

1: Identification of the Substance and Supplier

Product Name	DESIQUAT
Recommended Use	Herbicide
Suppliers Details	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545
Web Address	www.orionagriscience.co.nz
Email Address	orders@orionagriscience.co.nz
Telephone Number	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
Emergency Telephone	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre	0800 POISON (0800 764 766) (24 hours)
Date of Issue/Revision	March 2025

2: Hazards Identification

Hazard Pictograms



Signal Words

Hazard Classes:

Acute Inhalation Toxicity (Cat. 3)
Acute Oral Toxicity (Cat. 4)
Skin Irritation (Cat. 2)
Specific Target Organ Toxicity (repeated exposure)(Cat.1)
Corrosive to Metals (Cat. 1)
Hazardous to the aquatic environment acute (Cat. 1)
Hazardous to the aquatic environment chronic (Cat. 1)
Hazardous to terrestrial vertebrates

Precautionary Statements:

Response

DANGER

Hazard Statements:

H331 Toxic if inhaled
H302 Harmful if swallowed
H315 Causes skin irritation
H372 Causes damage to organs through prolonged or repeated exposure
H290 May be corrosive to metals
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
H433 Harmful to terrestrial vertebrates

P101 If medical advice is needed, have product container or label at hand
P102 Keep out of reach of children
P103 Read carefully and follow all instructions
P271 Use only outdoors or in a well ventilated area
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P280 Wear protective gloves
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P234 Keep only in original packaging
P273 Avoid release to the environment

Avoid contact with eyes and skin. Do not breathe in the spray mist. When mixing or applying, wear personal protection as described in section 8. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water.

P304+P340 IF INHALED: Move person to fresh air and keep comfortable for breathing
P311 Call a POISON CENTRE/doctor
P321 First aid measures described in section 4
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell
P330 Rinse mouth

	<p>P302+P352 IF ON SKIN: Wash with plenty water</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse</p> <p>P314 Get medical advice/attention if you feel unwell</p> <p>P390 Absorb spillage to prevent material damage</p> <p>P391 Collect spillage</p> <p>First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs).</p>
Storage	<p>P403+P233 Store in a well ventilated place. Keep container tightly closed</p> <p>P405 Store locked up</p> <p>P406 Store in a corrosive resistant container with a resistant inner liner</p> <p>Keep out of reach of children.</p>
Disposal	<p>P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).</p>

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Diquat dibromide (active ingredient)	2764-72-9	37
Other ingredients	Proprietary	Remainder

4: First Aid Measures

If medical advice is needed, have product container or label at hand. For advice call the National Poisons Centre or a Doctor

Ingestion:	Rinse mouth. Call a POISON CENTRE/doctor if you feel unwell
Skin Contact:	Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. Seek medical advice if irritation occurs or if feeling unwell.
Eye Contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice immediately.
Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately.
Workplace Facilities:	Hand wash facility. Eye wash facility
Advice to Doctor:	Rapid treatment is essential. Refer to an authoritative text on treatment, e.g., Recognition and Management of Pesticide Poisonings, US EPA, Chapter 12 Paraquat and Diquat http://www2.epa.gov/pesticide-worker-safety/pesticide-poisoning-handbook-complete-document
National Poison Centre	Eye splashes should be referred to a specialist after initial treatment 0800 POISON (0800 764 766) (24 hours)
Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:	

Ingestion:	Burning pain in the mouth, throat, chest and abdomen; intense nausea and vomiting; and diarrhea
Skin Contact:	Irritation
Eye Contact:	Irritation. Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.
Inhalation:	Irritation

5: Fire-Fighting Measures

Fire/Explosion Hazard	Non-Flammable
HAZCHEM Code	2X
ERP Guide No	37
Extinguishing Media	Water spray, foam, dry chemical or CO2. Avoid water jet.
Fire Fighting Instructions	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.

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Specific Hazards Arising from Fire

No data available

6: Accidental Release Measures

Personal Precautions	Caution: Floors may be slippery if wet. Wear personal protective clothing and equipment as described in section 8. Exclude non-essential people from the area.
Environmental Precautions	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
Clean Up	Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill.

7: Handling and Storage

Storage:	Keep out of reach of children. Store in the original tightly closed container in a locked and secure area.
Handling and Use:	Keep out of reach of children. Refer to Precautionary statements in section 2 above. Keep people and animals away from the area while spraying and for the duration of the REI. Do not use with a mist blower or fogger
REI	Until spray has dried

8: Exposure Controls / Personal Protection

Tolerable Exposure Limit	None established
Workplace Exposure Standards	Diquat dibromide 0.5 mg/m ³ (8hr TWA)
Engineering Controls	Select spray application equipment to minimize exposure to operator and bystanders
Personal Protection:	
Eye	Safety glasses/goggles or face shield when mixing or applying
Skin	Chemical resistant coveralls with hood tightly fitting at head, wrists and ankles (e.g., Tychem F suit), chemical resistant boots and chemical resistant gloves (e.g. nitrile, neoprene, rubber, barrier multilayer).
Respiratory	Respirator (organic vapour and particulate matter)

Clean protective equipment after use

9: Physical and Chemical Properties

Appearance	Dark Brown/Red Liquid
Odour	Non specific
Odour Threshold	Does not apply
pH	3 - 7
Melting Point/Freezing Point	< 0°C
Boiling Point	> 100°C
Flash Point	Does not apply
Flammability	Not flammable
Upper/Lower Flammability Limits	Does not apply
Vapour Pressure	Does not apply
Vapour Density	Does not apply
Relative Density	1.17 g/mL (approx.)
Solubility in Water	Soluble
Partition Coefficient: n-octanol/water	See section 12
Auto ignition Temperature	Does not apply
Decomposition Temperature	Does not apply
Kinematic Viscosity	Does not apply
Particle characteristics	Does not apply

10: Stability and Reactivity

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Stability	Stable under normal conditions
Hazardous Reactions	None Expected
Incompatibility	Corrosive to metals. Only use in spray tanks made of plastic or fiberglass. Do not use with aluminum, copper, galvanised or steel tanks.
Hazardous Decomposition Products	None known

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

Acute Oral Toxicity	LD50 > 300 mg/kg
Acute Dermal Toxicity	LD50 > 5000 mg/kg
Acute Inhalation Toxicity	LD50 > 0.5 mg/L
Skin corrosion/irritation	Causes skin irritation
Serious eye damage/Eye irritation	May causes serious eye damage
Respiratory or skin sensitisation	Information not available
Germ cell mutagenicity	Information not available
Carcinogenicity	Information not available
Reproductive Toxicity	Information not available
Specific Organ Toxicity – Single exposure	Information not available
Specific Organ Toxicity – Repeated exposure	Ingestion of diquat is damaging to the kidneys and other organs
Aspiration hazard	Information not available

12: Ecological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

The following information is presented in respect of the active ingredient:

Ecotoxicity	<ul style="list-style-type: none">Acute Oral LD50 (Cattle) 30 mg/lLC50 (96 hr) (Bluegill) 18 mg/lEC50 (48 hr) (Daphnia) 0.77 mg/lEC50 (96 hr) (Algae) 0.021 mg/lAcute Oral LD50 (Bee) 51 µg/bee (moderately toxic)	
Persistence/degradability	Biodegradable. DT50 (soil) 2345 days (typical)	
Bioaccumulative Potential	Octanol-water partition coefficient	LogP = - 4.6 (low)
Soil Mobility	Soil organic carbon water partitioning coefficient	Koc = 2184750 (non mobile)
Environmental Exposure Limit:	None established	

13: Disposal Considerations

Product	Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd.
Container	Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose.

14: Transport Information

Dangerous Goods	
UN Number	2922
Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (DIQUAT DIBROMIDE 37%)
Class	8

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Subsidiary Class	6.1
Packing Group	III
Additional Information	MARINE POLLUTANT. CORROSIVE TO METAL
MTQ (Non-Commercial)	250 litres

15 Regulatory Information

EPA Approval No	HSR000446
ACVM Registration No	P7159
Qualified Person	Required
Certified Handler	Not required
Workplace Only	Yes
Tracking	Not required
Record Keeping	Required (> 3 Kg applied within 24 hours, and which is likely to leave the application area)
Site Requirements under EPA Notice and HSWHS Regs:	<ul style="list-style-type: none"> • A hazardous substance location compliance certificate is required • A hazardous area is not required • Separation distances for class 3 and class 6 substances to protected places and public places is applicable • Fire extinguishers are not required • Signage is required for more than 100 litres • An emergency response plan is required for more than 100 litres • Secondary containment is required for more than 100 litres • Segregation from incompatible substances (classes 1 and 5) is required
Additional Requirements	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

16: Other Information

SDS review date	17 March 2025
Glossary	
ADE	Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure
ACVM	Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries
Cat.	GHS category
Ceiling	A concentration that should not be exceeded at any time during any part of the working day
Certified Handler	A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)
DT50	Time (days) for 50% reduction in concentration
EC50	Concentration required to produce an effect in 50% of organisms
Environmental Exposure Limit	Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.
EPA Notice	Hazardous Property Controls Notice 2017
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
GHS	Globally harmonized system of classification and labelling of chemicals
Hazardous Substance Location	For locations storing hazard substances of certain classes above threshold quantities
Compliance Certificate	
Hazardous Area	A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009
HAZCHEM Code	Emergency action code for emergency services
HSWHS Regs	Health and Safety at Work (Hazardous Substances) Regulations 2017
LC50	Concentration that will kill 50% of organisms
LD50	Dose that will kill 50% of organisms

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MTQ	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
Notification	Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described
Octanol-Water Partition Coefficient	The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate
PDE	Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure
Protected Place	Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble
Public Place	A place frequented by the public, including roads (does not include private property)
Qualified Person	A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.
Record Keeping	Includes a spray diary or other record of application
REI	Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.
Segregation	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
Separation Distances	The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places
Signage	Positioned at entrances to commercial premises providing information on the hazardous substances present
Soil Adsorption Coefficient (Kd)	The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil
Soil Organic Carbon-Water Partitioning Coefficient (Koc)	The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil
STEL	Short term exposure level – 15 minute time weighted average
Tolerable Exposure Limit	Maximum concentration limit of a substance above which persons must not be exposed
Tracking	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
TWA	Time weighted average calculated over an 8 hour working day
Workplace Exposure Standard	An occupational health standard limiting concentrations of specified substances to which persons are exposed
Workplace Only	A product that is restricted to a workplace only and under the supervision of a certified handler

Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.