

Safety Data Sheet

according to WHS Regulations

Printing date 28.09.2021

Revision: 28.09.2021

1 Identification

Product Name: GLUFOSINATE 200 HERBICIDE by TITAN**Other Means of Identification:** Mixture**APVMA Number:** 66364**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:

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)



Health hazard

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

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



STOT SE 3 H336 May cause drowsiness or dizziness.

Signal Word Danger**Hazard Statements**

H360 May damage fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER/doctor if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

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3 Composition and Information on Ingredients

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

CAS: 77182-82-2	Glufosinate ammonium (ISO)	20%
	☠ Toxic To Reproduction 1B, H360; STOT RE 2, H373; ☠ Acute Toxicity (Oral) 4, H302; Acute Toxicity (Dermal) 4, H312; Acute Toxicity (Inhalation) 4, H332	
CAS: 107-98-2	1-methoxy-2-propanol	10-30%
	☠ Flammable Liquids 3, H226; ☠ STOT SE 3, H336	

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 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 flush eye continuously with large amounts of 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 medical attention if symptoms occur.

Symptoms Caused by Exposure:

Inhalation: May cause respiratory irritation. May cause drowsiness and dizziness.

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: May be harmful if swallowed. Symptoms of poisoning may include: shivering, cramps, stomach complaints, overheating, breathing difficulty, heart problems, convulsions, respiratory depression, loss of memory, drowsiness and/or loss of consciousness. These symptoms may be delayed from a few hours up to 48 hours after ingestion.

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, nitrogen and phosphorous, hydrogen chloride and ammonia.

Product is not flammable but may burn in a fire.

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

Minimise fire fighting measures entering drains and water courses.

Special Protective Equipment and Precautions for Fire Fighters:

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

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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.

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 out of direct sunlight. 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, strong acids and strong bases. Do not store in steel or aluminium containers.

8 Exposure Controls and Personal Protection

Exposure Standards:
CAS: 107-98-2 1-methoxy-2-propanol

NES	STEL: 553 mg/m ³ , 150 ppm TWA: 369 mg/m ³ , 100 ppm
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Engineering Controls:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits.

Respiratory Protection:

Respiratory protection is not required under normal use conditions.

Use an approved organic 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:

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.

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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:

Form:	Liquid
Colour:	Blue
Odour:	Weak characteristic odour
Odour Threshold:	No information available
pH-Value:	4-6 (1% solution)
Melting point/freezing point:	No information available
Initial Boiling Point/Boiling Range:	No information available
Flash Point:	No information available
Flammability:	Product is not flammable
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	No information available
Density:	No information available
Relative Density at 20 °C:	1.11
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Wettable
Solvent separation test:	
% Volatiles by Weight:	40 %

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:

Keep away from heat and sources of ignition. Protect from extreme temperatures and direct sunlight.

Incompatible Materials: Strong oxidising agents, strong acids and strong bases.

Hazardous Decomposition Products:

Oxides of carbon, nitrogen and phosphorous, hydrogen chloride and ammonia.

11 Toxicological Information

Toxicity:**LD50/LC50 Values Relevant for Classification:****CAS: 107-98-2 1-methoxy-2-propanol**

Oral	LD50	5660 mg/kg (rat)
Dermal	LD50	13000 mg/kg (rabbit)

CAS: 77182-82-2 Glufosinate ammonium (ISO)

Oral	LD50	1910 mg/kg (rat) (female)
		2170 mg/kg (rat) (male)

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Dermal	LD50	1400 mg/kg (rat) (male) ≥1380 mg/kg (rat) (female)
Inhalation	LC50/4 h	>3.22 mg/L (rat)

Acute Health Effects**Inhalation:** May cause respiratory irritation. May cause drowsiness and dizziness.**Skin:** May cause skin irritation.**Eye:** May cause eye irritation.**Ingestion:**

May be harmful if swallowed. Symptoms of poisoning may include: shivering, cramps, stomach complaints, overheating, breathing difficulty, heart problems, convulsions, respiratory depression, loss of memory, drowsiness and/or loss of consciousness. These symptoms may be delayed from a few hours up to 48 hours after ingestion.

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:** Based on classification principles, the classification criteria are not met.**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:** Suspected of damaging fertility or the unborn child.**Specific Target Organ Toxicity (STOT) - Single Exposure:** May cause drowsiness and dizziness.**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

May cause damage to organs through prolonged or repeated exposure.

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 glufosinate ammonium for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 2.1 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:

Glufosinate-ammonium is practically non-toxic to birds, earthworms, honeybees and other beneficial insects.

LC50 (8 day dietary) >5000 mg/kg (japanese quail)

Glufosinate-ammonium is expected to be moderately toxic to wild animals.

Aquatic toxicity:**CAS: 77182-82-2 Glufosinate ammonium (ISO)**

EC50/48 h	560-1000 mg/l (daphnia)
LC50/96 h	710 mg/l (rainbow trout) >1000 mg/l (bluegill)
LD50	1000 mg/L (scenedesmus subspicatus) 37 mg/l (scenedesmus subspicatus)

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Persistence and Degradability:

Product is considered readily biodegradable. Glufosinate-ammonium is very soluble in water and is hydrolytically and photolytically stable. It is rapidly degraded in surface levels of soils and in water.

Bioaccumulative Potential:

Glufosinate ammonium does not accumulate in the fatty tissues of fish or other animals.

Mobility in Soil: The potential for groundwater contamination with glufosinate ammonium is minimal.

Other adverse effects: No 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 Not regulated

Proper Shipping Name Not regulated

Dangerous Goods Class Not regulated

Packing Group: Not regulated

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

16 Other Information

Date of Preparation or Last Revision: 27.09.2021

Prepared by: MSDS.COM.AU Pty Ltd

www.msds.com.au

Abbreviations and acronyms:

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) 4: Acute toxicity – Category 4

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

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

STOT RE 2: Specific target organ toxicity (repeated exposure) – 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 - July 2020"

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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.