

MATERIAL SAFETY DATA SHEET

PRODUCT : Paraquat dichloride 24% SL

PRODUCT DESIGNATION : Herbicide

Section 1. Product & Company Identification

Common Name : Paraquat dichloride
Grade : Formulation
Active Ingredient : Paraquat dichloride
Chemical Name of Active Ingredient (IUPAC) : 1, 1'-dimethyl-4, 4'-bipyridinium dichloride
Chemical Family of A. I. : Bipyridylum
Molecular Formula of A. I. : C₁₂H₁₄Cl₂N₂
Molecular Mass of A. I. : 186.3 g/mol
Manufacturer & Supplier : **M/s United Chemicals**
Head office:B-371, 1st Floor, Meera Bagh, New Delhi,
Factory:15/1, 15/2, 15/3, Industrial Estate, Vidisha,
(M.P)
Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

Name of Components	Concentration% w/w
Paraquat dichloride a.i.	24.00% w/w
Inert Ingredients	76.00% w/w
TOTAL	100.00% w/w

Section 3. Hazards Identification

Eye contact

May cause injury.

Skin contact

Contact with irritated skin, or a cut, or repeated contact with intact skin will cause severe irritation and may result in poisoning.

Ingestion

In animals can cause excitability and lung congestion, which in some cases leads to convulsions, incoordination, and death by respiratory failure.

Inhalation

Inhalation exposure may cause irritation, nosebleed and may lead to poisoning.

Section 4. First Aid Measures

RAPID TREATMENT IS ESSENTIAL IN CASE OF PARAQUAT POISONING. SPEED IS ESSENTIAL.

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. All care must be taken to prevent vomit from being inhaled.

Do not give anything by mouth to a semi-conscious or unconscious person.

Immediately transfer patient to nearest hospital or medical centre, warning by telephone of the estimated time of arrival so that the start of treatment is not delayed.

Eye: If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. 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.

Skin: Contact of the concentrate with abraded skin or skin with cuts must be avoided. Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use. Seek medical advice, but only after the exposed skin has been thoroughly washed.

Inhaled: Remove patient from exposure, keep warm and at rest. Obtain medical attention urgently.

Advice to Doctor:

Rapid treatment for PARAQUAT poisoning is essential. Evacuation of the stomach and stomach washout should be carried out as quickly as possible. A booklet entitled 'Paraquat Poisoning, a practical guide to diagnosis, first aid and hospital treatment' or 'The Treatment

of Paraquat Poisoning: a guide for doctors' (prepared by Orica Australia) is available at major hospitals or Poison 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 the stools. This should normally take between 4 and 6 hours after the start of treatment. Do not use supplemental oxygen.

Section 5. Fire Fighting Measures

Specific Hazard: Not flammable. Choose extinguishing media to suit the burning material. Contain all runoff. Contain all runoff.

Hazards from combustion products: There is no risk of an explosion from this product under normal circumstances if involved in a fire. Product is unlikely to decompose until heated to dryness. On further heating will emit toxic fumes including oxides of carbon, oxidise of nitrogen and hydrogen chloride. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke, or the product.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

Section 6. Accidental Release Measures

Emergency 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

Isolate and post spill area. Keep all bystanders away. Wear full length clothing and PVC gloves to prevent skin and eye contamination. Re-position any leaking containers so as to

minimise further leakage. Large spills should be dyked or covered to prevent dispersal. Vacuum, shovel or pump spilled material into an approved container and dispose of as listed below. Keep out unprotected persons and animals.

Material and methods for containment and cleanup procedures:

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. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

Section 7. Handling & Storage

Precautions for Safe Handling:

For use by licensed pest control operators or primary producer's only. Do not work in spray mist. Ensure containers are kept closed until using product. When opening the container and preparing product for use, wear elbow-length PVC gloves and 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.

Do not continue to use if skin irritation or nose bleed occurs. This may be caused by exposure to stray mist as the result of incorrect use of equipment or adverse climatic conditions. Stop and review handling and spraying techniques before further spraying. If symptoms persist seek medical advice.

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. Store in the closed, original container in a dry, cool, well-ventilated, locked room or a place away from children, animals, food, feedstuffs, seed

and fertilisers. DO NOT store for prolonged periods in direct sunlight. This product is a Dangerous Good - Class 6.1.

Section 8. Exposure Control, Personal Protection

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): When opening the container and preparing product for use wear elbow length PVC gloves and face shield or goggles. When there is a risk of exposure to spray mist wear waterproof footwear and waterproof protective clothing, impervious gauntlet length gloves (rubber or PVC), goggles and a face mask and respirator covering nose and mouth and capable of filtering spray droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirements of AS1716 (Standard Association of Australia). Further advice on safety equipment should be obtained from a safety equipment manufacturer.

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, goggles, contaminated clothing and respirator.

Section 9. Physical and Chemical Properties

Appearance / state	: Clear blue coloured liquid.
Colour	: Clear blue
Odour	: Obnoxious odour. (Stenching agent included)
pH	: 5.0 – 6.5
Boiling Point	: No specific data ~100°C
Specific Gravity	: 1.1
Flammability:	: Non combustible material.
Water Solubility	: Soluble in water

Section 10. Stability & Reactivity

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture. Paraquat is inactivated by adsorption onto clay.

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

Incompatible materials: Paraquat is highly corrosive to most metals eg. 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

Acute Oral Toxicity LD50 for rats : >129-157 mg/kg

Acute Dermal Toxicity LD50 Rat : >911 mg /kg

Acute Inhalation Toxicity LC50 (rat) = 0.5 - 1.5 µg/L/4 hr

Eye Irritation Rabbit : The product is an eye irritant.

Skin Irritant Rabbit : The product is a skin irritant

Skin sensitization Guinea pig : The product is a skin sensitizer

Section 12. Ecological Information

Toxicity to fish: Rainbow trout, LC50 (96h) 55 mg/l

Toxicity to Bird (Bobwhite quail) LD50: 175 mg/kg , (Mallard duck), LD50: 199 mg/kg

Toxicity to Bee, LD50 36 µg/bee

Section 13. Disposal Consideration

Spills & Disposal:

Isolate and post spill area. 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. Large spills should be dyked or covered to prevent dispersal. 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 tank mix. Do not dispose of undiluted chemicals on-site. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. 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

IMDG Classification

Shipping name : BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC –
(Contains Paraquat).

Class : 6.1

Packing group : III

UN number : 3016

Marine pollutant : Yes

Section 15. Regulatory Information

R-phrases

R43 May cause sensitization by skin contact.

R24/25 Toxic in contact with skin and if swallowed.

R26 Very toxic by inhalation.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

R48/25 Toxic: danger of serious damage to health by prolonged exposure

Safety phrases:

Admn. Off. : B-371, 1st Floor, Meera Bagh, Delhi-110063 (India)
Ph. : 25258770, 25258771, 25258772, 42334229

E-mail : utc_chemicals@hotmail.com
info@unitedchemicals.in

S1/2 Keep locked up and out of reach of children.

S23 Do not breathe vapour or spray.

S28 After contact with skin, wash immediately with plenty of water.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S38 If insufficient ventilation, wear suitable respiratory equipment.

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION

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