

# Safety Data Sheet

according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

## 1 Identification

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

**Other Means of Identification:** Mixture

**APVMA Number:** 82380

**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 packages 500kg(L) or less; or IBCs (refer to SP AU01). However if transported by Air or Sea, this provision does not apply.



Health hazard

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



Skin Sensitisation 1 H317 May cause an allergic skin reaction.

Flammable Liquids 4 H227 Combustible liquid.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

**Signal Word** Danger

**Hazard Statements**

H227 Combustible liquid.

H317 May cause an allergic skin reaction.

H304 May be fatal if swallowed and enters airways.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary Statements**

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.

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).

P331 Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of water.

(Contd. on page 2)

# Safety Data Sheet

## according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 1)

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 CO<sub>2</sub>, powder or water spray to extinguish.  
 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: 64742-94-5	Solvent naphtha (petroleum), heavy arom.	50-55%
	☠ Aspiration Hazard 1, H304	
CAS: 99129-21-2	Clethodim	35-40%
	☠ Acute Toxicity (Oral) 4, H302; Skin Sensitisation 1, H317; Aquatic Chronic 3, H412	

### 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, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

**Ingestion:**

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: May cause mild irritation.

Skin Contact: May cause an allergic skin reaction. May cause skin irritation, itchiness and reddening.

Eye Contact: May cause eye irritation, stinging and reddening.

Ingestion: May be fatal if swallowed and enters airways. May cause irritation, reddening and burning sensation to mouth and throat, decreased motor activity, incoordination and hyperactivity.

### 5 Fire Fighting Measures

**Suitable Extinguishing Media:**

Use fire extinguishing methods suitable to surrounding conditions. Recommended is alcohol-resistant foam.

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon, oxides of nitrogen, oxides of sulfur, other sulphur compounds, hydrogen cyanide gas, smoke and water.

Product is combustible.

Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

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

(Contd. on page 3)

# Safety Data Sheet

## according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 2)

**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, safety glasses, 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. If absorbent material is not available or spill is too large, create a dike to stop spill from spreading. Collect the spilled material and place into a suitable container for disposal.

**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 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, strong acids and strong bases.

**8 Exposure Controls and Personal Protection****Exposure Standards:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Engineering Controls:** Ensure adequate ventilation of the working area.

**Respiratory Protection:**

Respiratory protection is not required under normal conditions of use.

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.

(Contd. on page 4)

# Safety Data Sheet

## according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 3)

**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>	Brown
<b>Odour:</b>	Characteristic
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	Not determined.
<b>Melting point/freezing point:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	>61 °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>	No information available
<b>Upper:</b>	No information available
<b>Vapour Pressure:</b>	No information available
<b>Relative Density:</b>	0.98
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Emulsifies into water.

### 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, strong acids and strong bases.

**Hazardous Decomposition Products:**

Oxides of carbon, oxides of nitrogen, oxides of sulfur, other sulphur compounds, hydrogen cyanide gas, smoke and water.

### 11 Toxicological Information

**Toxicity:****LD50/LC50 Values Relevant for Classification:****CAS: 64742-94-5 Solvent naphtha (petroleum), heavy arom.**

Oral	LD50	5,000 mg/kg (rat)
	LD50	2,000 mg/kg (rabbit)

**CAS: 99129-21-2 Clethodim**

Oral	LD50	1,360-1,630 mg/kg (rat)
	LD50	>5,000 mg/kg (rabbit)
Inhalation	LC50/4 h	>3.9 mg/l (rat)

**Acute Health Effects**

**Inhalation:** May cause mild irritation.

(Contd. on page 5)

# Safety Data Sheet

## according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 4)

**Skin:** May cause an allergic skin reaction. May cause skin irritation, itchiness and reddening.**Eye:** May cause eye irritation, stinging and reddening.**Ingestion:**

May be fatal if swallowed and enters airways. May cause irritation, reddening and burning sensation to mouth and throat, decreased motor activity, incoordination and hyperactivity.

**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:** 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:**

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

**Aspiration Hazard:** May be fatal if swallowed and enters airways.**Chronic Health Effects:** No data associated with long term health effects.**Existing Conditions Aggravated by Exposure:** No data available.**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for clethodim for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 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:** Non-toxic to birds. Non-toxic to bees.**Aquatic toxicity:**

Harmful to aquatic life with long lasting effects.

**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: 99129-21-2 Clethodim**

LC50/96 h	120 mg/l (bluegill)
	67 mg/l (rainbow trout)
LC50/48 h	120 mg/l (daphnia)
EC50/120hr	57.8 mg/l (algae)

**Persistence and Degradability:**

Not persistent in soils. Clethodim half-life in soil: 3 days.

Persistent in the aquatic environment. Half-life in water: 128 days. Half-life in sediments: 214 days.

**Bioaccumulative Potential:** Bioaccumulation is not expected to occur.

(Contd. on page 6)

# Safety Data Sheet

according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 5)

**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

<b>UN Number</b> ADG, IMDG, IATA	UN3082
<b>Proper Shipping Name</b> ADG, IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (Clethodim)
<b>Dangerous Goods Class</b> ADG Class:	9
<b>Subsidiary Risk:</b>	
<b>Packing Group:</b> ADG, IMDG, IATA	III
<b>Marine pollutant:</b>	No
<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 in Australia by Road or Rail in packages 500kg(L) or less; 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: 5

**Australian Pesticides and Veterinary Medicines Authority:** 82380

## 16 Other Information

**Date of Preparation or Last Revision:** 04.11.2021

(Contd. on page 7)

# Safety Data Sheet

## according to WHS Regulations

Printing date 04.11.2021

Revision: 04.11.2021

**Product Name: TITAN CLETHODIM 360 HERBICIDE**

(Contd. of page 6)

**Prepared by:** MSDS.COM.AU Pty Ltd

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

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 Sensitisation 1: Skin sensitisation, Hazard Category 1

Aspiration Hazard 1: Aspiration hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term (Chronic). Category 3

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

Section 2. Hazards identification

Section 3: Hazardous Components

Section 4: Symptoms Caused by Exposure

Section 5: Specific Hazards Arising from the Chemical

Section 10: Hazardous Decomposition Products

Section 11. Toxicological Information

Section 12: Aquatic toxicity

Section 15. Regulatory Information

**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”

The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Titan Ag Pty Ltd makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.