

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name: Speedy 250 Herbicide
Company Name: Kenso Corporation (M) Sdn Bhd
Address: Office A, 49B, Apollo Drive, Rosedale, Auckland 0632 NZ
Telephone Number: (09) 410 0861
Emergency Telephone Number: 0800 CHEMCALL (0800 243 622)
National Poisons Information Centre: 0800 POISON (0800 764 766)

Use: For weed control in Market Gardens, Nurseries, Orchards, and Vineyards.

SECTION 2 – HAZARDS IDENTIFICATION

Hazard classification: 6.1A, 6.3A, 6.4A, 6.5B, 6.9A, 9.1A, 9.3A, 9.4C
Priority Identifier: DANGER
KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers: 6.1A = May be fatal if swallowed, inhaled or absorbed through the skin.
6.3A = May cause skin irritation
6.4A = Irritating to eyes
6.5B = May cause sensitisation by skin contact
6.9A = May cause eye damage from repeated oral exposure at high doses.
9.1A = Very toxic to aquatic organisms.
9.3A = Very toxic to terrestrial vertebrates.
9.4C = Harmful to terrestrial invertebrates.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
Paraquat (present as dichloride)	1910-42-5	13.5% w/v
Diquat (present as dibromide)	85-00-7	11.5% w/v
Other inert ingredients	secret	To 100% w/v

SECTION 4 – FIRST AID MEASURES

Swallowed:	If poisoning occurs get to a doctor or hospital immediately, warning by telephone of the estimated arrival time so that treatment is not delayed. Do not induce vomiting. DO NOT delay the start of treatment.
Skin:	Immediately take off all contaminated clothing. Wash skin immediately with water followed by soap and water. If swelling, redness, blistering or irritation occurs seek medical attention. Contaminated clothing should be laundered before reuse.
Eyes:	Immediately irrigate with copious quantities of water for at least 20 minutes. Eyelids to be held open. Urgently seek medical assistance. Transport to hospital or medical centre.
Inhaled:	Remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Obtain immediate medical attention.

Advice to Doctor:

Give up to 1 litre of 15% aqueous suspension of Fuller's Earth orally or via gastric tube, together with a suitable purgative (200mL of a 20% aqueous solution of mannitol). If ingested, wash out the stomach and test

urine for the presence of Diquat. If there is severe mouth ulceration give nothing by mouth until patient's condition has improved. Give intravenous fluids only.
Eye contact: severe damage may be caused by apparently trivial contact and healing may be delayed. Medical supervision should continue until complete healing has occurred.

SECTION 5 – FIRE FIGHTING MEASURES

Combustibility: Non-combustible

Hazardous Combustion Product: During a fire, smoke may contain the original material in addition to combustion products of varying composition that may be toxic and/ or irritating. Take appropriate protective measures. It may emit oxides of nitrogen, and possibly toxic fumes of hydrogen chloride and hydrogen bromide gas.

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Always wear positive-pressure self-contained breathing apparatus and full protective clothing. Do not allow water from fire-fighting to enter water supplies or drainage systems.

Extinguishing Media: Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Hazchem code: 2X

Recommended Protective Clothing: When fighting a major fire wear an air-supplied respirator. Wear protective equipment.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

General Instructions: Wear appropriate protective equipment. Clear area of all unprotected personnel. Prevent entry of chemical or used/damaged containers into sewers, drains, streams or waterways. If necessary, inform the police and the relevant State Authority.

Procedures for Spill:

- (1) Keep all bystanders away.
- (2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.
- (3) Reposition any leaking containers so as to minimise further leakage.
- (4) Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.

Storage: Keep out of reach of children. Keep in original containers and tightly closed. Keep away from food, drink and animal feeding stuffs. Store in a cool, dry, well ventilated place and protect from sunlight.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Workplace Exposure Guidelines:

Workplace Exposure Standards:

Paraquat (respirable sizes)
8 hr TWA 0.1 mg/m ³
Diquat
8 hr TWA: 0.5 mg/m ³
Emetic

8 hr TWA 0.02 mg/m³
Pyridine Base (can be absorbed by skin)
8 hr TWA 1 ppm
5 mg/m³

Engineering controls: No special requirements. Product is used outdoors. Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapors are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of agrichemical NZS8409.

Personal Protection: Use only protective equipment bearing the mark of the Standards Association with Australia/ New Zealand. In case of heavy exposure, wear half face-piece respirator with combined dust and vapour cartridge, chemical resistant gloves and heavy duty cotton overalls.

General Hygiene: Change work clothes daily. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Clear solution
Colour:	Dark green/ blue
Odour:	Pyridine bases
pH:	5 - 6.5
Melting point (°C):	100
Boiling point (°C):	100
Specific Gravity:	1.16
Vapour Pressure:	N/A
Flash Point	N/A
Flammability Limits:	N/A
Combustibility:	Non combustible
Volatility:	Not volatile
Solubility	Soluble
Corrosiveness:	Corrosive

SECTION 10 – STABILITY AND REACTIVITY

Stability of the Substance: Corrosive in contact with metals.

Conditions to Avoid: Corrosive in contact with metals.

Material to Avoid: Diquat reacts with zinc and potassium permanganate and is corrosive to aluminium, zinc, iron.

Hazardous decomposition products: Following evaporation of aqueous component, combustion or thermal decomposition will evolve toxic and irritant vapours.

Hazardous polymerisation: Not known

SECTION 11 – TOXICOLOGICAL INFORMATION

Swallowed:	Paraquat: LD ₅₀ 283 mg/kg (rat) Diquat: LD ₅₀ 1389 mg/kg (rat)
Dermal absorption:	Paraquat: LD ₅₀ >2000 mg/kg (rat)

Inhaled: Diquat: LD₅₀ >2000 mg/kg (rat)
Paraquat: LC₅₀ (4 h) 0.5-1.5 µg/L (rat)

Irritation

Eye: Irritant (rabbit)
Skin: Irritant (rabbit)

Sensitization: sensitizer (guinea pigs)

Chronic / Long Term Effects (Active Ingredients)

Studies in animals have shown that repeated doses of paraquat do not produce carcinogenic nor teratogenic effects or adverse reproductive effects. The dietary no effect level in the rat was 25 ppm of paraquat over 2 years. Ingestion studies in animals have shown that repeated doses of diquat produce cataracts in test animals (dog, rat). These effects have not been seen in occupationally exposed humans. The ADI (Acceptable Daily Intake) for humans (paraquat ion) is 0.004 mg/kg/day. The ADI (Acceptable Daily Intake) for humans (diquat ion) is 0.002 mg/kg/day.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity effect - Paraquat

Toxicity to Birds: LD₅₀ (8 d) = 262-380 mg/kg (hens)
Acute toxicity to fish: LC₅₀ (96 h) = 55 mg/L (Rainbow trout)
LC₅₀ (96 h) = 2.5-13 mg/L (brown trout)
Growth inhibition, Algae: ErC₅₀ (72 h) = 0.34 mg/L (green algae)
Toxicity to aquatic Invertebrates: LC₅₀ (48h) = 6.1 mg/L (Daphnia magna (water flea))
Toxicity to soil dwelling organisms: LC₅₀ (14 days) = >1380 mg/kg (earthworms)
Toxicity to Bees: LD₅₀ (72 h, oral) = 36 µg/bee
LD₅₀ (72 h, contact) = 150 µg/bee

Environmental Fate - Paraquat

The information presented here is for the active ingredient, paraquat.
Distribution and Persistence: paraquat is rapidly absorbed and deactivated by soil. There is no mobility in soil or leaching into ground water; K_d >10,000. K_{ow} logP = -4.5 (20°C). There is rapid photodegradation in water and on plants. Paraquat is rapidly degraded by soil organisms (DT50 of unadsorbed paraquat <1 week). Strong binding in soil increases persistence.

Ecotoxicity effect - Diquat

Toxicity to Birds: LD₅₀ = 155 (mallard duck)
LD₅₀ = 295 mg/kg (partridges)
Acute toxicity to fish: LC₅₀ (96 h) = 39 mg/L (Rainbow trout)
LC₅₀ (96 h) = 125 mg/L (Mirror carp)
Growth inhibition, Algae: EC₅₀ (96 h) = 21 µg/L (green algae)
Toxicity to aquatic Invertebrates: LC₅₀ (48h) = 2.2 µ/L (Daphnia magna (water flea))
Toxicity to soil dwelling organisms: LC₅₀ (14 days) = 243 mg/kg (earthworms)
Toxicity to Bees: LD₅₀ (120 h, oral) = 22 µg/bee

Environmental Fate - diquat

The information presented here is for the active ingredient, diquat dibromide.
Distribution and Persistence: diquat is rapidly absorbed and deactivated by soil. There is no mobility in soil or leaching into ground water; K_d >10,000. K_{ow} logP = -4.6 (20 °C). There is rapid photodegradation in water and on plants. Diquat is rapidly degraded by soil organisms (DT50 of unadsorbed paraquat <1 week). Strong binding in soil increases persistence.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal: Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

SECTION 14 – TRANSPORT INFORMATION

UN Number (Sea Transport): 3016

IMO Proper Shipping: BIPYRIDILIUM PESTICIDE, LIQUID, N.O.S (contains PARAQUAT 13.5% and DIQUAT11.5%), Class 6, Packing Group III.

SECTION 15 – REGULATORY INFORMATION

HSNO Approval Number: HSR000447

HSNO Controls (inc. Tracking and Record Keeping):

Product requires **Tracking**

Product **must be under the control of an Approved Handler over all lifecycle stages.**

See <http://www.epa.govt.nz> for controls.

ACVM Registration: P8747

ACVM Controls:

See www.footsafety.govt.nz for registration conditions.

SECTION 16 – OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

CONTACT POINT:

Police and Fire Brigade:	Dial	111
National Poisons Information Centre:	Dial	0800 POISON (0800 764 766)
Chemical Emergency management:	Dial	0800 CHEMCALL (0800 243 622)