Prepared by** MSDS.COM.AU Pty Ltd [www.msds.com.au](http://www.msds.com.au)  
**Abbreviations Used** IARC: International Agency for Research on Cancer  
NTP: National Toxicology Program (U.S.)  
OSHA: Occupational Safety and Health Administration (U.S.)  
STEL: Short term exposure limit  
TWA: Time weighted average

#### Emergency Contacts

**Titan Ag Pty Ltd** 02 9999 6655  
**Titan Ag Pty Ltd – Emergency Number** 02 9999 6655  
**Police and Fire Brigade** 000  
**Poisons Information Centre** 13 11 26



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Please read instructions / label before using product.