

# SAFETY DATA SHEET

## DESIQUAT

### 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

# SAFETY DATA SHEET

## DESIQUAT



	P302+P352 IF ON SKIN: Wash with plenty water P332+P313 If skin irritation occurs: Get medical advice/attention P362+P364 Take off contaminated clothing and wash it before reuse P314 Get medical advice/attention if you feel unwell P390 Absorb spillage to prevent material damage P391 Collect spillage 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).
Storage	P403+P233 Store in a well ventilated place. Keep container tightly closed P405 Store locked up P406 Store in a corrosive resistant container with a resistant inner liner Keep out of reach of children.
Disposal	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).

### 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

<b>Ingestion:</b>	Rinse mouth. Call a POISON CENTRE/doctor if you feel unwell
<b>Skin Contact:</b>	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.
<b>Eye Contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice immediately.
<b>Inhalation:</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately.
<b>Workplace Facilities:</b>	Hand wash facility. Eye wash facility
<b>Advice to Doctor:</b>	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 <a href="http://www2.epa.gov/pesticide-worker-safety/pesticide-poisoning-handbook-complete-document">http://www2.epa.gov/pesticide-worker-safety/pesticide-poisoning-handbook-complete-document</a> Eye splashes should be referred to a specialist after initial treatment
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)
Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:	
<b>Ingestion:</b>	Burning pain in the mouth, throat, chest and abdomen; intense nausea and vomiting; and diarrhea
<b>Skin Contact:</b>	Irritation
<b>Eye Contact:</b>	Irritation. Severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.
<b>Inhalation:</b>	Irritation

### 5: Fire-Fighting Measures

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

# SAFETY DATA SHEET

## DESIQUAT



Specific Hazards Arising from Fire No data available

### 6: Accidental Release Measures

<b>Personal Precautions</b>	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.
<b>Environmental Precautions</b>	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
<b>Clean Up</b>	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

<b>Storage:</b>	Keep out of reach of children. Store in the original tightly closed container in a locked and secure area.
<b>Handling and Use:</b>	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
<b>REI</b>	Until spray has dried

### 8: Exposure Controls / Personal Protection

<b>Tolerable Exposure Limit</b>	None established
<b>Workplace Exposure Standards</b>	Diquat dibromide 0.5 mg/m <sup>3</sup> (8hr TWA)
<b>Engineering Controls</b>	Select spray application equipment to minimize exposure to operator and bystanders
<b>Personal Protection:</b>	
<b>Eye</b>	Safety glasses/goggles or face shield when mixing or applying
<b>Skin</b>	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).
<b>Respiratory</b>	Respirator (organic vapour and particulate matter)

Clean protective equipment after use

### 9: Physical and Chemical Properties

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

### 10: Stability and Reactivity

# SAFETY DATA SHEET

## DESIQUAT



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

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

<b>Ecotoxicity</b>	<ul style="list-style-type: none"><li>Acute Oral LD50 (Cattle) 30 mg/l</li><li>LC50 (96 hr) (Bluegill) 18 mg/l</li><li>EC50 (48 hr) (Daphnia) 0.77 mg/l</li><li>EC50 (96 hr) (Algae) 0.021 mg/l</li><li>Acute Oral LD50 (Bee) 51 µg/bee (moderately toxic)</li></ul>
<b>Persistence/degradability</b>	Biodegradable. DT50 (soil) 2345 days (typical)
<b>Bioaccumulative Potential</b>	Octanol-water partition coefficient
<b>Soil Mobility</b>	Soil organic carbon water partitioning coefficient
<b>Environmental Exposure Limit:</b>	Koc = 2184750 (non mobile)
	None established

### 13: Disposal Considerations

<b>Product</b>	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.
<b>Container</b>	Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose.

### 14: Transport Information

<b>Dangerous Goods</b>	
<b>UN Number</b>	1760
<b>Proper Shipping Name</b>	CORROSIVE LIQUID, N.O.S. (DIQUAT DIBROMIDE 37%)
<b>Class</b>	8

# SAFETY DATA SHEET

## DESIQUAT



Subsidiary Class	
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"><li>• A hazardous substance location compliance certificate is required</li><li>• A hazardous area is not required</li><li>• Separation distances for class 3 and class 6 substances to protected places and public places is applicable</li><li>• Fire extinguishers are not required</li><li>• Signage is required for more than 100 litres</li><li>• An emergency response plan is required for more than 100 litres</li><li>• Secondary containment is required for more than 100 litres</li><li>• Segregation from incompatible substances (classes 1 and 5) is required</li></ul>
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

# SAFETY DATA SHEET

## DESIQUAT



<b>MTQ</b>	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
<b>Notification</b>	Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described
<b>Octanol-Water Partition Coefficient</b>	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
<b>PDE</b>	Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure
<b>Protected Place</b>	Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble
<b>Public Place</b>	A place frequented by the public, including roads (does not include private property)
<b>Qualified Person</b>	A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.
<b>Record Keeping</b>	Includes a spray diary or other record of application
<b>REI</b>	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.
<b>Segregation</b>	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
<b>Separation Distances</b>	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
<b>Signage</b>	Positioned at entrances to commercial premises providing information on the hazardous substances present
<b>Soil Adsorption Coefficient (Kd)</b>	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
<b>Soil Organic Carbon-Water Partitioning Coefficient (Koc)</b>	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
<b>STEL</b>	Short term exposure level – 15 minute time weighted average
<b>Tolerable Exposure Limit</b>	Maximum concentration limit of a substance above which persons must not be exposed
<b>Tracking</b>	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
<b>TWA</b>	Time weighted average calculated over an 8 hour working day
<b>Workplace Exposure Standard</b>	An occupational health standard limiting concentrations of specified substances to which persons are exposed
<b>Workplace Only</b>	A product that is restricted to a workplace only and under the supervision of a certified handler
<b>Please Note</b>	

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.