

SAFETY DATA SHEET

According to Safe Work Australia

1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: TITAN DIQUAT 200 HERBICIDE

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. HAZARDS 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 Tox. 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.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Signal Word Danger

Hazard Statements

H330 Fatal if inhaled.

H315 Causes skin irritation.

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.



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H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P284	[In case of inadequate ventilation] wear respiratory protection.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P264	Wash hands 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.
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).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P391	Collect spillage.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
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:

85-00-7	Diquat dibromide	20%
⚠ Acute Tox. 2, H330; ⚠ STOT RE 1, H372; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335		

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 immediate medical attention.

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: Fatal if inhaled. May cause respiratory irritation, headaches, increased secretion of mucous, nose bleeding and a sore throat. May cause pulmonary oedema, which can be fatal.

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

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

Ingestion: May be corrosive to the gastrointestinal tract, causing nausea, vomiting, diarrhoea, ulceration of the lips, throat and intestines, severe dehydration, changes in body fluid balances, kidney failure and liver damage.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Small fires: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use a solid water stream as it may scatter and spread fire.

Large fires: Use alcohol-resistant foam. Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical:

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

There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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. 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. 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:

85-00-7 Diquat dibromide

NES | TWA: 0.5 mg/m³

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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:	Viscous liquid
Colour:	Dark red to brown
Odour:	Non specific odour
Odour Threshold:	No information available
pH-Value:	4-5
Melting point/Melting range:	~0 °C
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
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	Not determined.
Relative Density:	~1.2
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 use.

Conditions to Avoid: Excessive heat and direct sunlight.

Incompatible Materials:

No information available

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Aluminium, mild steel, iron - corrosive in contact with metals.

Hazardous Decomposition Products:

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

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

No information available

85-00-7 Diquat dibromide

Oral	LD50	120 mg/kg (rat)
Dermal	LD50	400 - 500 mg/kg (rabbit)

Acute Health Effects

Inhalation:

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

Skin:

Causes skin irritation, itchiness and reddening. May cause an allergic skin reaction, skin rash and inflammation.

Eye:

Causes serious eye irritation, stinging, reddening and watering. Prolonged exposure or delayed treatment may cause permanent eye damage.

Ingestion:

May be corrosive to the gastrointestinal tract, causing nausea, vomiting, diarrhoea, ulceration of the lips, throat and intestines, severe dehydration, changes in body fluid balances, kidney failure and liver damage.

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.

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:

Prolonged exposure or delayed treatment may cause permanent eye damage. May cause loss of appetite, decreased growth, lung changes, skin inflammation, changes to fingernails and damage to the kidneys.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:

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: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', June 2014).

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12 . ECOLOGICAL INFORMATION

Ecotoxicity:

Non-toxic to bees.

Moderately toxic to birds.

Diquat dibromide:

LD50 200-400 mg/kg (hen)

LD50 564 mg/kg (mallard duck)

LC50/ 5 day dietary 1300 ppm (japanese quail)

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Persistence and Degradability:

Highly persistent, diquat half life in soil: >1000 days.

May accumulate in soil.

Bioaccumulative Potential: Bioaccumulation is not expected to occur.

Mobility in Soil: Diquat binds strongly to soil particles, and so has low mobility and will not leach.

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	UN1760
ADG, IMDG, IATA	
Proper Shipping Name	
ADG	CORROSIVE LIQUID, N.O.S.
IMDG, IATA	CORROSIVE LIQUID, N.O.S. 8 I
Dangerous Goods Class	
ADG Class:	8 Corrosive 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:	223, 274
Limited Quantities:	5L
Packagings & IBCs - Packing Instruction:	P001, IBC03, LP01
Packagings & IBCs - Special Packing Provisions:	Not applicable
Portable Tanks & Bulk Containers - Instructions:	T7

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Portable Tanks & Bulk Containers - Special Provisions:

TP2, TP28

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:

85-00-7 Diquat dibromide

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 6

16 . OTHER INFORMATION

Date of Preparation or Last Revision: 27.08.2015

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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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)

Data compared to the previous version altered: GHS format

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 - December 2011"

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