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Revision Number 2

1. Identification

Product identifier

Product Name Willowood Paraquat 3SL

Other means of identification

EPA Reg. No. 87290-35

UN/ID no UN2922

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product label

Details of the supplier of the safety data sheet

Supplier Address

Generic Crop Science, LLC
1887 Whitney Mesa Drive #9740
Henderson, NV 89014-2069
1-844-200-FARM (3276)

E-mail regulatory@farmersbusinessnetwork.com

Emergency telephone number For Emergency Medical Assistance (Human or Animal) contact Rocky Mountain Poison Control at 866-767-5040.

For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) contact CHEMTREC at 800-424-9300 (North America) or 703-527-3887 (International).

2. Hazard(s) identification

Classification

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

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Corrosive to metals	Category 1

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements**Danger****Hazard statements**

May be corrosive to metals.
Toxic if swallowed.
Toxic in contact with skin.
Fatal if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe vapor or mist.
Use only outdoors or in a well-ventilated area.
Wear respiratory protection.
Keep only in original packaging.
Wear protective gloves/clothing and eye/face protection.

Precautionary Statements - Response

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 water and soap.
Call a doctor if you feel unwell.
Take off immediately all contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a doctor.
IF SWALLOWED: Immediately call a doctor.
Rinse mouth.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Store in corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other information

Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
Paraquat dichloride	1910-42-5	90 - 99	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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. If breathing is difficult, (trained personnel should) give oxygen. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
Skin contact	Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe vapor or mist. 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. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Coughing and/ or wheezing. Difficulty in breathing. May cause redness and tearing of the eyes. Burning sensation.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Unsuitable extinguishing media	None known based on information supplied.
Specific hazards arising from the	This product is mildly corrosive to aluminum and produces hydrogen gas which may form a

chemical highly combustible gas mixture.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Do not breathe vapor or mist. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Do not get water inside containers. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Do not breathe vapor or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Do not get water inside containers.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Paraquat dichloride 1910-42-5	-	TWA: 0.5 mg/m ³ respirable dust (vacated) TWA: 0.1 mg/m ³ respirable dust Paraquat (vacated) S* S*	IDLH: 1 mg/m ³ TWA: 0.1 mg/m ³ respirable dust

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. Do not breathe vapor or mist. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Appearance Dark green liquid
Physical state Liquid
Color Dark green
Odor Pungent
Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.83	@ 25 °C
pH (as aqueous solution)		No data available
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point		No data available
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Vapor density		No data available
Relative density	1.120 g/cm ³ @ 25°C	
	1.115 g/cm ³ @ 40°C	
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	3.75 cP @ 25°C	

2.71 cP @ 40°C

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods. Incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). Toxic in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Coughing and/ or wheezing. Difficulty in breathing. Redness. May cause redness and tearing of the eyes.
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Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral)	243.1313 mg/kg
ATEmix (dermal)	327.10 mg/kg

ATEmix (inhalation-dust/mist) 0.055 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Paraquat dichloride 1910-42-5	= 223 mg/kg (Rat)	> 2000 mg/kg (Rat)	0.8 - 1.9 mg/m ³ (Rat) 4 h

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

Skin corrosion/irritation	Classification based on data available for ingredients. Causes skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	May cause respiratory irritation.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Target organ effects	Heart. Liver. Kidney. Respiratory system. Eyes. Skin. Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Paraquat dichloride 1910-42-5	-	LC50: =15mg/L (96h, Cyprinus carpio) LC50: 8.5 - 19mg/L (96h, Lepomis macrochirus) LC50: 11.0 - 19.0mg/L (96h, Oncorhynchus mykiss)	-	EC50: 9.1 - 12.2mg/L (48h, Daphnia magna)

Persistence and degradability No information available.**Bioaccumulation****Component Information**

Chemical name	Partition coefficient
Paraquat dichloride 1910-42-5	-4.5

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

ID number	UN2922
Proper shipping name	Corrosive Liquid, Toxic, N.O.S. (Paraquat dichloride, Valeric acid)
Hazard Class(es)	8 (6.1)
Packing group	III
Hazard Label	Class 8 Corrosive, Division 6.1 Toxic

IATA

ID number	UN2922
Proper shipping name	Corrosive Liquid, Toxic, N.O.S. (Paraquat dichloride, Valeric acid)
Hazard Class(es)	8 (6.1)
Packing group	III
Hazard Label	Class 8 Corrosive, Division 6.1 Toxic

IMDG

ID number	UN2922
Proper shipping name	Corrosive Liquid, Toxic, N.O.S. (Paraquat dichloride, Valeric acid)
Hazard Class(es)	8 (6.1)
Packing group	III
Hazard Label	Class 8 Corrosive, Division 6.1 Toxic, Environmentally Hazardous
Marine Pollutant/Environmentally Hazardous Substance	YES

15. Regulatory information

International Inventories

Contact supplier for inventory compliance status

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

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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	Extremely Hazardous Substances RQs	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
Paraquat dichloride 1910-42-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 87290-35

16. Other information

NFPA	Health hazards 4	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 3*	Flammability 0	Physical hazards 0	Personal protection X
Chronic Hazard Star Legend	* = Chronic Health Hazard			

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision Note Change to Email, Emergency Telephone Number and Section 14.

Disclaimer

The information provided in this 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