


1: Substance Identification

Product Name	PQ200
Recommended Use	Herbicide: For weed control in clover seed and lucerne crops.
Active Ingredient	200 g/L Paraquat as the dichloride salt in the form of a soluble concentrate.
Suppliers Details	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 www.orionagriscience.co.nz
Email Address	orders@orionagriscience.co.nz
Telephone Number	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
Chemical Emergency	0800 CHEMCALL (0800 243 622) (24 hours)
Poison Information	0800 POISON (0800 764 766) (24 hours)
Date of Issue/Revision	February 2025

2: Hazards Identification

Hazard Pictograms	
HSNO Classifications	
Signal Words	Danger
GHS Classifications:	Hazard Statements:
Acute Inhalation toxicity Category 1	H330 Fatal if inhaled
Acute oral toxicity Category 3	H301 Toxic if swallowed
Skin irritation Category 2	H315 Causes skin irritation
Eye Irritation Category 2	H319 Causes serious eye irritation
Specific target organ toxicity (repeated exposure) Category 1	H372 Causes damage to organs through prolonged or repeated exposure
Hazardous to terrestrial vertebrates	H432 Toxic to terrestrial vertebrates
Hazardous to terrestrial invertebrates	H442 Toxic to terrestrial invertebrates
Hazardous to the aquatic environment acute Category 1	H400 Very toxic to aquatic life
Hazardous to the aquatic environment chronic Category 1	H410 Very toxic to aquatic life with long lasting effects
Precautionary Statements:	
Prevention	P103 Read label before use P264 Wash hands thoroughly after handling P270 Do not eat, drink or smoke when using this product P260 Do not breathe dust/fume/gas/mist/vapours/spray P271 Use only outdoors or in a well-ventilated area P284 Wear respiratory protection. Refer to standard AS/NZS 1716:2012 P280 Wear protective gloves P280 Wear eye protection/face protection P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing P337+P313 If eye irritation persists: Get medical advice/attention P273 Avoid release to the environment

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Response	<p>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.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or a doctor/physician</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>P330 Rinse mouth</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing</p> <p>P310 Immediately call a POISON CENTRE/doctor</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water</p> <p>P314 Get medical advice/attention if you feel unwell</p> <p>P391 Collect spillage</p>
Storage	<p>P405 Store locked up</p> <p>P403+P233 Store in well ventilated place. Keep container tightly closed</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> <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>

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.

If Swallowed:	Rinse mouth. Do Not induce vomiting. Seek medical advice immediately. Seek immediate medical advice (National Poisons Centre 0800 764 766 or a doctor).
Skin Contact:	Wash with plenty of soap and water. 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 16 Paraquat and Diquat http://www2.epa.gov/pesticide-worker-safety/pesticide-poisoning-handbook-complete-document

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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 mouth, throat, chest and upper abdomen. Inflammation or ulceration of the mouth, nose, throat and oesophagus. Vomiting, diarrhoea, giddiness, headache, fever
Skin Contact:	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.
Eye Contact:	Irritation. Splashes of concentrate may cause severe conjunctivitis and corneal damage
Inhalation:	Cough, sore throat, laboured breathing, headache, nosebleeds

5: Fire-Fighting Measures

Fire/Explosion Hazard	Non-Flammable
HAZCHEM Code	2X
IER Guide No	34
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.
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. Never put in a drinks container.
Handling and Use:	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 ³ (8hr TWA)
Engineering Controls	Select spray application equipment to minimize exposure to operator and bystanders
Personal Protection:	

	The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210.
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). Refer to standard AS/NZS 1716:2012

Clean protective equipment after use

9: Physical and Chemical Properties

Appearance	Dark Green Liquid
Odour	Characteristic pyridine
Odour Threshold	Does not apply
pH	2.0 – 6.0
Melting Point/Freezing Point	Does not apply
Boiling Point	>100°C
Flash Point	Does not apply
Flammability	Does not apply
Upper/Lower Flammability Limits	Does not apply
Vapour Pressure	Does not apply
Vapour Density	Does not apply
Relative Density	1.08 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

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	Combustion or thermal decomposition will evolve toxic and irritant vapours

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 corrosion/irritation	Skin Irritant
Serious eye damage/Eye irritation	Strongly Irritating
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	Paraquat has life threatening effects on the lungs, gastrointestinal tract, kidney, liver, heart 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 Information (Paraquat dichloride)	Acute Oral LD50 (Bobwhite quail) 175 mg/kg LC50 (96 hr) (Bunni fish) 10.85 mg/l LC50 (48 hr) (Daphnia) 1.2 mg/l
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Toxicity	Algae EC50 (96 hr) 0.55 ug/l 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
Persistence/degradability	Biodegradable. DT50 (soil) 2800 days (typical)
Bioaccumulative Potential	Octanol-water partition coefficient LogP = -4.5 (low)
Soil Mobility	Soil organic carbon water partitioning coefficient Koc = 1000000 (none 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	3016
Proper Shipping Name	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC (PARAQUAT DICHLORIDE 28%)
Class	6
Subsidiary Class	None
Packing Group	III
Additional Information	MARINE POLLUTANT
MTQ (Non-Commercial)	250 litres
Passenger Service Vehicle	Must not be carried on passenger service vehicle

15 Regulatory Information

EPA Approval No	HSR000828
ACVM Registration No	P4852
Qualified Person	Required
Certified Handler	Required
Workplace Only	Yes
Tracking	Required
Record Keeping	Required
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 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 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

SDS review date

28 February 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

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

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

MTQ

Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road

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Notification	by the user 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
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.