

## 1. IDENTIFICATION

**Product identifier**

**Product Name** Paraquat Concentrate

**Other means of identification**

**Product Code** 83529-27  
**UN/ID no** UN3016  
**Synonyms** Para-Shot 3.0  
**Registration Number(s)** 83529-27

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Herbicide Restricted to professional users  
**Uses advised against** Consumer use

**Details of the supplier of the safety data sheet**

**Manufacturer Address**  
 Sharda USA LLC  
 P.O. Box 640  
 Hockessin, DE 19707  
 Website: www.shardausa.com

**Emergency telephone number**

**Company Phone Number** 610-350-6930 (US)  
 +91 22 5678 2800 (India)  
**Emergency Telephone** CHEMTREC: 800-424-9300  
 CHEMTREC: 703-527-3887  
 POISON CONTROL CENTER: 800-222-1222

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

Toxic if swallowed  
 Fatal if inhaled  
 Causes serious eye irritation  
 May cause an allergic skin reaction  
 May cause respiratory irritation  
 Causes damage to organs through prolonged or repeated exposure



**Appearance** viscous

**Physical state** liquid

**Odor** Strong Pungent

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace

**Precautionary Statements - Response**

Specific treatment is urgent (see instructions on this label)  
Get medical advice/attention if you feel unwell  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention  
IF ON SKIN: Wash with plenty of soap and water  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Immediately call a POISON CENTER or doctor/physician  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Rinse mouth

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

Very toxic to aquatic life with long lasting effects. May be harmful in contact with skin.

**Unknown acute toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable

**Mixture**

Chemical Name	CAS No	Weight-%
Other ingredients	Proprietary	56.8
Paraquat dichloride	1910-42-5	43.2

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

**Description of first aid measures**

<b>General advice</b>	Immediate medical attention is required. Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a poison control center or doctor for treatment advice.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a poison control center or doctor for treatment advice.
<b>Inhalation</b>	Move victim to fresh air. Administer oxygen if breathing is difficult. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. The odor of this product is from the stenching agent, which has been added, not from the paraquat. Call a poison control center or doctor for treatment advice.
<b>Ingestion</b>	If swallowed, call a poison control center or physician immediately. SPEED IS ESSENTIAL. Immediate medical attention is required. If available, give an absorbent such as activated charcoal, bentonite or Fuller's Earth. Drink 1 or 2 glasses of water. Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Use personal protection recommended in Section 8. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	May cause redness and tearing of the eyes. May cause skin irritation. Coughing and/ or wheezing. May cause damage to lungs, including sores, bleeding and disease. Note - Symptoms are prolonged and painful.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Administer either activated charcoal (100g for adults or 2g/kg body weight in children) or Fuller's Earth (15% solution; 1 liter for adults or 15ml/kg body weight in children). NOTE: The use of gastric lavage without administration of an absorbent has not shown any clinical benefit. Do not use supplemental oxygen. Eye splashes from concentrated material should be treated by an eye specialist after initial treatment. With the possibility of late onset corneal ulceration, it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation. Use treatment that is appropriate for chemical burns. Intact skin is an effective barrier to paraquat; however, contact with irritated or cut skin or repeated contact with intact skin may result in poisoning.
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## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Dry chemical, CO<sub>2</sub>, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

### Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Hazardous combustion products** Carbon oxides. Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

Wear protective gloves/protective clothing and eye/face protection. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and inhalation of vapors. Ensure adequate ventilation, especially in confined areas.

#### **For emergency responders**

Use personal protection recommended in Section 8. Ventilate the area.

### Environmental precautions

#### **Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

#### **Methods for containment**

Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material.

#### **Methods for cleaning up**

Prevent product from entering drains. Take up with sand or other non-combustible absorbent material and place into containers for later disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on safe handling**

Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep in properly labeled containers.

**Packaging materials** Keep only in original container. Reacts with aluminum and its alloys.

**Incompatible materials** Strong oxidizing agents. Aluminum.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Paraquat dichloride 1910-42-5	-	TWA: 0.5 mg/m <sup>3</sup> respirable dust S*	IDLH: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> respirable dust

#### Legend

*Skin - Skin Absorber*

*NIOSH IDLH Immediately Dangerous to Life or Health*

### Appropriate engineering controls

**Engineering Controls** Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

**Respiratory protection** Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Strong Pungent
<b>Appearance</b>	viscous	<b>Odor threshold</b>	No information available
<b>Color</b>	blue		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
<b>pH</b>	4.3		
<b>Melting point / freezing point</b>	No information available		
<b>Boiling point / boiling range</b>	No information available		
<b>Flash point</b>	> 100 °C / 212 °F		Tag Closed Cup
<b>Evaporation rate</b>	No information available		
<b>Flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
<b>Upper flammability limit:</b>	No information available		
<b>Lower flammability limit:</b>	No information available		
<b>Vapor pressure</b>	~17 mmHg		@ 25 °C
<b>Vapor density</b>	No information available		
<b>Relative density</b>	1.130		

<b>Water solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	@ 25 °C
<b>Partition coefficient</b>	2.44	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	Not an explosive	
<b>Oxidizing properties</b>	Not applicable	

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	9.42 lb/gal

**10. STABILITY AND REACTIVITY****Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Elevated Temperature. Storage near to reactive materials.

**Incompatible materials**

Strong oxidizing agents. Aluminum.

**Hazardous Decomposition Products**Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NO<sub>x</sub>). Carbon oxides. Hydrogen chloride.**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information**

Acute Oral LD50 (rat): 300-2000 mg/kg  
 Acute Dermal LD50 (rabbit): > 2000 mg/kg Irritation (rabbit): Causes eye irritation.  
 Skin Irritation (rabbit): Not an irritant.  
 Inhalation LC50 (rat): >2.19 ug/L (4 HR)  
 Skin Sensitization (guinea pig): Sensitizer.  
 Ames Test: Not mutagenic.

**Inhalation**

May be fatal if inhaled. May cause irritation.

**Eye contact**

Severely irritating to eyes.

**Skin contact**

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be harmful in contact with skin.

**Ingestion**

Toxic if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Inert ingredients	> 90 mL/kg ( Rat )	-	-
Paraquat dichloride 1910-42-5	= 223 mg/kg ( Rat ) = 57 mg/kg ( Rat )	= 325 mg/kg ( Rabbit ) = 79 mg/kg ( Rat ) = 80 mg/kg ( Rat )	= 1 mg/m <sup>3</sup> ( Rat ) 6 h

**Information on toxicological effects**

**Symptoms** May cause an allergic skin reaction. Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing. May cause damage to lungs, including sores, bleeding and disease. Note - Symptoms are prolonged and painful.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** May cause sensitization by skin contact.  
**Germ cell mutagenicity** Based on available data, the classification criteria are not met.  
**Carcinogenicity** Based on available data, the classification criteria are not met.  
**Reproductive toxicity** Based on available data, the classification criteria are not met.  
**STOT - single exposure** Respiratory system.  
**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.  
**Chronic toxicity** Prolonged or repeated exposure increases the risk. Possible risk of irreversible effects. Avoid repeated exposure.  
**Target Organ Effects** Respiratory system, Central nervous system, Gastrointestinal tract (GI), Eyes, Skin, heart, liver, kidney.  
**Aspiration hazard** Based on available data, the classification criteria are not met.

**Numerical measures of toxicity - Product Information**

Refer to product information above.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Very toxic to aquatic life with long lasting effects This product is toxic to wildlife. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

56.8 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Paraquat dichloride 1910-42-5	-	15: 96 h Cyprinus carpio mg/L LC50 static 8.5 - 19: 96 h Lepomis macrochirus mg/L LC50 static 11.0 - 19.0: 96 h Oncorhynchus mykiss mg/L LC50 static	9.1 - 12.2: 48 h Daphnia magna mg/L EC50 Static

**Persistence and degradability**

Not readily biodegradable. Paraquat is quickly and strongly adsorbed by soil particles, especially in clay soil. Such bound residues are not available to plants, earthworms, and microorganisms. Because of its unavailability, and its resistance to microbial degradation and breakdown by sunlight, paraquat is long-lived. The bound residues persist indefinitely and are transported in runoff with the sediment. The reported half-life for paraquat in soil ranges from 16 months (aerobic laboratory conditions) to 13 years (field study).

**Bioaccumulation**

Not likely to bioaccumulate.

**Other adverse effects**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Disposal of wastes**

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

**Contaminated packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

## 14. TRANSPORT INFORMATION

**DOT** NOTE - For containers with a net quantity of 23 LBS or more, the descriptive text/designation "RQ (Paraquat dichloride)" is required either before or after the shipping description.

<b>UN/ID no</b>	UN3016
<b>Proper shipping name</b>	Bipyridilium pesticides, liquid, toxic
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>Special Provisions</b>	IB3, T7, TP2, TP28
<b>Description</b>	UN3016, Bipyridilium pesticides, liquid, toxic mixture, 6.1, III
<b>Emergency Response Guide Number</b>	151

**TDG**

<b>UN/ID no</b>	UN3016
<b>Proper shipping name</b>	Bipyridilium pesticide, liquid, toxic mixture
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>Description</b>	UN3016, Bipyridilium pesticide, liquid, toxic mixture (Paraquat dichloride), 6.1, III

**IATA**

<b>UN/ID no</b>	UN3016
<b>Proper shipping name</b>	Bipyridilium pesticide, liquid, toxic
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>ERG Code</b>	6L
<b>Special Provisions</b>	A3, A4
<b>Description</b>	UN3016, Bipyridilium pesticide, liquid, toxic (Paraquat dichloride), 6.1, III

**IMDG**

<b>UN/ID no</b>	UN3016
<b>Proper shipping name</b>	Bipyridilium pesticide, liquid, toxic
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>EmS-No</b>	F-A, S-A
<b>Special Provisions</b>	61, 223, 274
<b>Description</b>	UN3016, Bipyridilium pesticide, liquid, toxic (Paraquat dichloride), 6.1, III

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies



**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Paraquat dichloride - 1910-42-5	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Paraquat dichloride 1910-42-5	-	10 lb	-

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Inert ingredients	-	-	X
Paraquat dichloride 1910-42-5	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number 83529-27

**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**Difference between SDS and EPA Pesticide label**

DANGER/POISON (Skull & Crossbones): May be fatal if swallowed. Fatal if inhaled. Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin. Do not breathe spray mist. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Inhalation is an unlikely route of exposure due to low vapor pressure and large spray droplet size, but mucosal irritation or nosebleeds may occur. Prolonged contact with this concentrated product can irritate your skin.

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

<b><u>NFPA</u></b>	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties -
<b><u>HMIS</u></b>	Health hazards 3*	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

Issue Date 04-Jul-2016  
 Revision Date 08-Mar-2019  
 Revision Note  
 No information available

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**