



4 Farmers ... For Farmers

Printing date 10.05.2017

Safety Data Sheet

according to WHS Regulations

Revision: 10.05.2017

Product Name: 4FARMERS DIQUAT 200 HERBICIDE

Other Means of Identification: Mixture

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

Details of Manufacturer or Importer:

4Farmers Australia Pty Ltd
70 McDowell Street
Welshpool WA 6106

Phone Number: +61 8 9356 3446

Emergency telephone number: National Poison Information Centre: 13 11 26

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 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). However if transported by Air or Sea, this provision does not apply. Then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG/IMSBC respectively. See details below and in Section 14 of this SDS.



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 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

Hazard Statements

H330 Fatal if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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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

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P284	[In case of inadequate ventilation] wear respiratory protection.
P280	Wear protective gloves / 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:**

Hazardous Components:		
85-00-7	Diquat dibromide	20%
	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 2A, H319; Skin Sensitisation 1, H317; STOT SE 3, H335	
7664-38-2	Phosphoric acid	<1%
	Skin Corrosion/Irritation 1B, H314; Serious Eye Damage/Irritation 1, H318	

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 for at least 20 minutes. Seek immediate medical attention if poisoning has occurred.

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.

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Ingestion:

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give charcoal if instructed. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: Fatal if inhaled. May cause headache and respiratory irritation.

Skin Contact: Causes skin irritation, redness, inflammation and rash. May cause an allergic skin reaction. May be harmful in contact with skin.

Eye Contact: Causes serious eye irritation, redness and watering.

Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation or corrosion, nausea, vomiting and dehydration.

5 Fire Fighting Measures

Suitable Extinguishing Media: Water fog or fine spray.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include oxides of carbon and nitrogen, other nitrogen compounds, hydrogen cyanide, bromine compounds, water and smoke..

Product is not flammable.

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. Wash area after spills.

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.

Take precautionary measures against static discharge. 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. Contaminated work clothing must not be allowed out of the workplace. 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. Store at temperatures below 30 °C.

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8 Exposure controls and personal protection

Exposure Standards:**85-00-7 Diquat dibromide**WES TWA: 0.5 mg/m³
Sen**7664-38-2 Phosphoric acid**WES STEL: 3 mg/m³
TWA: 1 mg/m³**Engineering Controls:**

Maintain air concentration below occupational exposure standards, providing adequate ventilation.

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: Liquid
Colour: Dark red-brown
Odour: Obnoxious

Odour Threshold: No information available**pH-Value:** 6.5 (1% solution)**Melting point/freezing point:** ~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:** Not applicable**Upper:** Not applicable**Vapour Pressure at 20 °C:** 2.37 kPa**Relative Density:** ~1.2**Vapour Density:** No information available**Evaporation Rate:** No information available

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Solubility in Water: Completely soluble
Partition Coefficient (n-octanol/water): No information available
Viscosity: Viscous

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.

Incompatible Materials: No further relevant information available.

Hazardous Decomposition Products:

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

11 Toxicological Information

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

7664-38-2 Phosphoric acid

Oral	LD ₅₀	1530 mg/kg (rat)
Dermal	LD ₅₀	2740 mg/kg (rabbit)
Inhalation	LC ₅₀ /1 h	>850 mg/m ³ (rat)

Acute Health Effects

Inhalation: Fatal if inhaled. May cause headache and respiratory irritation.

Skin:

Causes skin irritation, redness, inflammation and rash. May cause an allergic skin reaction. May be harmful in contact with skin.

Eye: Causes serious eye irritation, redness and watering.

Ingestion:

May be harmful if swallowed. May cause gastrointestinal irritation or corrosion, nausea, vomiting and dehydration.

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:

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Prolonged eye contact or delayed treatment may lead to permanent eye damage.
 May cause softening, discolouration and possibly permanent loss of fingernails.
 Repeated or prolonged skin contact may cause inflammation.
 May cause kidney, liver and lung damage.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:

Animal studies have shown that symptoms may be delayed to around 24 hours after exposure.
 Symptoms may occur for up to 14 days.

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', 2017).

12 Ecological Information

Ecotoxicity:

Diquat dibromide is moderately toxic to birds.
 LD50 (Oral) 564 mg/kg (mallards)
 LD50 (Oral) 200 - 400 mg/kg (hens)
 LC50/ 5-day dietary 1300 ppm (Japanese quail)

Diquat dibromide is non-toxic to honeybees.

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

Persistence and Degradability: Diquat dibromide is highly persistent, with reported half-lives of >1000 days.

Bioaccumulative Potential: The product has low potential for bioaccumulation in fish.

Mobility in Soil:

Diquat is strongly adsorbed to clay and soil organic matter and so is not expected to leach into ground water.

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	UN3016
ADG, IMDG, IATA	
Proper Shipping Name	3016 BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC
ADG	ENVIRONMENTALLY HAZARDOUS
IMDG	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, (Diquat Dibromide), MARINE POLLUTANT

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IATA BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC**Dangerous Goods Class****ADG Class:****IMDG Class:**

6.1 Toxic substances.

Packing Group:

III

ADG, IMDG, IATA**Marine pollutant:**Yes
Symbol (fish and tree)**EMS Number:**

F-A,S-F

Hazchem Code:

2X

Special Provisions:

274, 331, 335, 375, AU01

Limited Quantities:

5L

Packagings & IBCs - Packing Instruction:

P001, IBC03, LP01

Packagings & IBCs - Special Packing Provisions: PP1**Portable Tanks & Bulk Containers - Instructions:** T4**Portable Tanks & Bulk Containers - Special Provisions:**

TP1, TP29

15 Regulatory information**Australian Inventory of Chemical Substances:**

85-00-7 Diquat dibromide

7664-38-2 Phosphoric acid

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

Poisons Schedule: 6

16 Other information**Date of Preparation or Last Revision:** 10.05.2017**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 percentLD₅₀: 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

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

Skin Corrosion/Irritation 1B: Skin corrosion/irritation – Category 1B

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

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

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

Skin Sensitisation 1: Skin sensitisation, Hazard Category 1

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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

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”

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