



# SAFETY DATA SHEET

According to Safe Work Australia

Printing date 09.12.2016

Revision: 09.12.2016

## 1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

**Product Name:** TITAN DIMETHOATE 400 SYSTEMIC HERBICIDE

**Other Means of Identification:** Mixture

**Recommended Use of the Chemical and Restriction on Use:** Agricultural insecticide

**Details of Manufacturer or Importer:**

Titan Ag Pty Ltd  
15/16 Princes Street  
Newport NSW 2106

**Phone Number:** 02 9999 6655

**Emergency telephone number:** 02 9999 6655

## 2 . HAZARDS IDENTIFICATION

**Hazardous Nature:**

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



flame

Flammable Liquids 3                      H226 Flammable liquid and vapour.



skull and crossbones

Acute Toxicity (Oral) 3                      H301 Toxic if swallowed.

Acute Toxicity (Dermal) 3                      H311 Toxic in contact with skin.



health hazard

STOT RE 1                                      H372 Causes damage to organs through prolonged or repeated exposure.



Acute Toxicity (Inhalation) 4                      H332 Harmful if inhaled.

Skin Sensitisation 1                                      H317 May cause an allergic skin reaction.

**Signal Word** Danger

**Hazard Statements**

H226                      Flammable liquid and vapour.

H301+H311 Toxic if swallowed or in contact with skin.

H332                      Harmful if inhaled.

H317                      May cause an allergic skin reaction.

H372                      Causes damage to organs through prolonged or repeated exposure.

**Precautionary Statements**

P233                      Keep container tightly closed.

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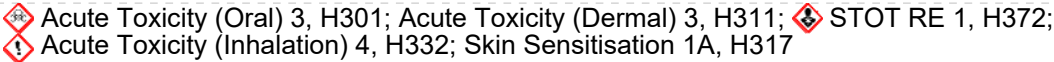

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P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P240	Ground/bond container and receiving equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321	Specific treatment (see on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P370+P378	In case of fire: Use for extinction: CO <sub>2</sub> , powder or water spray.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national regulations.

### 3 . COMPOSITION AND INFORMATION ON INGREDIENTS

**Chemical Characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

60-51-5	Dimethoate (ISO) 	40%
108-94-1	Cyclohexanone 	12%

### 4 . FIRST AID MEASURES

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

**Skin Contact:**

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

**Eye Contact:**

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

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**Ingestion:**

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Give activated charcoal if instructed. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: Harmful if inhaled. Inhalation may cause headache, dizziness and nausea. High concentrations can cause Central Nervous System (CNS) depression leading to impaired judgement, incoordination and unconsciousness.

Skin Contact: Toxic in contact with skin. May cause an allergic skin reaction. May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: Toxic if swallowed. May cause nausea, vomiting, abdominal pain, diarrhoea, sweating and twitching. Aspiration into lungs may cause chemical pneumonitis or pulmonary oedema.

**Medical Attention and Special Treatment:**

0.6 mg atropine tablets should be available where this product is used. In case of poisoning give one atropine tablet every 5 minutes until dryness of the mouth occurs.

## 5 . FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:**

Water fog, foam, dry chemical or carbon dioxide. Foam is preferred for large fires.

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon, nitrogen and sulphur.

Product is flammable. Vapours may travel considerable distances to a source of ignition where they can ignite, flashback, or explode. There is a moderate risk of explosion if involved in fire.

Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

**Special Protective Equipment and Precautions for Fire Fighters:**

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

## 6 . ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

**Environmental Precautions:**

In the event of a major spill, prevent spillage from entering drains or water courses.

**Methods and Materials for Containment and Cleaning Up:**

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal. Do not flush spill area with water.

## 7 . HANDLING AND STORAGE

**Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Contaminated work clothing must not be allowed out of the workplace. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

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**Conditions for Safe Storage:**

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Do not store in direct sunlight for prolonged periods. Keep away from strong acids and oxidising agents. Do not store with seed, fertiliser, animal feed or foodstuff.

### 8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Standards:****108-94-1 Cyclohexanone**

WES	TWA: 100 mg/m <sup>3</sup> , 25 ppm Sk
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**Engineering Controls:**

Maintain air concentration below occupational exposure standards, providing adequate ventilation. Use explosion-proof ventilating equipment.

**Respiratory Protection:**

Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. Full face supplied air respirator may be required if high concentrations are present. See Australian Standards AS/NZS 1715 and 1716 for more information.

**Skin Protection:**

Impervious elbow-length gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

**Eye and Face Protection:**

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

### 9 . PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless to yellow
<b>Odour:</b>	Sulphurous, mercaptan-like odour
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	No information available
<b>Melting point/Melting range:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	39 °C
<b>Flammability:</b>	Flammable.
<b>Auto-ignition Temperature:</b>	No information available
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	No information available
<b>Upper:</b>	No information available
<b>Vapour Pressure at 20 °C:</b>	2.37 kPa (water vapour pressure)
<b>Relative Density:</b>	~1.1
<b>Vapour Density:</b>	No information available

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**Evaporation Rate:** No information available**Solubility in Water:** Emulsifiable**Partition Coefficient (n-octanol/water):** No information available

## 10 . STABILITY AND REACTIVITY

**Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.**Chemical Stability:** Stable at ambient temperature and under normal conditions of use.**Conditions to Avoid:** Heat, sparks, open flames and other sources of ignition.**Incompatible Materials:** Strong acids and oxidising agents.**Hazardous Decomposition Products:** Oxides of carbon, nitrogen and sulphur.

## 11 . TOXICOLOGICAL INFORMATION

**Toxicity:****LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:****60-51-5 Dimethoate (ISO)**

Oral	LD <sub>50</sub>	160 mg/kg (mice) 550 - 600 mg/kg (guinea pig)
	LD <sub>50</sub>	180 - 330 mg/kg (rat)
Dermal	LD <sub>50</sub>	100 - 600 mg/kg (rat) 400 - 500 mg/kg (rabbit)
	LD <sub>50</sub>	
Inhalation	LC <sub>50</sub> /4 h	>2.0 mg/L (human)

**108-94-1 Cyclohexanone**

Oral	LD <sub>50</sub>	1620 mg/kg (rat)
Dermal	LD <sub>50</sub>	1000 mg/kg (rabbit)
Inhalation	LC <sub>50</sub> /4 h	8000 mg/l (rat)

**Acute Health Effects****Inhalation:**

Harmful if inhaled. Inhalation may cause headache, dizziness and nausea. High concentrations can cause Central Nervous System (CNS) depression leading to impaired judgement, incoordination and unconsciousness.

**Skin:** Toxic in contact with skin. May cause an allergic skin reaction. May cause skin irritation.**Eye:** May cause eye irritation.**Ingestion:**

Toxic if swallowed. May cause nausea, vomiting, abdominal pain, diarrhoea, sweating and twitching. Aspiration into lungs may cause chemical pneumonitis or pulmonary oedema.

**Skin Corrosion / Irritation:** Based on classification principles, the classification criteria are not met.**Serious Eye Damage / Irritation:** Based on classification principles, the classification criteria are not met.**Respiratory or Skin Sensitisation:** May cause an allergic skin reaction.**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.**Carcinogenicity:**

Cyclohexanone is classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.

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**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** Based on classification principles, the classification criteria are not met.**Chronic Health Effects:**

Repeated or prolonged skin exposure may cause de-fatting of the skin, dermatitis and possible sensitisation. Repeated exposure may cause lowering of cholinesterase activity leading to numbness, tingling, incoordination, headaches, dizziness, tremors, nausea, abdominal pain, sweating, blurred vision, breathing difficulties, lowered heart rate, unconsciousness, incontinence, convulsions or fatality. Repeated exposure may cause damage to liver or blood.

**Existing Conditions Aggravated by Exposure:**

Existing respiratory or liver conditions, or impaired cholinesterase production may be aggravated by exposure.

**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for dimethoate for a human is 0.001 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.1 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', March 2016).

## 12 . ECOLOGICAL INFORMATION

**Ecotoxicity:**

Dimethoate is highly toxic to birds and honeybees:

LC50/ 5 day 341 ppm (Japanese quail)

LD50 41.7 - 63.5 mg/kg (mallard duck)

LD50 20 mg/kg (pheasant)

LD50 12µg/bee

**Aquatic toxicity:****60-51-5 Dimethoate (ISO)**LC<sub>50</sub> 6 mg/L (bluegill)

6.2 mg/L (rainbow trout)

&gt;5000 mg/L (fish)

Dimethoate is moderately toxic to fish.

**Persistence and Degradability:** This product is biodegradable and will not accumulate in water or soil.**Bioaccumulative Potential:** No further relevant information available.**Mobility in Soil:** No further relevant information available.**Other adverse effects:** No further relevant information available.

## 13 . DISPOSAL CONSIDERATIONS

**Disposal Methods and Containers:** 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

**UN Number****ADG, IMDG, IATA**

UN3017

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**Proper Shipping Name**  
ADG, IMDG, IATA

ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC,  
FLAMMABLE (Dimethoate (ISO), Cyclohexanone)**Dangerous Goods Class****ADG Class:**

6.1 Toxic substances.

**Subsidiary Risk:**

3

**Packing Group:****ADG, IMDG, IATA**

III

**EMS Number:**

F-E,S-D

**Hazchem Code:**

.3W

**Special Provisions:**

61, 223, 274

**Limited Quantities:**

5L

**Packagings & IBCs - Packing Instruction:**

P001, IBC03

**Portable Tanks & Bulk Containers - Instructions:** T7**Portable Tanks & Bulk Containers - Special Provisions:**

TP2, TP28

## 15 . REGULATORY INFORMATION

**Australian Inventory of Chemical Substances:**

60-51-5 Dimethoate (ISO)

108-94-1 Cyclohexanone

**Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:**

Poisons Schedule: 6

## 16 . OTHER INFORMATION

**Date of Preparation or Last Revision:** 09.12.2016**Prepared by:** MSDS.COM.AU Pty Ltd[www.msds.com.au](http://www.msds.com.au)**Abbreviations and acronyms:**

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC<sub>50</sub>: Lethal concentration, 50 percentLD<sub>50</sub>: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Flammable Liquids 3: Flammable liquids – Category 3

Acute Toxicity (Oral) 3: Acute toxicity – Category 3

Acute Toxicity (Inhalation) 4: Acute toxicity – Category 4

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

Skin Sensitisation 1A: Skin sensitisation, Hazard Category 1A

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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## **Disclaimer**

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

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