

1: IDENTIFICATION

Chemical Name	1, 1'-dimethyl-4, 4'-bipyridinium dichloride	Trade Name	PARAQUIT
Synonyms	Paraquat Dichloride 24% SL	Molecular Formula	C ₁₂ H ₁₄ Cl ₂ N ₂
Uses	Herbicides		
Manufacturer/ Supplier	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
Emergency Contact	9503095030	E-mail	info@agrostar.in

2: COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Paraquat Dichloride a.i.	1910-42-5	24.0%
Other Ingredients	-	76.0%

3: HAZARD IDENTIFICATION

Human Health Hazard

- 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.

4: FIRST AID MEASURES

General: Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

Inhalation: Move patients to fresh air. Allow patients to rest. If difficulty in breathing or not breathing give artificial respiration, preferably mouth to mouth. Do not use supplemental oxygen. Immediately seek medical attention.

Ingestion: Rinse mouth with water and give plenty of water to drink. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Seek medical attention immediately.

Skin Contact: In case of contact with product, immediately rinse with plenty of water. Remove and isolate contaminated clothing and shoes. Seek medical attention.

Eye Contact: Rinse immediately with plenty of water for several minutes with eyes wide open. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15-20 minutes. Seek medical attention if irritation develops.

Note to physician: Rapid treatment for PARAQUAT poisoning is essential. Evacuation of the stomach and stomach washout should be carried out as quickly as possible.

Treatment: Wash out stomach (gastric lavage) and test both the urine and gastric aspirate (if it's clear) for the presence of paraquat. Administer an absorbent like Fuller's Earth (up to 1 liter of a 15% aqueous suspension, given orally or by tube) combined with a powerful purgative (e.g., 200 mL of aqueous mannitol). If Fuller's Earth is unavailable, use a 7% bentonite suspension in 10% glycerol and water instead. This combination of absorbent and purgative must be repeated until the absorbent is clearly visible in the stools, which usually takes between 4 and 6 hours. Supplemental oxygen is strictly prohibited.

5: FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, foam, dry powder, carbon dioxide

Unsuitable Extinguishing Media: Solid water stream as it may scatter and spread fire.

Specific Hazards: 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 but on further heating will emit toxic fumes including oxides of carbon and nitrogen, and hydrogen chloride

Hazardous Thermal (de)composition: May release irritating and toxic gases due to thermal decomposition

Special Procedures: Evacuate area and fight fire upwind from a safe distance. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff. Minimize use of water to prevent environmental contamination. Dike and collect water used to fight fire to prevent environmental damage due to runoff. Do not discharge extinguishing water into the drain or water bodies.

Protection of Fire Fighters: Do not breathe a fumes. Wear full protective clothing and self-contained breathing apparatus.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ventilate spillage area. Avoid breathing fume. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from spill/ fumes.

Environmental Precaution: Do not allow runoff to enter drains and public waters. Notify the authorities if product enters.

Methods for Cleaning-up: Collect spilled liquid with non-combustible absorbent material and transfer into containers for disposal. Large spills may be neutralized with bentonite or other absorbent clays. Dispose of absorbed material in accordance with regulations. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Do not allow any material to run off in soil, drainage systems or bodies of water. Notify and consult with proper regulatory authorities

7: HANDLING & STORAGE

Handling: Do not smoke, drink, or eat during handling. Wash hands and other exposed areas with mild soap and water before and after handling material. Wear protective equipments to avoid contact and/or inhalation with the product. Wash clothing and equipment before reuse. Eliminate all sources of ignition from areas where the material is handled or used. Good personal hygiene procedures must be practiced.

Specific Conditions: Do not continue to use if skin irritation or nose bleed occurs. This may be caused by exposure to spray 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.

Storage: Store in dry, cool, well-ventilated area. Keep away from excessive heat and open flame. Keep in original container and tightly closed when not in use. Keep product away from seeds, fertilizer, foods and animal feeds. Keep out of reach of the children

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Measures: Ensure adequate ventilation and set up emergency exits and the risk-elimination area. Handle in accordance with good industrial hygiene and safety practice.

General Protection: Avoid breathing dust, vapours or aerosols. Avoid contact with eyes and skin. While handling the product wear cotton overalls buttoned to the neck and wrist, elbow-length PVC gloves. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

Personal Protection: Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

Respiratory Protection: Always use NIOSH/MSHA approved respiratory protection equipment with a universal filter type including particle filter.

Skin Protection: Wear suitable protective clothing, including long sleeved shirt, long pants, gloves, coveralls, and boots to avoid skin contact. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand Protection: Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or Viton.

Eye Protection: Safety goggles, chemical splash goggles or face shield should be used. Safety showers and eyewash should be easily available.

Others: Wash clothing before reusing.

9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Liquid	Specific Gravity: 1.1	Physical State: Liquid	pH: 5 - 6.5	Flammability: Non combustible
Colour: Clear Blue	Odour: Obnoxious odour	Boiling Point [°C]: No specific data	~100	Solubility in Water: Soluble

10: STABILITY & REACTIVITY

Stability: Stable under normal circumstances upto 2 years from manufacture. **Conditions to Avoid:** exposure to direct sunlight for prolonged periods.

Hazardous Thermal Decomp. Products: Does 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.

Material to Avoid: Highly corrosive to most metals eg. Aluminium, zinc, iron.

11: TOXICOLOGICAL INFORMATION

Rat oral LD50 [mg/kg] : >129-157	Rat inhalation LC50 [µg/l/4h] : 0.5 - 1.5	Skin irritation (rabbit): Irritant
Dermal (rat) LD50 [mg/kg]: >911	Skin Sensitization (Guinea Pig): Sensitizer	Eye irritation (rabbit): Irritant

12: ECOLOGICAL INFORMATION

Toxicity to Fish: Rainbow trout, LC50 (96h) 55 mg/l	Toxicity to Bee: Honey bee LD50 36 µg/bee
Toxicity to Bird: Bobwhite quail LD50: 175 mg/kg , Mallard duck LD50: 199 mg/kg	
Bioaccumulative Potential: No data available	Persistence, Degradability and Mobility in soil: No data available

13: DISPOSAL CONSIDERATION

Waste-disposal Procedures: Dispose of this product only according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container.

Contaminated Packaging: Empty remaining contents and the rinse containers thrice before disposal and add residue in spray tank. Empty containers should be taken to an approved waste handling site for recycling or disposal. Avoid contamination of any water supply with chemical or empty container. 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.

14: TRANSPORT INFORMATION

UN No. 3016 **Proper Shipping Name:** BIPYRIDYLIUM PESTICIDE, LIQUID, TOXIC - (contains Paraquat)

Land Transport (ADR/RID): Class-6.1, Packing group - III **Air Transport (IATA /ICAO):** Class-6.1, Packing group - III

Sea Transport (IMO/IMDG): Class-6.1, Packing group - III , Marine pollutant - Yes

15: REGULATORY INFORMATION

Hazard symbol: Xn Harmful

Risk Phrase: R24/25, R26, R37/38, R41, R43, R48/25

Safety Phrase: S1/2, S23, S28, S36/37/39, S38

16: OTHER INFORMATION

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