

1. IDENTIFICATION

Product Identifier

Product Name **KELPIE® P-QUAT 250 SL HERBICIDE**

Product Code(s) **A12983T**

Other Means of Identification

Proper shipping name: Corrosive Liquid, Toxic N.O.S. (paraquat dichloride)

Recommended Use: Herbicide

Details of Manufacturer or Importer

SINOCHEM INTERNATIONAL AUSTRALIA PTY LTD
ABN: 74 160 164 616

Address Level 1, 2 Lyonpark Road
Macquarie Park, NSW, 2113
Australia

Telephone +61 2 8014 5200

Emergency Phone Number Australia: 1800 033 111

2. HAZARD IDENTIFICATION

Classification of the Hazardous Chemical:	Corrosive to metals	Category 1
	Acute Toxicity (Oral)	Category 4
	Acute Toxicity (Dermal)	Category 3
	Acute Toxicity (Inhalation)	Category 1
	Skin irritation	Category 2
	Serious eye damage	Category 1
	STOT (single exposure)	Category 3 (respiratory system)
	STOT (repeated exposure)	Category 1

Signal Word: DANGER

Hazard Statement(s):

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

- P102 Keep out of reach of children.
- P280 Wear protective gloves/ protective clothing/ eye protection/face protection.

- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTRE or doctor/ physician.
- P390 Absorb spillage to prevent material damage.
- P391 Collect spillage.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Hazard Symbols:**3. COMPOSITION AND INFORMATION ON INGREDIENTS****Mixture:**

Identity of Chemical Ingredient	CAS Number	Proportion (w/w)
Paraquat (present as paraquat dichloride)	1910-42-5	20-25 %
Pyridine	110-86-1	<1 %
Ingredients determined not to be hazardous	-	to 100 %

4. FIRST-AID MEASURES

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Description of Necessary First Aid Measures:

- Ingestion:** **SPEED IS ESSENTIAL.** Immediate medical attention is required. DO NOT induce vomiting. If available, give an adsorbent such as activated charcoal or bentonite.
- Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.
- Skin contact:** Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If irritation persists, call a physician. Wash contaminated clothing before re-use.
- Inhalation:** Move person to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poisons Information Centre immediately.
- Symptoms Caused by Exposure:** Symptoms include inflammation of the mouth, throat and oesophagus, gastrointestinal discomfort and diarrhoea.

Medical Attention and Special Treatment:

Refer to the booklet 'Paraquat Poisoning. A Practical Guide to Diagnosis, First Aid and Hospital Treatment' (www.syngenta.com/pqmedguide/).

Administer either activated charcoal (100 g for adults or 2 g/kg body weight in children).

NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit.

Do not use supplemental oxygen.

Eye splashes from concentrated material should be treated by an eye specialist after initial treatment. With the possibility of late onset corneal ulceration it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Large fires: Use alcohol-resistant foam or water spray.

Specific Hazards Arising from the Chemical:

This product may burn and/or decompose if exposed to fire. Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide, ammonia and oxides of nitrogen. Exposure to decomposition products may be a hazard to health.

Special Protective Equipment and Precautions for Fire Fighters:

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Hazchem Code:

2X

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

In case of spillage, it is important to take all steps necessary to

- Avoid eye and skin contact
- Avoid contamination of waterways

Wear full length clothing and PVC gloves.

Keep all bystanders away.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so.

DO NOT flush into surface water or sanitary sewer system.

If the product contaminates rivers and lakes or drains advise local emergency services.

Methods and Materials for Containment and Clean Up:

Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up-wind or increase ventilation.

Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Dike to collect large liquid spills. Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

MANUFACTURE, PACKAGING AND TRANSPORT:

Avoid skin and eye contact and the inhalation of vapour and mist. Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If inhalation risk of vapour or spray exists wear organic vapour respirator meeting the requirements of Standards Australia

PREPARATION AND USE OF PRODUCT:

This product can only be purchased by authorised persons holding a current certificate in the safe and responsible use of agricultural chemicals, eg. Chemcert Certificate.

Very dangerous, particularly the concentrate. Product is poisonous if swallowed. Will irritate the nose, throat and skin. Attacks the eyes, protect the eyes while using. Avoid contact with eyes, skin and clothing. When opening the container and preparing product for use wear:

- elbow-length PVC gloves
- face shield or goggles

If product on skin, immediately wash area with soap and water. If clothing becomes contaminated with product remove clothing immediately. If product in eyes, wash it out immediately with water. Avoid contact with spray mist. DO NOT inhale spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and face shield or goggles and contaminated clothing.

Conditions for Safe Storage, Including any Incompatibilities:

Store in the closed, original container in a dry, cool, well ventilated locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters:

Exposure Standards:

Chemical name	CAS Number	Exposure Limit	Value Type	Source
Paraquat (respirable sizes)	1910-42-5	0.1 mg/m ³	TWA	HCIS, Safe Work Australia

Biological Monitoring:

No specific biological monitoring required.

Engineering Controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Personal Protective Equipment:

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

MANUFACTURE, PACKAGING AND TRANSPORT:

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- elbow-length PVC gloves
- face shield or goggles

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OVERALLS, SAFETY SHOES, GLOVES, CHEMICAL GOGGLES, RESPIRATOR

**Eye/face protection:**

Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

	Attacks the eyes, protect the eyes while using. Avoid contact with eyes. When opening the container and preparing product for use wear face shield or goggles.
Skin and body protection:	Will irritate the skin. Avoid contact with skin and clothing. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. Wear as appropriate: boots, overalls
Hand protection:	Wear protective gloves. Always wash hands before smoking, eating, drinking or using the toilet. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break-through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Respiratory protection:	If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Appearance:	Dark bluish green liquid
Colour:	Dark bluish green
Odour:	Pungent, Strong Pyridine
Solubility:	Soluble in water
Specific gravity:	1.07
pH:	5.0 – 6.5
Melting point / freezing point:	ca. 0°C
Boiling Point (°C):	ca. 100°C
Flash point (°C):	> 103°C
Flammability (solid, gas):	Not applicable
Flammability limit in air:	
Upper flammability or explosive limits:	Not flammable
Lower flammability or explosive limits:	Not flammable
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.07

Water solubility:	Soluble in water
Solubility(ies):	No data available
Partition coefficient:	No data available
Auto-ignition temperature (°C):	No data available
Decomposition temperature:	No data available
Kinematic viscosity:	No data available
Dynamic viscosity:	No data available

10. STABILITY AND REACTIVITY

Reactivity:	No information available
Chemical stability:	Stable under normal conditions.
Possibility of hazardous Reactions:	Corrosive in contact with metals
Conditions to avoid:	No information available
Incompatible materials:	Aluminium, mild steel, iron
Hazardous decomposition products:	Combustion or thermal decomposition will evolve toxic and irritant vapours.

11. TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	<p>Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Toxic if swallowed. May be fatal if swallowed.</p> <p>PARAQUAT CAN KILL IF SWALLOWED. Rapid treatment is essential. The immediate effects of poisoning depend on the dose of paraquat absorbed into the blood.</p> <p>Mild poisoning occurs at <20 mg paraquat ion/kg body weight and the effects are vomiting and diarrhoea.</p> <p>Moderate to severe poisoning occurs at 20-30 mg paraquat ion/kg body weight and the effects are vomiting, abdominal discomfort, soreness and inflammation of the mouth, throat and oesophagus, difficulty in swallowing and later, diarrhoea.</p> <p>Kidney and liver damage may appear 1-3 days after exposure. Can cause death by delayed proliferating fibrosis of the lung within 1-3 weeks.</p> <p>Lethal poisoning occurs at >30 mg paraquat ion/kg body weight and the effects are nausea and vomiting, and can cause death by multi-organ failure and circulatory collapse within 48 hours.</p>
Eye contact:	Causes serious eye irritation. Contamination of eyes can result in permanent injury.
Skin contact:	Causes skin irritation. Contact with skin will result in irritation. Contamination of the nails may cause white spots or in severe cases cracking and loss of the nail. Normal growth follows without delay. Intact skin is a very effective barrier to paraquat. Damaged skin removes the barrier and paraquat may be absorbed with effects as outlined above under 'Ingestion'.

Inhalation:	(Humans): Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations. Remarks: Nose bleeding and soreness of the throat may result from spray mist or dust trapped on the nasal mucosa.												
Acute toxicity:	<table> <tr> <td>Oral toxicity:</td> <td>Similar formulation: LD₅₀ = 707 mg/kg (rat, male) LD₅₀ = 612 mg/kg (rat, female)</td> </tr> <tr> <td>Dermal toxicity:</td> <td>Similar formulation: LD₅₀ = 590 mg/kg (rat, male) LD₅₀ = 735 mg/kg (rat, female)</td> </tr> <tr> <td>Inhalation toxicity:</td> <td>Acute toxicity estimate: 0.02 mg/L Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method</td> </tr> <tr> <td>Skin irritation:</td> <td>Moderate irritant</td> </tr> <tr> <td>Eye irritation:</td> <td>Severe irritant</td> </tr> <tr> <td>Skin sensitisation:</td> <td>Not a sensitiser</td> </tr> </table>	Oral toxicity:	Similar formulation: LD ₅₀ = 707 mg/kg (rat, male) LD ₅₀ = 612 mg/kg (rat, female)	Dermal toxicity:	Similar formulation: LD ₅₀ = 590 mg/kg (rat, male) LD ₅₀ = 735 mg/kg (rat, female)	Inhalation toxicity:	Acute toxicity estimate: 0.02 mg/L Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method	Skin irritation:	Moderate irritant	Eye irritation:	Severe irritant	Skin sensitisation:	Not a sensitiser
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Skin irritation:	Moderate irritant												
Eye irritation:	Severe irritant												
Skin sensitisation:	Not a sensitiser												
Chronic effects:													
Mutagenicity:	No evidence was obtained of mutagenic effects												
Carcinogenicity:	No evidence was obtained of carcinogenic effects												
Reproductive toxicity:	No evidence was obtained of reproductive effects												
Specific Target Organ Toxicity (STOT) - single exposure:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.												
Specific Target Organ Toxicity (STOT) - repeated exposure:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1. Target organs: lungs, kidney.												
Aspiration hazard:	No information available.												

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Toxicity to fish:	Rainbow trout 96 hr LC ₅₀ : 8.3 mg/L
Toxicity to daphnia and other aquatic invertebrates:	Daphnia magna 48 hr LC ₅₀ : 6 mg/L
Toxicity to algae:	Green algae (<i>Pseudokirchneriella subcapitata</i>) 72 hr E _b C ₅₀ : 0.11 mg/L 72 hr E _b C ₅₀ : 0.34 mg/L
Persistence/degradability:	Paraquat is rapidly and strongly bound to soil particles, however it is biodegradable in soil pore water and will not accumulate in soils. Half-life, soil ca. 20 y Paraquat is persistent in soil Half-life, water > 30 d Paraquat is persistent in water
Mobility in Soil:	Paraquat is immobile in soil.
Bioaccumulative Potential:	Does not bioaccumulate. This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

13. DISPOSAL CONSIDERATIONS

Safe Handling and Disposal Methods: Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Disposal of Contaminated Packaging: Triple rinse or preferably pressure rinse containers with water. Add the rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
For refillable container, empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

14. TRANSPORT INFORMATION

ADG

UN number: 2922
Proper shipping name: Corrosive Liquid, Toxic N.O.S. (Paraquat Dichloride)
Class: 8
Subsidiary Risk: 6.1
Packing group: III
Hazchem Code: 2X

IATA-DGR

UN number: 2922
Proper shipping name: Corrosive Liquid, Toxic N.O.S. (Paraquat Dichloride)
Class: 8
Subsidiary Risk: 6.1
Packing group: III
Packing instruction (cargo aircraft): 856
Packing instruction (passenger aircraft): Y841
Environmentally hazardous: Yes

IMDG-Code

UN number: 2922
Proper shipping name: Corrosive Liquid, Toxic N.O.S. (Paraquat Dichloride)
Class: 8
Subsidiary Risk: 6.1

Packing group: III
EmS Code: F-A, S-B
Marine pollutant: Yes

15. REGULATORY INFORMATION

APVMA Product Registration Number: 87370
Poisons Schedule (SUSMP): Schedule 7

16. OTHER INFORMATION

Date of preparation or review: 06/04/2022

Full text of abbreviations and acronyms:

ADG	Australian Dangerous Goods Code
APVMA	Australian Pesticides & Veterinary Medicines Authority
EmS	Emergency Schedule
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
LD ₅₀	Lethal Dose to 50% of a test population (Median Lethal Dose)
LC ₅₀	Lethal Concentration to 50 % of a test population
MARPOL	International Convention for the Prevention of Pollution from Ships
NO(A)EL	No Observed (Adverse) Effect Level
n.o.s.	Not Otherwise Specified
OECD	Organization for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative and Toxic substance
SDS	Safety Data Sheet
STEL	Short Term Exposure Limit - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
TWA	The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

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