

# Safety Data Sheet

according to WHS Regulations

Printing date 03.12.2021

Revision: 03.12.2021

## 1 Identification

**Product Name: TITAN DICLOFOP-METHYL 500 EC SELECTIVE HERBICIDE****Other Means of Identification:** Mixture**APVMA Approval Number:** 66100**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), IATA and IMDG/IMSBC.

Not subject to the ADG Code when transported in Australia by Road or Rail in packagings that do not incorporate a receptacle exceeding 500(L) or less; or IBCs (refer to SP AU01). However if transported by Air or Sea, this provision does not apply.



Health hazard

Toxic To Reproduction 1A H360 May damage fertility or the unborn child.

Aspiration Hazard 1 H304 May be fatal if swallowed and enters airways.



Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Acute Toxicity (Oral) 4 H302 Harmful if swallowed.

Skin Sensitisation 1 H317 May cause an allergic skin reaction.

Flammable Liquids 4 H227 Combustible liquid.

**Signal Word** Danger**Hazard Statements**

H227 Combustible liquid.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H360 May damage fertility or the unborn child.

H304 May be fatal if swallowed and enters airways.

H410 Very toxic to aquatic life with long lasting effects.

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**Precautionary Statements**

- P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P273 Avoid release to the environment.  
 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.  
 P331 Do NOT induce vomiting.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P362+P364 Take off 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 CO2, powder or water spray to extinguish.  
 P391 Collect spillage.  
 P403 Store in a well-ventilated place.  
 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.**Hazardous Components:**

CAS: 51338-27-3	diclofop-methyl (ISO)  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Acute Toxicity (Oral) 4, H302; Skin Sensitisation 1, H317	45-50%
CAS: 64742-94-5	Solvent naphtha (petroleum), heavy arom.  Aspiration Hazard 1, H304	25-30%
CAS: 872-50-4	N-methyl-2-pyrrolidone  Toxic To Reproduction 1B, H360;  Skin Corrosion/Irritation 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	10%

### 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. Never give anything by mouth to an unconscious person. Seek medical attention.

**Symptoms Caused by Exposure:**

Skin Contact: May cause an allergic skin reaction.

Eye Contact: May cause eye irritation, stinging, reddening and watering. Prolonged exposure or delayed treatment may cause permanent eye damage.

Ingestion: Harmful if swallowed. May cause lung damage if swallowed, leading to severe injury or death.

### 5 Fire Fighting Measures

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

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon, hydrogen chloride, other chlorine compounds and water.

Product is combustible.

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

Prevent run-off from fire fighting entering drains or water courses.

HAZCHEM Code: •3Z

**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.

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. Wash spill area, preventing runoff from entering drains.

### 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.

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 in original container, tightly closed when not in use. Protect from heat, sparks, open flames, hot surfaces and direct sunlight. Keep away from strong oxidising agents.

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## 8 Exposure Controls and Personal Protection

**Exposure Standards:****CAS: 872-50-4 N-methyl-2-pyrrolidone**

WES	STEL: 309 mg/m <sup>3</sup> , 75 ppm TWA: 103 mg/m <sup>3</sup> , 25 ppm Sk
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**Engineering Controls:** Ensure adequate ventilation of the working area.**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:**

PVC or rubber 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>	Light brown to dark brown.
<b>Odour:</b>	Aromatic hydrocarbon 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>	~200 °C (solvent)
<b>Flash Point:</b>	65-92 °C
<b>Flammability:</b>	Product is combustible.
<b>Auto-ignition Temperature:</b>	No information available
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	0.6 Vol %
<b>Upper:</b>	7 Vol %
<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>	Miscible

## 10 Stability and Reactivity

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

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**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.**Hazardous Decomposition Products:**

Oxides of carbon, hydrogen chloride, other chlorine compounds and water.

## 11 Toxicological Information

**Toxicity:****LD50/LC50 Values:****CAS: 51338-27-3 diclofop-methyl (ISO)**

Oral LD50 563-693 mg/kg (rat)

Dermal LD50 &gt;2,000 mg/kg (rat)

640 mg/kg (rabbit)

LD50 &gt;5,000 mg/kg (rat)

**CAS: 64742-94-5 Solvent naphtha (petroleum), heavy arom.**

Oral LD50 5,000 mg/kg (rat)

LD50 2,000 mg/kg (rabbit)

**CAS: 872-50-4 N-methyl-2-pyrrolidone**

Oral LD50 3,914 mg/kg (rat)

LD50 8,000 mg/kg (rabbit)

**Acute Health Effects****Inhalation:** No adverse health effects expected.**Skin:** May cause an allergic skin reaction.**Eye:** May cause eye irritation, stinging, reddening and watering.**Ingestion:** Harmful if swallowed. May cause lung damage if swallowed, leading to severe injury or death.**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:** This product does NOT contain any IARC listed chemicals.**Reproductive Toxicity:** May damage fertility or the unborn child.**Specific Target Organ Toxicity (STOT) - Single Exposure:**

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

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

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

**Aspiration Hazard:** May be fatal if swallowed and enters airways.**Chronic Health Effects:**

Prolonged exposure or delayed treatment may cause permanent eye damage. Prolonged exposure may cause skin defatting and cracking.

**Existing Conditions Aggravated by Exposure:** No information available

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**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for diclofop-methyl for a human is 0.002 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 0.25 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:**

Non-toxic to bees.

Oral LD50 4400 mg/kg (bobwhite quail)

Oral LD50 &gt;10000 mg/kg (Japanese quail)

LC50 /8 day dietary &gt;20000 ppm (coturnix quail)

LC50 /8 day dietary 13000 ppm (bobwhite quail)

LC50 /8 day dietary &gt;20000 ppm (mallard duck)

**Aquatic toxicity:**

Very toxic to aquatic life with long lasting effects.

**CAS: 51338-27-3 diclofop-methyl (ISO)**

LC50/96 h 0.35 mg/l (rainbow trout)

LC50/48 h 4.03 ppm (daphnia)

**CAS: 64742-94-5 Solvent naphtha (petroleum), heavy arom.**

EC50/48 h 12 mg/l (daphnia)

EC50/72 h 2.5 mg/l (skeletonema costatum)

LC50/96 h 45 mg/l (fathead minnow)

**CAS: 872-50-4 N-methyl-2-pyrrolidone**

EC50/24 h &gt;1,000 mg/l (daphnia)

EC50/72 h &gt;500 mg/l (green algae)

LC50/96 h 1,072 mg/l (fathead minnow)

&gt;5,000 mg/l (rainbow trout)

**Persistence and Degradability:** Half-life in soil: 10- 30 days.**Bioaccumulative Potential:** No data available on finished product.**Mobility in Soil:** No data available on finished product.**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**

UN3082

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<b>Proper Shipping Name ADG, IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diclofop-methyl (ISO))
<b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diclofop-methyl (ISO)), MARINE POLLUTANT
<b>Dangerous Goods Class ADG Class:</b>	9
<b>Subsidiary Risk:</b>	
<b>Packing Group: ADG, IMDG, IATA</b>	III
<b>Marine pollutant:</b>	Symbol (fish and tree)
<b>EMS Number:</b>	F-A,S-F
<b>Hazchem Code:</b>	•3Z
<b>Special Provisions:</b>	274, 331, 335, 375, AU01
<b>Transport/Additional information:</b>	Not subject to the ADG Code when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs. (refer to SP AU01)
<b>Limited Quantities:</b>	5L
<b>Packagings &amp; IBCs - Packing Instruction:</b>	P001, IBC03, LP01
<b>Packagings &amp; IBCs - Special Packing Provisions:</b>	PP1
<b>Portable Tanks &amp; Bulk Containers - Instructions:</b>	T4
<b>Portable Tanks &amp; Bulk Containers - Special Provisions:</b>	TP1, TP29

## 15 Regulatory Information

**Australian Inventory of Industrial Chemicals:**

All components are on the inventory, or in compliance with the inventory.

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

Poisons Schedule: 6

**Australian Pesticides and Veterinary Medicines Authority:**

This product is registered with the Australian Pesticides and Veterinary Medicines Authority. APVMA number 66100.

## 16 Other Information

**Date of Preparation or Last Revision:** 03.12.2021**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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

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STEL: Short Term Exposure Limit

TWA: Time Weighted Average

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

Flammable Liquids 4: Flammable liquids – Category 4

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

Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

Toxic To Reproduction 1A: Reproductive toxicity – Category 1A

Toxic To Reproduction 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aspiration Hazard 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

**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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