

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Weedy Seedy 250 Herbicide**

Other Names: Paraquat dichloride + Diquat dibromide, Group L herbicide.
Use: A liquid 'knockdown' agricultural herbicide.
Company: Apparent Pty Ltd
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SECTION 2

HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Classified as a Dangerous Good according to the ADG Code.**

FOR USE AS AN AGRICULTURAL HERBICIDE ONLY.
THIS PRODUCT IS TOO HAZARDOUS FOR USE IN THE HOME GARDEN.

GHS Classification:

Acute Toxicity – Oral: Hazard Category 3.
Acute Toxicity – Dermal: Hazard Category 3.
Acute Toxicity – Inhalation: Hazard Category 1, 2.
Skin Corrosion/Irritation: Category 2.
Sensitization – Skin: Hazard Category: 1, 1A, 1B.
Eye Damage/Irritation – Hazard Category 2B.
Specific Target Organ Toxicity (Single Exposure): Hazard Category 3.
Specific Target Organ Toxicity (Repeated Exposure): Hazard Category 1.

GHS Signal Word: DANGER

Hazard Statements:

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:

Prevention:

P260 Do not breathe mist, vapours or spray.
P261 Avoid breathing mist, vapours or spray.
P264 Wash hands, arms and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P284 Wear respiratory protection.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

SECTION 2 HAZARDS IDENTIFICATION (Continued)**Response:**

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P 340	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 CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P320	Specific treatment is urgent see Safety Directions on the product label.
P321	Specific treatment see Safety Directions on this label.
P322	Specific measures see First Aid Instructions on the product label.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P361	Remove/Take off immediately all contaminated clothing.
P362	Take off contaminated clothing and Wash before reuse.
P363	Wash contaminated clothing before reuse.

Storage and Disposal:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with national regulations.

Pictograms:**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Paraquat { as Paraquat dichloride)	1910-42-5	135 g/L
Diquat (as Diquat dibromide)	85-00-7	115 g/L
Odouriser (stencing agent)	-	< 1%
Other ingredients (including water) determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

RAPID TREATMENT IS ESSENTIAL. OBTAIN IMMEDIATE MEDICAL ATTENTION.

Ingestion: Go to a doctor or hospital IMMEDIATELY. If possible, phone ahead to alert to the situation so treatment is not delayed on arrival. If more than 15 minutes from a hospital induce vomiting, if this has not already occurred, by tickling back of throat with a clean, blunt instrument (e.g. spoon handle). **DO NOT delay the start of treatment.**

Eye contact: Immediately hold eyes open and flood with copious quantities of clean water for at least 20 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre. If splashed with the concentrate, patients should be reviewed after 24 hours. Referral to an ophthalmologist should be considered.

SECTION 4**FIRST AID MEASURES (Continued)****FIRST AID** (Continued)

Skin contact: Immediately take off all contaminated clothing. Wash skin immediately with water followed by soap and water. If skin is damaged, the paraquat can be absorbed through the skin. Seek medical advice. Contaminated clothing should be laundered before reuse.

Inhalation: Remove from exposure. If vapour has been inhaled, lie patient down comfortably and keep warm. Monitor closely and seek medical attention if effects persist. (Vapour consists of stanching agent rather than paraquat). If spray mist has been inhaled, immediately seek medical attention. Monitor patient closely and apply resuscitation or oxygen if available. (Spray mist contains paraquat).

Advice to Doctor: Rapid treatment is essential. Refer to "Paraquat Poisoning. A Practical Guide to Diagnosis, First Aid and Hospital Treatment" (2003 or later edition) - available at most major treatment hospitals and Poisons Information Centres.

Treatment: Wash out stomach and test urine and gastric aspirate (if clear) for presence of paraquat. Give up to 1 litre of 15% aqueous suspension of Fuller's Earth orally or via gastric tube, together with a suitable purgative (200 mL of an aqueous solution of mannitol). A 7% suspension of bentonite in 10% glycerol in water should be used if Fuller's earth is unavailable. Repeat administration of absorbent plus purgative until absorbent is seen in stools. This should normally take between 4 and 6 hours after the start of treatment.

Do not use supplemental oxygen.

With the possibility of late onset conjunctival ulceration it is advised that patients with paraquat eye injuries are reviewed the day after first presentation. At the review, consideration should be given to treating the eyes with a local antibiotic preparation to prevent secondary infection. Local treatment with a suitable steroid will aid resolution of granulation tissue. Corneal oedema, which may persist for up to 3 - 4 weeks, may cause blurring of vision.

OBTAIN IMMEDIATE MEDICAL ATTENTION. SPEED IS ESSENTIAL.

SECTION 5**FIRE FIGHTING MEASURES**

Extinguishing media: Not flammable or combustible. No risk of explosion if involved in a fire. Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff.

Hazards from combustion products: Not combustible as formulated, but residue left after evaporation of water may burn. Fumes are toxic. Firefighters **must** wear full protective equipment and self-contained breathing apparatus if risk to of exposure to vapour or smoke.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. DO NOT breathe smoke or vapours generated.

SECTION 6**ACCIDENTIAL RELEASE MEASURES****Emergency procedures / Material and methods for containment and cleanup procedures:**

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

- Avoid eye and skin contact.
- Avoid contamination of waterways and drains.

Keep all bystanders away. Wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, face shield or goggles, half facepiece respirator or disposable respirator to prevent skin and eye contamination. Re-position any leaking containers so as to minimise further leakage.

Wear protective equipment to prevent skin/eye contamination. In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay, cat litter or material such as vermiculite and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear full prescribed protective clothing and equipment. Keep out animals and unprotected persons.

SECTION 7**HANDLING AND STORAGE**

Precautions for Safe Handling: Very dangerous, particularly the concentrate. Product is poisonous if absorbed by skin contact, inhaled or swallowed. Will irritate the eyes, nose, throat and skin. Attacks eyes. Protect eyes while using. Avoid contact with eyes, skin and clothing. DO NOT inhale spray mist. When opening the container, preparing product for use and using the prepared spray, wear:

- cotton overalls buttoned to the neck and wrist,
- a washable hat,
- elbow-length PVC gloves,
- face shield or goggles and
- half-face piece respirator or disposable respirator.

If clothing becomes contaminated with product, or wet with spray, remove contaminated clothing immediately. If product on skin, immediately wash area with soap and water. 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, respirator and if rubber wash with detergent and warm water, face shield or goggles and contaminated clothing.

Conditions for Safe Storage: KEEP OUT OF REACH OF CHILDREN. This product is a Schedule 7 Poison (S7) and must be stored, transported and sold in accordance with the relevant Health Department regulations. This product is classified as a Dangerous Good. 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. DO NOT repack or use container for any other purpose. No smoking, eating or drinking should be allowed where material is used or stored.

SECTION 8**EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines:**

Exposure guidelines have been established for this product by Safe Work Australia.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Paraquat dichloride (respirable sizes)	0.1 mg/m ³	Not set
Diquat dibromide	0.5 mg/m ³	Not set

TWA = Time-Weight Average. STEL Short Term Exposure Level.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas adequate to keep exposure below the TWA. Keep containers closed when not in use. Some people who are extremely sensitive to the product may develop nose bleeds when handling the concentrate. If possible, these people should not handle the material; if they must, provide effective local ventilation.

Personal Protective equipment (PPE):

Very dangerous, particularly the concentrate. Product is poisonous if absorbed by skin contact, inhaled or swallowed. Will irritate the eyes, nose, throat and skin. Attacks eyes. Protect eyes while using. Avoid contact with eyes, skin and clothing. DO NOT inhale spray mist. When opening the container, preparing product for use and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, face shield or goggles and half face piece respirator or disposable respirator. If clothing becomes contaminated with product, or wet with spray, remove contaminated clothing immediately. If product on skin, immediately wash area with soap and water. 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, respirator and if rubber wash with detergent and warm water, face shield or goggles and contaminated clothing.

Hygiene Measures:

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Clear dark blue coloured liquid.
Odour:	Obnoxious odour.
Boiling point:	No specific data (~ 100°C).
Freezing point:	No data.
Specific Gravity:	1.1 g/L.
Solubility in Water:	Soluble in water.
pH:	Slightly acidic.
Flammability:	Not flammable.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	This product is a schedule 7 (S7) poison.

SECTION 10**STABILITY AND REACTIVITY**

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight.

Incompatible materials: Paraquat is highly corrosive to most metals e.g. Aluminium, zinc, iron.

Hazardous decomposition products: Should not decompose unless heated further after reaching complete dryness. May then produce carbon monoxide, nitrogen oxides, hydrogen cyanide and/or hydrogen chloride.

Hazardous reactions: Keep away from strong oxidizing agents.

SECTION 11**TOXICOLOGICAL INFORMATION**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:**ACUTE EFFECTS**

Swallowed: CAN KILL IF INGESTED. Acute LD₅₀ (paraquat) 150 mg/kg (rat), ~ 30 mg/kg man. About 10 mL of product may be lethal. Kidney and liver damage may occur after 2-3 days. Lung fibrosis after 1-3 weeks may cause death. Higher doses may cause multi-organ failure and death within 2-3 days.

The immediate effects of poisoning depend on the dose of paraquat absorbed into the blood. Mild poisoning occurs at < 20 mg paraquat ion/kg body weight and the effects are vomiting and diarrhoea. 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. Ulceration of the lips, mouth, throat and intestine may follow within 24 - 48 hours. Kidney and liver damage may appear 1 - 3 days after exposure. Can cause death by a delayed proliferating fibrosis of the lung within 1 - 3 weeks.

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.

Eye: Eye irritation may be delayed. May lead to ulceration of corneal and conjunctival epithelium giving rise to secondary infection. Loss of corneal and conjunctival epithelium and even mild iritis can occur with the risk of secondary infection and consequent residual corneal scarring. Corneal oedema may persist for up to 3-4 weeks with blurring of vision.

Skin: Contact with skin will result in moderate irritation. Can cause inflammation and in severe cases blistering of the skin. 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. Broken skin removes the barrier and paraquat may be absorbed with effects as outlined above under "Swallowed".

SECTION 11**TOXICOLOGICAL INFORMATION (Continued)**

Skin (Cont): Modelling predicted for intact human skin and diluted solutions that systemic toxicity would be unlikely, but the risk increased significantly with damaged skin or concentrated solutions. LD₅₀ (rat) > 2000 mg/kg (paraquat dichloride).

Inhaled: Highly toxic if inhaled. However, unlikely to be hazardous by inhalation because of low vapour pressure of the material at ambient temperature. Nose bleeding and soreness of the throat may result from spray mist or dust trapped on the nasal mucosa. Irritating to the respiratory system. Pulmonary oedema may occur up to 48 hours after exposure and could prove fatal.

This product contains a stenching agent to give an offensive smell. This has been done to reduce the likelihood of accidental ingestion. This stenching agent may cause headaches and nausea in some people when inhaled. The presence of this offensive smell in the air does not necessarily indicate the presence of paraquat.

LC₅₀ = 0.5 - 1.5 µg/L/4hrs (paraquat dichloride).

Long Term Exposure:

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. The Acceptable Daily Intake (ADI) for humans (paraquat cation) is 0.004 mg/kg/day.

Organ toxicity:

Paraquat affects the lungs, heart, liver, kidneys, cornea, adrenal glands, skin, and digestive system.

SECTION 12**ECOLOGICAL INFORMATION****Environmental Toxicology:**

No data is available on this product. The active ingredient, paraquat is toxic to aquatic organisms. 96hr LC₅₀ (rainbow trout) is 55 mg/L (static). The 96 hr LC₅₀ (brown trout) is 2.5 - 13 mg/L. LC₅₀ 72 hours for green algae is 0.34 mg/L. Paraquat is highly toxic to birds. The oral LD₅₀ for hens is 262 - 380 mg/kg; Mallard duck LD₅₀ = 199 mg/kg; Bobwhite quail LD₅₀ = 175 mg/kg. Not toxic to bees. LD₅₀ = 36 µg/bee.

Environmental Fate:

Paraquat is rapidly absorbed and deactivated by soil. There is no mobility in soil or ground water. There is evidence of photodegradation in water and plants.

Keep domestic pets and poultry away from treated areas. This formulation should not be applied on or near water which is used for livestock watering. Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.

SECTION 13**DISPOSAL CONSIDERATIONS**

Spills and Disposal: Persons involved in cleanup require complete skin protection - see section 8. In case of spillage, contain and absorb spilled material with absorbent material such as clay, sand or cat litter and dispose of waste as indicated below or in accordance to the Australian Standard 2507-Storage and Handling of Pesticides. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty containers: Triple or preferably pressure rinse containers before disposal. Add rinsings to 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 an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SECTION 14**TRANSPORT INFORMATION**

Transport: This product is classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail. UN 3016 BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC. Packaging Group III. Class 6.1. Hazchem 2XE. Hazard Identification number (HIN) 60. Australian Standards Initial Emergency Response Guide No. 34.

This product is a Schedule 7 Poison (S7) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 15**REGULATORY INFORMATION**

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 7 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 67627.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. T+: very toxic; T: toxic.

This product is classified as a Dangerous Good according to the ADG Code (7th Ed).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16**OTHER INFORMATION**

Issue Date: 24 July 2014. Valid for 5 years till 24 July 2020. (First Issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Ataxia: Inability to control the coordinate movements of the muscles.

Carcinogen: An agent which is responsible for the formation of a cancer.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Mutagenic: Capable of inducing a genetic mutation in an organism.

LD₅₀: Median Lethal Dose A statistically derived single dose of a substance that can be expected to cause death in 50% of dosed animals.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2015).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End SDS