

**MATERIAL SAFETY DATA SHEET****1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

Product Name : Paraquat dichloride 24%SL

Common Name : Paraquat dichloride

IUPAC Name : 1,1'-dimethyl-4,4'-bipyridinediium dichloride; 1,1'-dimethyl-4,4'-bipyridinium dichloride; 1,1'-dimethyl-4,4'-bipyridylium dichloride

Chemical Abstracts Name : 1,1'-dimethyl-4,4'-bipyridinium dichloride

CAS No. : [1910-42-5]

Chemical formula : $C_{12}H_{14}Cl_2N_2$

Molecular weight : 257.2

Chemical Family : Bipyridylium

Use : Herbicides

Company Name : Solas Cropotech Private Limited.

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Content % (w/w)
Paraquat dichloride	[1910-42-5]	24%
Other	-	76 %

**MATERIAL SAFETY DATA SHEET****3. HAZARDS IDENTIFICATION**

Classification of the Hazardous Chemical:	: Acute toxicity, Category 4 Reproductive toxicity, Category 1B
Signal Word:	: DANGER.
Hazard Statement(s):	: H302 Harmful if swallowed.
Hazards	: H360Df May damage the unborn child. Suspected of damaging Fertility.
Precautionary Statement(s):	: P201 Obtain special instructions before use. P280 Wear protective gloves/ protective clothing/ Eye protection/ face protection. P308 + P313 IF exposed or concerned: Get medical Advice/attention.
Skin and Eyes	: Avoid contact with skin and eyes.
Entry route	: Ingestion, Inhalation, Contact with eye or skin.
Symptoms of poisoning	: No cases of human poisoning are on record. The poisoning symptoms observed for laboratory animals were non-specific.

4. FIRST AID MEASURES

Ingestion	: If swallowed, seek medical advice immediately DO NOT induce vomiting.
Eye	: Rinse immediately with plenty of water, also under the Eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required
Skin	: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before reuse
Inhalation	: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poison Information



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Centre
immediately
Advice to Physician : No specific Antidote. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Specific Hazard : There is no risk of an explosion from this product under normal circumstances if involved in a fire.

Extinguishing Media : Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. DO NOT use a solid water stream as it may scatter and spread fire.
Large fires: Use alcohol-resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire.

Hazard From Combustion products : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion .
Exposure to decomposition products may be a hazard to health.

Protective equipment : Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

In Case of Emergency : 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

Clean up Procedures : Procedure for spill
(1) Keep all bystanders away
(2) Wear 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) Disposal of the absorbed material will depend upon the extent of the spill
• For quantities up to 50 L of product bury in a secure



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landfill site

- For quantities greater than 50 L seek advice from the Manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established

(7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable

7. HANDLING AND STORAGE

Handling	: Avoid contact with eyes and skin. Do not inhale spray mist. Wash hands after use.
Storage	: Store in tightly sealed original containers in a dry secure place away from fertilisers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	: In the Workplace: ensure ventilation is adequate and that air concentrations of components are controlled below quote Workplace Exposure Standards. Keep containers closed when not in use. No special requirements. Product is used outdoors.
Ingestion	: DO NOT eat, drink or apply cosmetics, where there is a potential for exposure to the product.
Eye Protection	: Safety goggles, chemical splash goggles or face shield for eyes protection should be used. Safety showers and eye wash should be easily available.
Skin Protection	: Chemical resistant gloves, coveralls socks, apron and chemical resistant foot covering should always be used while handling the product.
Respiratory protection	: Always use NIOSH/MSHA approved respiratory protection equipment with a universal filter type including particle filter.
General Protection	: Avoid contact with eyes and skin. While handling the product wear cotton overalls buttoned to the neck and wrist. Elbow-length PVC gloves and face shield. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water.



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After each day's use, wash gloves and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Violet
Physical state	: Dark greenish blue liquid
Vapour pressure	: <0.1 mPa.
Density/Specific Gravity	: 1.072 at 20 °C
Water solubility	: 620 g/l at 25°C

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal use and storage conditions.
Conditions to Avoid	: See "Unusual Fire, Explosion and Reactivity Hazards" statement,
Incompatible Materials	: Strong bases, Strong acids, Strong oxidizing agents
Hazardous decomposition products	: Can decompose at high temperatures forming toxic gases.
Hazardous Reactions	: No polymerization will occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀	: Rat:>707mg/kg(male) 590 mg/kg(female)
Acute Dermal LD₅₀	: Rat: 590 mg/kg
Acute Inhalation LC₅₀	: No vapour toxicity, extreme exposure May Cause nose bleeding
Skin Irritation	: Irritant (Rabbit)
Eye Irritation	: Irritant (Rabbit)
Skin Sensitization	: Not a skin sensitizer (Guinea pig)

**MATERIAL SAFETY DATA SHEET****12. ECOLOGICAL INFORMATION****Birds**

Mallard duck	:	Acute oral LD50: 199mg/kg(8d)
Bobwhite quail	:	Acute oral LD50: 175mg/kg
Mallard duck	:	Acute oral LC50: 4048mg/kg(5d)
Bobwhite quail	:	Acute oral LC50: 981mg/kg(5d)

Fish

Rainbow trout	:	LC50: 32 mg/l(96h)
mirror carp	:	LC50: 135 mg/l(96h)

Daphnia magna

	:	EC50:6.1mg/l(48h)
Bees LD50	:	(Oral):36 µg/bee (72h)
	:	(Contact): 150 µg/bee (72h)

13. D**NSIDERATIONS**

Disposal	:	Dispose of this product only by using according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Add rinsing's to spray tank.
Disposal of empty Containers	:	(1) Rinse containers before disposal. Add rinsing's to the spray tank. DO NOT dispose of undiluted chemicals on site. (2) Dispose of rinsed, empty containers at 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.

14. TRANSPORT INFORMATION

Shipping Name	:	CORROSIVE LIQUID ,TOXIC N.O.S (Paraquat dichloride)
UN No.	:	3016
Class	:	6.1
Packing group	:	III
Marine	:	Yes

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pollutant

15. REGULATORY INFORMATION**Hazard
symbol****Dangerous for the
environment (N)**

Risk Phrase R22, harmful if swallowed. R38, irritating to skin. R41, risk of serious damage to eyes. R43 may cause sensitisation by skin contact.

Safety phrase S 1/2: Keep locked up and out of reach of children.
S 26: In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
S 35: The material and its container must be disposed-off in a safe way.

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 resented 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 on 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 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. Accordingly, no guarantee or warrantee expressed or implied is made by Solas Cropotech Private Limited, as to the results to be obtained based upon the user's use of the information, nor does Solas Cropotech Private Limited, assume any liability arising out of user's use of the information.

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