


**1: Substance Identification**

<b>Product Name</b>	<b>PQ200</b>
<b>Recommended Use</b>	Herbicide: For weed control in clover seed and lucerne crops.
<b>Active Ingredient</b>	200 g/L Paraquat as the dichloride salt in the form of a soluble concentrate.
<b>Suppliers Details</b>	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 www.orionagriscience.co.nz
<b>Email Address</b>	orders@orionagriscience.co.nz
<b>Telephone Number</b>	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
<b>Chemical Emergency</b>	0800 CHEMCALL (0800 243 622) (24 hours)
<b>Poison Information</b>	0800 POISON (0800 764 766) (24 hours)
<b>Date of Issue/Revision</b>	Jan 2023

**2: Hazards Identification**

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

<b>Hazard Pictograms</b>	
<b>HSNO Classifications</b>	6.1A (i), 6.1C (o), 6.3A, 6.4A, 6.9B, 9.1A, 9.3B, 9.4B
<b>Signal Words</b>	<b>Danger</b>
<b>GHS Classifications:</b>	<b>Hazard Statements:</b>
Acute Inhalation toxicity Category 1	Fatal if inhaled
Acute oral toxicity Category 3	Toxic if swallowed
Skin irritation Category 2	May be harmful in contact with skin, Causes skin irritation
Eye Irritation Category 2	Causes serious eye irritation
Specific target organ toxicity (repeated exposure) Category 1	Causes damage to organs through prolonged or repeated exposure
Hazardous to terrestrial vertebrates Category 1	Toxic to terrestrial vertebrates
Hazardous to terrestrial invertebrates Category 1	Toxic to terrestrial invertebrates
Hazardous to the aquatic environment acute Category 1	Very toxic to aquatic organisms (acute)
Hazardous to the aquatic environment chronic Category 1	Toxic to terrestrial invertebrates with long lasting effects (chronic)
<b>Precautionary Statements:</b>	6.1A (i), 6.1C (o), 6.3A, 6.4A, 6.9B, 9.1A, 9.3B, 9.4B
Prevention	Keep out of reach of children. Read label before use. Avoid contact with eyes and skin. Do not breathe in the spray mist. Do not eat, drink or smoke during use. Wash hands thoroughly after use. When mixing, loading, applying, or entering a treated area, wear personal protection as described in section 8. Take off contaminated clothing and wash before reuse. Use outdoors only. 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.
Response	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).

### 3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Paraquat dichloride (active ingredient)	1910-42-5	28
Stenching agent	Proprietary	<1
Emetic	Proprietary	<1
Other ingredients	Proprietary	Remainder

### 4: First Aid Measures

**IF POISONING IS SUSPECTED RUSH TO AN ACCIDENT AND EMERGENCY DEPARTMENT OF THE NEAREST HOSPITAL AFTER ALERTING THEM BY TELEPHONE.**

**For advice call the National Poisons Centre 0800 POISON (0800 764 766) 24 hours or a doctor.**

<b>If Swallowed:</b>	Rinse mouth. Do Not induce vomiting. Seek medical advice immediately. <b>Seek immediate medical advice</b> (National Poisons Centre 0800 764 766 or a doctor).
<b>Skin Contact:</b>	Wash with plenty of soap and water. 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 16 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 mouth, throat, chest and upper abdomen. Inflammation or ulceration of the mouth, nose, throat and oesophagus. Vomiting, diarrhoea, giddiness, headache, fever
<b>Skin Contact:</b>	Irritation. Prolonged contact can cause redness, blistering, abrasion, ulceration, cracking of the skin and ridging of fingernails. Can be absorbed via the skin, especially through cuts, blisters, ulcers, etc.
<b>Eye Contact:</b>	Irritation. Splashes of concentrate may cause severe conjunctivitis and corneal damage
<b>Inhalation:</b>	Cough, sore throat, laboured breathing, headache, nosebleeds

### 5: Fire-Fighting Measures

<b>Fire/Explosion Hazard</b>	Non-Flammable
<b>HAZCHEM Code</b>	2X
<b>IER Guide No</b>	34
<b>Extinguishing Media</b>	Water spray, foam, dry chemical or CO2. Avoid water jet.
<b>Fire Fighting Instructions</b>	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
<b>Specific Hazards Arising from Fire</b>	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.
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### Handling and Use:

Never put in a drinks container.

Refer to Prevention statements in section 2 above. Exclude people and animals from the application area, both during application and for the duration of the REI. Do not use with a mist blower or fogger.

### REI

24 hours from application and when sprayed foliage is dry

## 8: Exposure Controls / Personal Protection

### Tolerable Exposure Limit

None established

### Workplace Exposure Standards

Paraquat 0.1 mg/m<sup>3</sup> (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 Green Liquid

### Odour

Characteristic pyridine

### Odour Threshold

No data available

### pH

2.0 – 6.0

### Melting Point/Freezing Point

No data available

### Boiling Point

>100°C

### Flash Point

Not Applicable

### Flammability

Not Applicable

### Upper/Lower Flammability Limits

Not Applicable

### Vapour Pressure

No data available

### Vapour Density

No data available

### Relative Density

1.08 g/mL (approx.)

### Solubility in Water

Soluble

### Partition Coefficient: n-octanol/water

See section 12

### Auto ignition Temperature

Not Applicable

### Decomposition Temperature

No data available

### Kinematic Viscosity

No data available

## 10: Stability and Reactivity

### Stability

Stable under normal conditions

### Hazardous Reactions

None Expected

### Incompatibility

None Known. Can cause corrosion when in contact with metals such as steel or aluminum.

### 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 > 50 mg/kg

### Acute Dermal Toxicity

LD50 > 2000 mg/kg

### Acute Inhalation Toxicity

LD50 < 0.05 mg/L

### Skin Irritant/Corrosive

Skin Irritant

### Eye Irritant/Corrosive

Strongly Irritating

### Sensitisation Effects

None

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<b>Mutagenic Effects</b>	None
<b>Carcinogenic Effects</b>	None
<b>Reproductive Effects</b>	None
<b>Specific Organ Toxicity</b>	Paraquat has life threatening effects on the lungs, gastrointestinal tract, kidney, liver, heart and other organs

### 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 Information</b> (Paraquat dichloride)	Acute Oral LD50 (Bobwhite quail) 175 mg/kg LC50 (96 hr) (Rainbow trout) 26 mg/l LC50 (48 hr) (Daphnia) 6.1 mg/l Algae EC50 (96 hr) 0.10 mg/l
<b>Toxicity</b>	Acute Oral LD50 (Bee) 36 µg/bee (moderately toxic) Very toxic to aquatic organisms with long lasting effects. Hazardous to terrestrial vertebrates Hazardous to terrestrial invertebrates Do not allow to enter waterways
<b>Persistence/degradability</b>	Biodegradable. DT50 (soil) 2800 days (typical)
<b>Bioaccumulative Potential</b>	Octanol-water partition coefficient LogP = -4.5 (low)
<b>Soil Mobility</b>	Soil organic carbon water partitioning coefficient Koc = 1000000 (none mobile)
<b>Environmental Exposure Limit:</b>	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>	3016
<b>Proper Shipping Name</b>	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC (PARAQUAT DICHLORIDE 28%)
<b>Class</b>	6
<b>Subsidiary Class</b>	None
<b>Packing Group</b>	III
<b>Additional Information</b>	MARINE POLLUTANT
<b>MTQ (Non-Commercial)</b>	250 litres
<b>Passenger Service Vehicle</b>	Must not be carried on passenger service vehicle

### 15 Regulatory Information

<b>EPA Approval No</b>	HSR000828
<b>ACVM Registration No</b>	P4852
<b>Qualified Person</b>	Required
<b>Certified Handler</b>	Required
<b>Workplace Only</b>	Yes
<b>Tracking</b>	Required

### Record Keeping

#### Site Requirements under EPA Notice and HSWS Regs:

#### Required

- 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 50 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

Responsible Handling Information is available at [www.orionagriscience.co.nz](http://www.orionagriscience.co.nz) and this information should be read and understood before use. Maximum single application rate: 3 L/ha. Maximum annual application rate: 3L/ha. This product must only be used for agricultural or biosecurity purposes. Do not apply when wind speeds are less than 3 km/h or more than 20 km/h. Application must be by a coarse quality spray for ground-based application, and coarse to very coarse droplets for aerial application - as classified by the American Society of Agricultural & Biological Engineers (ASABE) droplet size classification scheme (American National Standard ANSI/ASABE S572.1). Do not transfer this product into food or drinks containers, or into unlabeled containers. Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans.

#### Downwind Buffer Zones:

	Aquatic Area		Non-target plants (non-threatened)		Non-target plants (threatened)	
	≤2 L/ha	>2 - ≤3 L/ha	≤2 L/ha	>2 - ≤3 L/ha	≤2 L/ha	>2 - ≤3 L/ha
Ground	Nil	5 m	Nil	5 m	5 m	5 m
Aerial	5 m	15 m	40 m	40 m	60 m	100 m

## 16: Other Information

### 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

#### Agricultural Purposes

Includes use for agricultural and production horticulture purposes, but does not include use for forestry plantation or biosecurity purposes. Production horticulture includes commercial cropping systems and commercial ornamental horticulture production, but excludes amenity horticulture in publicly accessible areas or horticulture areas which would otherwise be considered domestic properties. This definition of agricultural purposes also includes commercial forestry nurseries.

#### Biosecurity Purposes

Use for operations carried out under the Biosecurity Act 1993, for which permission under S95A must be obtained

#### 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

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<b>Hazardous Substance Location</b>	For locations storing hazard substances of certain classes above threshold quantities
<b>Compliance Certificate</b>	
<b>Hazardous Area</b>	A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009
<b>HAZCHEM Code</b>	Emergency action code for emergency services
<b>HSWHS Regs</b>	Health and Safety at Work (Hazardous Substances) Regulations 2017
<b>LC50</b>	Concentration that will kill 50% of organisms
<b>LD50</b>	Dose that will kill 50% of organisms
<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>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.
<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

**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

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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.