

Safety Data Sheet

according to WHS Regulations

Printing date 28.09.2021

Revision: 28.09.2021

1 Identification

Product Name: EOS HERBICIDE by TITAN

Other Means of Identification: Mixture

APVMA Number: 61860

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.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



Skull and crossbones

Acute Toxicity (Inhalation) 2 H330 Fatal if inhaled.



Health hazard

STOT RE 1

H372 Causes damage to organs through prolonged or repeated exposure.



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 Corrosion/Irritation 2

H315 Causes skin irritation.

Eye Irrit. 2A

H319 Causes serious eye irritation.

Skin Sensitisation 1

H317 May cause an allergic skin reaction.

STOT SE 3

H335 May cause respiratory irritation.

Signal Word Danger

Hazard Statements

H302 Harmful if swallowed.

H330 Fatal if inhaled.

H315 Causes skin irritation.

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H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

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.
 P273 Avoid release to the environment.
 P280 Wear protective gloves / eye protection / face protection.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P320 Specific treatment is urgent (see on this label).
 P314 Get medical advice/attention if you feel unwell.
 P330 Rinse mouth.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P391 Collect spillage.
 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.

3 Composition and Information on Ingredients

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

CAS: 1910-42-5	Paraquat (present as paraquat dichloride) ⚠️ Acute Toxicity (Oral) 3, H301; Acute Toxicity (Dermal) 3, H311; Acute Toxicity (Inhalation) 2, H330; ⚠️ STOT RE 1, H372; ⚠️ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠️ Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2, H319; STOT SE 3, H335	10-15%
CAS: 85-00-7	Diquat dibromide ⚠️ Acute Toxicity (Inhalation) 2, H330; ⚠️ STOT RE 1, H372; ⚠️ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠️ Acute Toxicity (Oral) 4, H302; Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2, H319; Skin Sensitisation 1, H317; STOT SE 3, H335	5-10%

Additional information: Emulsifiers, CAS No. not supplied: 10-29%

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 immediately.

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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 immediately.

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 immediately.

Symptoms Caused by Exposure:

Inhalation: Fatal if inhaled. May cause respiratory irritation, nose bleeding, sore throat and pulmonary oedema, which can be fatal.

Skin Contact: Causes skin irritation. May be harmful in contact with skin. May cause itchiness and reddening. May be absorbed through broken skin, causing symptoms similar to ingestion. May cause an allergic skin reaction and dermatitis.

Eye Contact: Causes serious eye irritation. May cause ulceration, corneal oedema and temporary blurred vision.

Ingestion: Harmful if swallowed. May cause irritation, reddening and burning sensation of the mouth and throat, vomiting, abdominal discomfort, diarrhoea, ulceration of the lips, throat and intestines, inflammation of the throat and difficulty swallowing.

5 Fire Fighting Measures

Suitable Extinguishing Media: Water fog or fine water spray.

Specific Hazards Arising from the Chemical:

During heating or in case of fire oxides of carbon, nitrogen, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, bromine compounds, smoke and water may be produced.

Product is not flammable. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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 measures from entering drains or water courses.

HAZCHEM code: 2X

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. 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.

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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 in original container, tightly closed when not in use. Protect from excessive heat and direct sunlight. Protect from physical damage. Check regularly for leaks or spills.

8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 85-00-7 Diquat dibromide**NES | TWA: 0.5 mg/m³**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards.

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:

Form:	Liquid
Colour:	Dark green to blue
Odour:	Characteristic unpleasant pyridine odour
Odour Threshold:	No information available
pH-Value:	5-6.5 (1% solution)
Melting point/freezing point:	Undetermined.
Initial Boiling Point/Boiling Range:	~100 °C
Flash Point:	Not applicable
Flammability:	Product is not flammable
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	No information available

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Explosion Limits:**Lower:** No information available**Upper:** No information available**Vapour Pressure at 20 °C:** 2.37 kPa (water vapour pressure)**Relative Density at 20 °C:** ~1.16 (expected)**Vapour Density:** No information available**Evaporation Rate:** No information available**Solubility in Water:** Completely soluble**Partition Coefficient (n-octanol/water):** No information available

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:** Excessive heat and direct sunlight.**Incompatible Materials:** No information available**Hazardous Decomposition Products:**

Oxides of carbon, nitrogen, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, bromine compounds, smoke and water.

11 Toxicological Information

Toxicity:**LD50/LC50 Values Relevant for Classification:****CAS: 1910-42-5 Paraquat (present as paraquat dichloride)**

Oral	LD50	104 mg/kg (mouse)
		157 mg/kg (rat)
		22-42 mg/kg (guinea pig)
		25-50 mg/kg (dog)
Dermal	LD50	236-500 mg/kg (rat)

Acute Health Effects**Inhalation:**

Fatal if inhaled. May cause respiratory irritation, nose bleeding and a sore throat. May cause pulmonary oedema, which can be fatal.

Skin:

Causes skin irritation. May be harmful in contact with skin. May cause itchiness and reddening. May be absorbed through broken skin, causing symptoms similar to ingestion. May cause an allergic skin reaction and dermatitis.

Eye: Causes serious eye irritation. May cause ulceration, corneal oedema and temporary blurred vision.**Ingestion:**

Harmful if swallowed. May cause irritation, reddening and burning sensation of the mouth and throat, vomiting, abdominal discomfort, diarrhoea, ulceration of the lips, throat and intestines, inflammation of the throat and difficulty swallowing.

Skin Corrosion / Irritation: Causes skin irritation.**Serious Eye Damage / Irritation:** Causes serious eye irritation.**Respiratory or Skin Sensitisation:** May cause an allergic skin reaction.**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.

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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:** May cause respiratory irritation.**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 skin exposure may cause irritation and allergic dermatitis. May cause kidney and liver damage.

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

The Australian Acceptable Daily Intake (ADI) for paraquat (as cation) for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.45 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).

The Australian Acceptable Daily Intake (ADI) for diquat for a human is 0.002 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.2 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:

Paraquat dichloride:

- LD50 262-380 mg/kg (hen)
- LD50 981 mg/kg (bobwhite quail)
- LD50 970 mg/kg (japanese quail)
- LD50 4048 mg/kg (mallard duck)

Aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

CAS: 1910-42-5 Paraquat (present as paraquat dichloride)

LC50	2.15-13 mg/L (trout)
	32 mg/L (rainbow trout)

Persistence and Degradability: Biodegradable, will not accumulate in soil or water.**Bioaccumulative Potential:** No data available on finished product.**Mobility in Soil:** No data available on finished product.**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.

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14 Transport Information

UN Number ADG, IMDG, IATA	UN3016
Proper Shipping Name ADG	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, (paraquat (present as paraquat dichloride)), ENVIRONMENTALLY HAZARDOUS
IMDG	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, (paraquat (present as paraquat dichloride)), MARINE POLLUTANT
IATA	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, (paraquat (present as paraquat dichloride))
Dangerous Goods Class ADG Class: Subsidiary Risk:	6.1 Toxic substances.
Packing Group: ADG, IMDG, IATA	III
Marine pollutant:	Yes Symbol (fish and tree)
EMS Number:	F-A,S-A
Hazchem Code:	2X
Special Provisions:	61, 223, 274
Limited Quantities:	5L
Packagings & IBCs - Packing Instruction:	P001, IBC03, LP01
Portable Tanks & Bulk Containers - Instructions:	T7
Portable Tanks & Bulk Containers - Special Provisions:	TP2, TP28

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: 7

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:

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

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TWA: Time Weighted Average

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

Acute Toxicity (Oral) 3: Acute toxicity – Category 3

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

Acute Toxicity (Inhalation) 2: Acute toxicity – Category 2

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

Serious Eye Damage/Irritation 2: Serious eye damage/eye irritation – Category 2

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

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

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

STOT RE 1: Specific target organ toxicity (repeated exposure) – 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

Data altered compared to the previous version:

Section 2: Hazardous Nature, Section 3: Hazardous Components, Section 4: Inhalation, Section 4: Symptoms Caused by Exposure, Section 5: Specific Hazards Arising from the Chemical, Section 8: Exposure Standards, 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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