



FarmAg Diquat 200 SL

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 9/9/2022 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	: Mixture
Trade name	: FarmAg Diquat 200 SL
Type of product	: Herbicide
CAS-No.	: 85-00-7
Product group	: End product

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: A soluble concentrate contact herbicide for the control of annual broadleaf weeds and grasses in deciduous fruit orchards, vineyards and the pre-harvest desiccation of sunflower and potatoes and the control of floating aquatic weeds in dams.
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1.3. Supplier's details

Supplier

Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.4. Emergency telephone number

Emergency number	: 24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777 In case of Spillage: HAZMAT:0800 147 112
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SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 5	H303
Acute toxicity (dermal), Category 5	H313
Skin corrosion/irritation, Category 3	H316
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Full text of H-statements: see section 16	

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)	: 
Signal word (GHS-ZA)	: Warning
Hazardous ingredients	: Lauryl dimethyl ammonium sulphate, Diquat ion (as dibromide salt)
Hazard statements (GHS ZA)	: H303 - May be harmful if swallowed H313 - May be harmful in contact with skin H316 - Causes mild skin irritation H400 - Very toxic to aquatic life.

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Precautionary statements (GHS ZA) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P273 - Avoid release to the environment.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P391 - Collect spillage.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Harmful in contact with skin, Harmful if swallowed, Causes mild skin irritation, Very toxic to aquatic life.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Diquat ion (as dibromide salt)	CAS-No.: 85-00-7	$\geq 15 - < 20$	Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Acute Tox. 3 (Inhalation:dust,mist), H331 Aquatic Acute 1, H400 (M=10)
Oxyneurine	CAS-No.: 107-43-7	$\geq 1 - < 5$	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Lauryl dimethyl ammonium sulphate	CAS-No.: 2235-54-3	$\geq 1 - < 5$	Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 2, H401 Aquatic Chronic Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general :
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Flush eyes with lukewarm, gently flowing water for at least 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. If irritation, redness or burning sensations develop, get medical attention immediately.
First-aid measures after ingestion : Do not induce vomiting. Wash mouth with water. Seek medical advice immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation :
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after ingestion : Harmful if swallowed.

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4.3. Indication of any immediate medical attention and special treatment needed

Rapid treatment is essential. Wash out stomach and test urine for presence of diquat. Give up to 1 litre of 15 % aqueous suspension of Fuller's Earth, orally or via gastric tube, together with suitable purgative (e.g. 200 ml of aqueous solution of mannitol or magnesium sulphate). Repeat administration of absorbent plus purgative until absorbent is seen in stools. This should normally take between 4 to 6 hours after start of treatment. If there is severe mouth ulceration, give nothing by mouth until patient's condition has improved. Give intravenous fluids only.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Do not use direct jet of water. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Firefighting instructions	: Keep upwind. Remove container from fire area if possible. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind. Consider evacuation of downwind area if material is leaking.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Personal protection (Emergency response)	: Wear respiratory protection, Wear protective gloves, Wear protective clothing, Wear eye protection, Face-shield



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Emergency procedures	: Do not breathe vapours, spray. Only qualified personnel equipped with suitable protective equipment may intervene.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
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Methods for cleaning up	: Do not flush with water. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Absorb or cover with dry earth or sand or other suitable non-combustible absorbent, and transfer to labelled containers. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.
Other information	: Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Do not breathe vapours, spray. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Storage area	: Store in a dry area. Store out of reach of unauthorised persons, children and animals.
Incompatible products	: Strong bases. Strong acids. Oxidizing agent.
Incompatible materials	: Avoid mild steel, zinc and aluminium.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.
Maximum storage period	: 2 years

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diquat ion (as dibromide salt) (85-00-7)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Diquat
Remark	SKIN (danger of cutaneous absorption)
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Diquat dibromide
OEL TWA	1 mg/m ³
OEL STEL	1 mg/m ³
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of inadequate ventilation wear respiratory protection.

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Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: Dark. Red to red-brown.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 4.6
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.171
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : May be harmful if swallowed.
Acute toxicity (dermal) : May be harmful in contact with skin.
Acute toxicity (inhalation) : Not classified

FarmAg Diquat 200 SL (85-00-7)	
ATE ZA (oral)	4384.042 mg/kg bodyweight
ATE ZA (Dermal)	2503.637 mg/kg bodyweight
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	3.65% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 79.35% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 99.97% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

Diquat ion (as dibromide salt) (85-00-7)	
LD50 oral rat	1000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.5 – 0.6 mg/l/4h

Lauryl dimethyl ammonium sulphate (2235-54-3)	
LD50 oral rat	500 – 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Water (7732-18-5)	
LD50 oral rat	90000 mg/kg

Skin corrosion/irritation : Causes mild skin irritation.
pH: 4.6
Serious eye damage/irritation : Not classified
pH: 4.6
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Diquat ion (as dibromide salt) (85-00-7)	
LC50 - Fish [1]	6.1 mg/l Rainbow Trout
LC50 - Other aquatic organisms [1]	1.2 mg/l Daphnia
BCF - Fish [1]	0.6 – 5.7 (Cyprinus carpio, Test duration: 6 weeks)
Partition coefficient n-octanol/water (Log Pow)	-4.6 – -3.05
Additional ecotoxicological information	Birds: Acute oral LD50 for mallard ducks 71, partridges 158. zebra finch 30.9 mg/kg. Dietary LC50 for Japanese quail 721, bobwhite quail 1570, ring-necked pheasants 2000, mallard ducks >2680 mg diquat ion/kg diet.

Oxyneurine (107-43-7)	
Partition coefficient n-octanol/water (Log Pow)	-4.93 (Estimated value)

Lauryl dimethyl ammonium sulphate (2235-54-3)	
LC50 - Fish [1]	3.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	7.1 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	11 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	9.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC chronic fish	> 1357 mg/l Test organisms (species): Pimephales promelas Duration: '42 d'

Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38

12.2. Persistence and degradability

FarmAg Diquat 200 SL (85-00-7)	
Persistence and degradability	No additional information available

Diquat ion (as dibromide salt) (85-00-7)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.

Oxyneurine (107-43-7)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

FarmAg Diquat 200 SL (85-00-7)	
Bioaccumulative potential	No additional information available

Diquat ion (as dibromide salt) (85-00-7)	
BCF - Fish [1]	0.6 – 5.7 (Cyprinus carpio, Test duration: 6 weeks)
Partition coefficient n-octanol/water (Log Pow)	-4.6 – -3.05

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Diquat ion (as dibromide salt) (85-00-7)

Bioaccumulative potential	Not bioaccumulative.
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Oxyneurine (107-43-7)

Partition coefficient n-octanol/water (Log Pow)	-4.93 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow)	-1.38
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12.4. Mobility in soil

FarmAg Diquat 200 SL (85-00-7)

Mobility in soil	No additional information available
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Diquat ion (as dibromide salt) (85-00-7)

Partition coefficient n-octanol/water (Log Pow)	-4.6 – -3.05
Ecology - soil	Not toxic to bees.

Oxyneurine (107-43-7)

Partition coefficient n-octanol/water (Log Pow)	-4.93 (Estimated value)
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Water (7732-18-5)

Partition coefficient n-octanol/water (Log Pow)	-1.38
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available




SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3016	3016	3016
14.2. Proper Shipping Name		
BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC (contains diquat 200 g/l)	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC (contains diquat 200 g/l)	Bipyridilium pesticide, liquid, toxic (contains diquat 200 g/l)
14.3. Transport hazard class(es)		
6.1	6.1	6.1
		

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SANS	IMDG	IATA
14.4. Packing group		
I	I	I
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS)	: 61, 274
Limited quantities (SANS)	: 0
Limited quantities (SANS)	: 0
Packagings, large packagings and IBCs Packing instructions (SANS)	: P001
Portable tank and bulk containers instructions (SANS)	: T14
Portable tank and bulk container special provisions (SANS)	: TP2, TP13, TP27

IMDG

Special provisions (IMDG)	: 61, 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E5
Packing instructions (IMDG)	: P001
Tank instructions (IMDG)	: T14
Tank special provisions (IMDG)	: TP2, TP13, TP27
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Liquid pesticides which present a very wide range of toxic hazard. Miscibility with water depends upon the composition. Toxic if swallowed, by skin contact or by inhalation.

IATA

PCA Excepted quantities (IATA)	: E5
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 652
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 658
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3, A4
ERG code (IATA)	: 6L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

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Full text of H-statements	
H302	Harmful if swallowed.
H303	May be harmful if swallowed
H312	Harmful in contact with skin.
H313	May be harmful in contact with skin
H315	Causes skin irritation.
H316	Causes mild skin irritation
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.