

Safety Data Sheet

according to WHS Regulations

Printing date 11.02.2021

Revision: 11.02.2021

1 Identification

Product Name: TITAN DIQUAT 200 HERBICIDE

Other Means of Identification: Mixture

APVMA Number: 64177

Recommended Use of the Chemical and Restriction on Use: Agricultural herbicide

Details of Manufacturer or Importer:

Titan Ag

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).



skull and crossbones

Acute Toxicity (Inhalation) 3 H331 Toxic if inhaled.



health hazard

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



corrosion

Corrosive To Metals 1 H290 May be corrosive to metals.



environment

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



Skin Corrosion/Irritation 2 H315 Causes skin irritation.

Serious Eye Damage/Irritation 2A H319 Causes serious eye irritation.

Skin Sensitisation 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Aquatic Acute 2 H401 Toxic to aquatic life.

Signal Word Danger

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Hazard Statements

H290 May be corrosive to metals.
 H331 Toxic 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.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P234 Keep only in original packaging.
 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.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P311 Call a POISON CENTER/doctor.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 Specific treatment (see on this label).
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P314 Get medical advice/attention if you feel unwell.
 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.
 P390 Absorb spillage to prevent material-damage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P406 Store in a corrosion resistant container /container with a resistant inner liner.
 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: 85-00-7	Diquat dibromide	20%

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 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: Toxic 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 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.

Medical Attention and Special Treatment:

Administer activated charcoal (100g/kg for adults or 2g/kg for children).

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 and smoke may be produced.

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

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

Prevent firefighting run off from entering drains and 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.

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.

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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. Do not store in aluminium, mild steel or iron containers.

8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 85-00-7 Diquat dibromide**

WES	TWA: 0.5 mg/m ³
	Sen

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:

Elbow-length 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/freezing point:	~0 °C
Initial Boiling Point/Boiling Range:	~100 °C
Flash Point:	Not applicable
Flammability:	Product is not flammable

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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
Viscosity:	No information available

10 Stability and Reactivity

Possibility of Hazardous Reactions:

Hazardous polymerisation will not occur.
May be corrosive to metals.

Chemical Stability: Stable at ambient temperature and under normal conditions of storage and use.

Conditions to Avoid: Excessive heat and direct sunlight.

Incompatible Materials: Aluminium, mild steel and iron.

Hazardous Decomposition Products:

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

11 Toxicological Information

Toxicity:**LD50/LC50 Values Relevant for Classification:****CAS: 85-00-7 Diquat dibromide**

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

Acute Health Effects**Inhalation:**

Toxic 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.

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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 NOAEL 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', 2020).

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)

Aquatic toxicity:

Toxic to aquatic life with long lasting effects.

CAS: 85-00-7 Diquat dibromide

IC50/96 h (static) 21 mg/l (rainbow trout)

EC50/48 h 5.9 mg/l (daphnia)

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.

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14 Transport Information

UN Number	UN1760
ADG, IMDG, IATA	
Proper Shipping Name	
ADG	CORROSIVE LIQUID, N.O.S. (Diquat dibromide)
IMDG	CORROSIVE LIQUID, N.O.S. MARINE POLLUTANT (Diquat dibromide)
IATA	Corrosive liquid, n.o.s (diquat dibromide)
Dangerous Goods Class	
ADG Class:	8 Corrosive substances.
Subsidiary Risk:	None
Packing Group:	
ADG, IMDG, IATA	III
Marine pollutant:	
EMS Number:	F-A,S-B
Hazchem Code:	2X
Special Provisions:	223, 274
Limited Quantities:	5 L
Packagings & IBCs - Packing Instruction:	P001, IBC03, LP01
Portable Tanks & Bulk Containers - Instructions:	T7
Portable Tanks & Bulk Containers - Special Provisions:	TP1, TP28

15 Regulatory Information

Australian Inventory of Industrial Chemicals:

All ingredients are listed except one which are trade secret.

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

Poisons Schedule: 6

16 Other Information

Date of Preparation or Last Revision: 11.02.2021**Prepared by:** MSDS.COM.AU Pty Ltdwww.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)

Corrosive To Metals 1: Corrosive to metals – Category 1

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

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

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Acute Toxicity (Inhalation) 3: Acute toxicity - inhalation – Category 3
Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2
Serious Eye Damage/Irritation 2: Serious eye damage/eye irritation – Category 2
Serious Eye Damage/Irritation 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 Acute 2: Hazardous to the aquatic environment, short-term (Acute). Category 2
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

Data altered compared to the previous version:

Section 1: Details of Manufacturer or Importer.
Section 2: Hazardous Nature.
Section 2: Hazard Statements.
Section 2: Precautionary Statements.
Section 5: Specific Hazards Arising from the Chemical.
Section 10: Possibility of Hazardous Reactions.
Section 10: Incompatible Materials.
Section 12: Aquatic toxicity.

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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