

## 1 Identification

**Product Name:** TITAN ETHOFUMESATE 500 SC

**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  
15/16 Princes Street  
Newport NSW 2106

**Phone Number:** 02 9999 6655

**Emergency telephone number:** 02 9999 6655

## 2 Hazard(s) Identification

**Hazardous Nature:**

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

**Signal Word** None

**Hazard Statements**

H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P273 Avoid release to the environment.

P391 Collect spillage.





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: 26225-79-6	Ethofumesate (ISO)  Aquatic Chronic 2, H411	44.3%
CAS: 57-55-6	Propylene glycol	1 - 10%
CAS: 2634-33-5	1,2-benzisothiazol-3(2H)-one  Serious Eye Damage/Irritation 1, H318;  Aquatic Acute 1, H400;  Acute Toxicity (Oral) 4, H302; Skin Corrosion/Irritation 2, H315; Skin Sensitisation 1, H317	0.005 - <0.05%

## 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.

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**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.

**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 immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: May be harmful if inhaled.

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: May be harmful if swallowed.

## 5 Fire Fighting Measures

**Suitable Extinguishing Media:**

Water fog, alcohol-resistant foam, dry chemical powder or carbon dioxide. Do not use full water jet.

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon and sulphur and other toxic gases and vapours.

This product is not flammable, but may burn or decompose in a 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.

## 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. 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 extreme temperatures and direct sunlight. Protect from freezing. Keep away from food, drink and animal feed.

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## 8 Exposure Controls and Personal Protection

### Exposure Standards:

**CAS: 57-55-6 Propylene glycol**

WES	TWA: 474* 10** mg/m <sup>3</sup> , 150* ppm *vapour&particluates;**particulates only
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**Engineering Controls:** Ensure adequate ventilation of the working area.

### Respiratory Protection:

Respiratory protection is not required under normal use conditions.

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:

Nitrile 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 suspension
<b>Colour:</b>	Brown
<b>Odour:</b>	Characteristic
<b>Odour Threshold:</b>	No information available
<b>pH-Value at 23 °C:</b>	6.0 - 7.5 (100%)
<b>Melting point/freezing point:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	No information available
<b>Flammability:</b>	Product is not 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>Density at 20 °C:</b>	~1.13 g/cm <sup>3</sup>
<b>Relative Density:</b>	No information available
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Miscible
<b>Partition Coefficient (n-octanol/water) at 25 °C:</b>	2.7 log POW
<b>Viscosity at 20 °C:</b>	200 - 450 mPa.s (Velocity gradient 20/s)

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## 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:** Extreme temperatures and direct sunlight.

**Incompatible Materials:** No further relevant information available.

**Hazardous Decomposition Products:** Oxides of carbon and sulphur and other toxic gases and vapours.

## 11 Toxicological Information

**Toxicity:**

**LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:**

**CAS: 57-55-6 Propylene glycol**

Oral	LD <sub>50</sub>	2,000 mg/kg (rat)
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Dermal	LD <sub>50</sub>	20,800 mg/kg (rabbit)
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**CAS: 2634-33-5 1,2-benzisothiazol-3(2H)-one**

Oral	LD <sub>50</sub>	1,020 mg/kg (rat)
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### Acute Health Effects

**Inhalation:** May be harmful if inhaled.

**Skin:** May cause skin irritation.

**Eye:** May cause eye irritation.

**Ingestion:** May be harmful if swallowed.

**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:** Sensitisation possible through skin contact.

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

**Chronic Health Effects:** No information available

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

### Additional toxicological information:

The Australian Acceptable Daily Intake (ADI) for ethofumesate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 30 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', 2020).

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## 12 Ecological Information

**Ecotoxicity:**

Ethofumesate:

LD50 &gt;8743 mg/kg (Bobwhite quail)

LD50 &gt;3552 mg/kg (Mallard Duck)

LD50 &gt;0.05 mg/kg (Bees)

**Aquatic toxicity:**

Toxic to aquatic life with long lasting effects.

LC <sub>50</sub> /96 h	64.1 mg/l (carp)
	68.8 mg/l (brachydanio rerio)
EC <sub>50</sub> /48 h	93.2 mg/l (daphnia)
EC <sub>50</sub> /96 h	9.7 mg/l (green algae)

**CAS: 2634-33-5 1,2-benzisothiazol-3(2H)-one**

EC <sub>50</sub> /48 h	3.7 mg/l (daphnia)
EC <sub>50</sub> /72 h	0.37 mg/l (algae)
LC <sub>50</sub> /96 h	0.169 ppm (rainbow trout)
LC <sub>50</sub> /48 h	>10 mg/l (daphnia)

**Persistence and Degradability:** Ethofumesate is not readily biodegradable.**Bioaccumulative Potential:** Bioaccumulation is not expected to occur. Ethofumesate BCF = 144**Mobility in Soil:** Ethofumesate is moderately mobile in soils.

## 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**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).  
UN3082**IMDG, IATA****Proper Shipping Name****ADG****IMDG**Not Regulated.  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S. (Ethofumesate (ISO)), MARINE  
POLLUTANT  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S. (Ethofumesate (ISO))**IATA****Dangerous Goods Class****ADG Class:****IMDG Class:**Not Regulated.  
9 Miscellaneous dangerous substances and articles.**Packing Group:****ADG**

Not Regulated.

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<b>IMDG, IATA</b>	III
<b>Marine pollutant:</b>	Yes 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>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 Chemical Substances:

CAS: 26225-79-6	Ethofumesate (ISO)
CAS: 57-55-6	Propylene glycol
CAS: 2634-33-5	1,2-benzisothiazol-3(2H)-one

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

Poisons Schedule: 5

### 16 Other Information

**Date of Preparation or Last Revision:** 11.03.2020**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)

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

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

Serious Eye Damage/Irritation 1: Serious eye damage/eye irritation – Category 1

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

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

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

#### 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 - February 2016"

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

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suitability of the information provided to the particular circumstances in which the product is used. (Contd. of page 6)