

# Safety Data Sheet

according to WHS Regulations

Printing date 20.07.2021

Revision: 20.07.2021

## 1 Identification

**Product Name: Dimethoate 400 Herbicide****Other Means of Identification:** Mixture**Recommended Use of the Chemical and Restriction on Use:** Agricultural herbicide**Details of Manufacturer or Importer:**Titan Ag Pty Ltd  
Princes Street Marina  
Suite 15/16 Princes Street  
Newport NSW 2106**Phone Number:** 02 9999 6655**Emergency telephone number:** 02 9999 6655

## 2 Hazard(s) 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) 2                      H300 Fatal 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.

H300 Fatal if swallowed.

H311 Toxic in contact with skin.

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H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary Statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P370+P378	In case of fire: Use to extinguish: CO <sub>2</sub> , powder or water spray.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
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.

<b>Hazardous Components:</b>		
CAS: 60-51-5	Dimethoate (ISO) <div style="font-size: small;"> <span style="color: red;">☠</span> Acute Toxicity (Oral) 2, H300; Acute Toxicity (Dermal) 3, H311; <span style="color: red;">☠</span> STOT RE 1, H372;  <span style="color: red;">☠</span> Acute Toxicity (Inhalation) 4, H332; Skin Sensitisation 1, H317         </div>	40%
CAS: 108-94-1	Cyclohexanone <div style="font-size: small;"> <span style="color: red;">☠</span> Flammable Liquids 3, H226; <span style="color: red;">☠</span> Acute Toxicity (Inhalation) 4, H332         </div>	12%

**Additional information:** Petroleum distillate CAS no. not supplied: 40%

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### 4 First Aid Measures

**General Information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

In case of eye contact, rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention if symptoms persist.

**Ingestion:**

If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: Harmful if inhaled. Inhalation of vapours, fumes or aerosols may cause respiratory discomfort and distress, central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness. Cyclohexane vapour irritates the nose and throat and may cause incoordination, low body temperature, damage to the lungs, liver and kidney, breathlessness, unconsciousness and even death depending on the dose.

Skin Contact: Toxic in contact with skin. There may be sweating and muscle twitches at site of contact. Symptoms may be delayed several hours after exposure. Entry into the blood stream through cuts, abrasions or lesions may produce systemic injury with harmful effects. Symptoms for skin absorption are the same as for inhalation. May cause an allergic skin reaction.

Eye Contact: Direct eye contact may cause tearing, eyelid twitches, pupil contraction, loss of focus, blurred or dimmed vision with dilation of the pupils.

Ingestion: Fatal if swallowed. Ingestion may cause nausea, vomiting, depressed appetite, abdominal cramps and diarrhoea, thirst, acidic blood, breathing difficulties, convulsions, fainting, weakening of the immune system and death.

### 5 Fire Fighting Measures

**Suitable Extinguishing Media:**

Foam, dry chemical powder or carbon dioxide. Use water spray or fog for large fires only.

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon, nitrogen, phosphorus and sulfur, hydrogen chloride, phosgene and other pyrolysis products typical of burning organic material.

The product is flammable.

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

Vapours are heavier than air and may travel long distance to a source of ignition and flash back.

Minimise run off from fire fighting from entering watercourses or drains.

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**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 and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

**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. Use only non-sparking tools.

**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.

Take precautionary measures against static discharge. 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. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

**Conditions for Safe Storage:**

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from heat, sparks, open flames and other sources of ignition. Keep away from strong oxidising agents. Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime.

**8 Exposure Controls and Personal Protection****Exposure Standards:****CAS: 108-94-1 Cyclohexanone**

NES	TWA: 100 mg/m <sup>3</sup> , 25 ppm
	Sk

**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. See Australian Standards AS/NZS 1715 and 1716 for more information.

**Skin Protection:**

Elbow length PVC gloves, protective clothing, chemical resistant apron and safety boots. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information.

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**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>	Pale yellow
<b>Odour:</b>	Offensive mercaptan odour
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	No information available
<b>Melting point/freezing point:</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:</b>	No information available
<b>Relative Density:</b>	1.1
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Immiscible

## 10 Stability and Reactivity

**Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.

**Chemical Stability:** Stable at ambient temperature and under normal conditions of storage and use.

**Conditions to Avoid:** Heat, sparks, open flames, hot surfaces and direct sunlight.

**Incompatible Materials:**

Strong oxidising agents. Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime.

**Hazardous Decomposition Products:**

Hazardous combustion products include oxides of carbon, nitrogen, phosphorus and sulfur, hydrogen chloride and phosgene.

## 11 Toxicological Information

**Toxicity:****LD50/LC50 Values Relevant for Classification:****CAS: 60-51-5 Dimethoate (ISO)**

Oral	LDLo	30 mg/kg (human)
	LD50	350 mg/l (guinea pig)
		60 mg/kg (rat)

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Dermal	TDL <sub>o</sub>	286 mg/kg (human) (man)
	LD <sub>50</sub>	1000 mg/kg (rabbit) 353 mg/kg (rat)
	<b>CAS: 108-94-1 Cyclohexanone</b>	
Oral	LD <sub>50</sub>	1535 mg/kg (rat)
Dermal	LD <sub>50</sub>	948 mg/kg (rabbit)
Inhalation	LC <sub>50/4 h</sub>	8000 mg/l (rat)
	TCL <sub>o</sub>	75 ppm (human)

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

Harmful if inhaled. Inhalation of vapours, fumes or aerosols may cause respiratory discomfort and distress, central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness. Cyclohexane vapour irritates the nose and throat and may cause incoordination, low body temperature, damage to the lungs, liver and kidney, breathlessness, unconsciousness and even death depending on the dose.

**Skin:**

Toxic in contact with skin. There may be sweating and muscle twitches at site of contact. Symptoms may be delayed several hours after exposure. Entry into the blood stream through cuts, abrasions or lesions may produce systemic injury with harmful effects. Symptoms for skin absorption are the same as for inhalation. May cause an allergic skin reaction.

**Eye:**

Direct eye contact may cause tearing, eyelid twitches, pupil contraction, loss of focus, blurred or dimmed vision with dilation of the pupils.

**Ingestion:**

Fatal if swallowed. Ingestion may cause nausea, vomiting, depressed appetite, abdominal cramps and diarrhoea, thirst, acidic blood, breathing difficulties, convulsions, fainting, weakening of the immune system and death. Aspiration into the lung from vomiting 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.

**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 contact will cause effects similar to acute symptoms in addition to impaired memory and loss of concentration, severe depression and acute psychosis, irritability, confusion, apathy, emotional liability, speech difficulties, headache, spatial disorientation, delayed reaction times, sleepwalking, drowsiness or insomnia.

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Long term cyclohexanone exposure may cause liver and kidney changes, clouding of the eye lens and cataract development.

**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for dimethoate (ISO) for a human is 0.001 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL 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: Australian Pesticides and Veterinary Medicines Authority, 'Acceptable Daily Intakes for Agricultural and Veterinary Chemicals', 2021).

## 12 Ecological Information

**Ecotoxicity:** Dimethoate is highly toxic to bees. Dimethoate is moderate to highly toxic to birds.

**Aquatic toxicity:****CAS: 60-51-5 Dimethoate (ISO)**

LC50/48 h	6 mg/l (bluegill)
LC50	6.2 mg/l (rainbow trout)

**Persistence and Degradability:**

This product is biodegradable. It will not accumulate in the soil or water. The persistence of dimethoate and cyclohexanone in water/soil is low.

**Bioaccumulative Potential:** The bioaccumulation potential of dimethoate and cyclohexanone is low.

**Mobility in Soil:** The mobility of dimethoate and cyclohexanone is high.

## 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

<b>UN Number</b>	
<b>ADG, IMDG, IATA</b>	UN3017
<b>Proper Shipping Name</b>	
<b>ADG, IMDG, IATA</b>	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE
<b>Dangerous Goods Class</b>	
<b>ADG Class:</b>	6.1 Toxic substances.
<b>Subsidiary Risk:</b>	3
<b>Packing Group:</b>	
<b>ADG, IMDG, IATA</b>	III
<b>Marine pollutant:</b>	No
<b>Hazchem Code:</b>	•3W
<b>Special Provisions:</b>	61, 223, 274

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**Limited Quantities:** 5L

**Packagings & IBCs - Packing Instruction:** P001, IBC03

**Packagings & IBCs - Special Packing Provisions:** Not applicable

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

**Portable Tanks & Bulk Containers - Special Provisions:** TP2, TP28

## 15 Regulatory Information

### Australian Inventory of Industrial Chemicals:

All ingredients are listed.

### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 6

## 16 Other Information

**Date of Preparation or Last Revision:** 20.07.2021**Prepared by:****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)  
 LC50: Lethal concentration, 50 percent  
 LD50: 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) 2: Acute toxicity - oral – Category 2  
 Acute Toxicity (Dermal) 3: Acute toxicity - dermal – Category 3  
 Acute Toxicity (Inhalation) 4: Acute toxicity - inhalation – Category 4  
 Skin Sensitisation 1: Skin sensitisation, Hazard Category 1  
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

**Data altered compared to the previous version:**

Section 4: Symptoms, Section 5: Specific Hazards Arising from the Chemical, Section 7: Conditions for Safe Storage, Section 11: Acute Health Effects

**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 - July 2020”

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