

Issuing Date 30-May-2023

Revision Date 31-Jan-2024

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** Willowood Propanil 4EC

### Other means of identification

**EPA Reg. No.** 87290-32

**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 Dr # 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 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements

**Warning**

**Hazard statements**

Harmful if swallowed.

Harmful if inhaled.

Causes serious eye irritation.

Suspected of causing cancer.

May cause respiratory irritation.

**Precautionary Statements - Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/clothing and eye/face protection.

Wash face, hands and any exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid breathing vapor or mist.

Use only outdoors or in a well-ventilated area.

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.

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 INHALED: Remove person to fresh air and keep comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

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.

**Other information**

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

**Unknown acute toxicity**

9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

Chemical name	CAS No	Weight-%	Trade secret
Propanil	709-98-8	40 - 50	*
Isophorone	78-59-1	40 - 50	*
Ethox 4617	-	5 - < 10	*
Distillates, petroleum, solvent-dewaxed light paraffinic	64742-56-9	5 - < 10	*

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

## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	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 medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if symptoms occur.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Self-protection of the first aider</b>	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. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

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

<b>Symptoms</b>	May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.
<b>Effects of Exposure</b>	No information available.

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
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## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical, CO2, alcohol-resistant foam or water spray.
<b>Unsuitable extinguishing media</b>	None known based on information supplied.
<b>Specific hazards arising from the chemical</b>	None known based on information supplied.
<b>Hazardous combustion products</b>	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	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** Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

**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** 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. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

**8. Exposure controls/personal protection****Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Isophorone 78-59-1	Ceiling: 5 ppm	TWA: 25 ppm TWA: 140 mg/m <sup>3</sup> (vacated) TWA: 4 ppm (vacated) TWA: 23 mg/m <sup>3</sup>	IDLH: 200 ppm TWA: 4 ppm TWA: 23 mg/m <sup>3</sup>

**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.

<b>Skin and body protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	Avoid release to the environment.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Brown liquid
<b>Physical state</b>	Liquid
<b>Color</b>	Brown
<b>Odor</b>	Moderate
<b>Odor threshold</b>	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	4.49	solution (1 %)
<b>pH (as aqueous solution)</b>		No data available
<b>Melting point / freezing point</b>		No data available
<b>Initial boiling point and boiling range</b>		No data available
<b>Flash point</b>	102 °C / 215.6 °F	
<b>Evaporation rate</b>		No data available
<b>Flammability</b>		No data available
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>		No data available
<b>Lower flammability or explosive limits</b>		No data available
<b>Vapor pressure</b>		No data available
<b>Relative vapor density</b>		No data available
<b>Relative density</b>		No data available
<b>Water solubility</b>		No data available
<b>Solubility(ies)</b>		No data available
<b>Partition coefficient</b>		No data available
<b>Autoignition temperature</b>		No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>	60.5 cP	@ 25 °C

### Other information

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content</b>	No information available
<b>Liquid Density</b>	1.082 g/cm <sup>3</sup>
<b>Bulk density</b>	No information available

## 10. Stability and reactivity

<b>Reactivity</b>	None under normal use conditions.
<b>Chemical stability</b>	Stable under normal conditions.

<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Incompatible materials.
<b>Incompatible materials</b>	Strong acids, Strong bases, Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon monoxide, Carbon dioxide (CO <sub>2</sub> ).

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. Causes mild skin irritation. May be harmful in contact with skin.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation. Coughing and/ or wheezing.
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### Acute toxicity

#### Numerical measures of toxicity

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

<b>ATEmix (oral)</b>	1,273.90 mg/kg
<b>ATEmix (dermal)</b>	> 2,000 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	4.3717 mg/l

#### Unknown acute toxicity

9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Propanil 709-98-8	= 840 mg/kg ( Rat )	= 4830 mg/kg ( Rabbit )	= 2.8 mg/L ( Rat ) 4 h
Isophorone 78-59-1	= 1870 mg/kg ( Rat )	= 1700 mg/kg ( Rat )	= 7 mg/L ( Rat ) 4 h
Distillates, petroleum, solvent-dewaxed light paraffinic 64742-56-9	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	> 5399 mg/m <sup>3</sup> ( Rat ) 4 h

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes mild skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer. The classification listed below for the petroleum distillates in this product pertains to those that contain more than 3% DMSO extract as measured by IP 346. The petroleum distillates in this product do not meet that criteria to be classified as carcinogens.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Isophorone 78-59-1	A3	Group 2B	-	X
Distillates, petroleum, solvent-dewaxed light paraffinic 64742-56-9	A2	Group 1	Known	X

**Legend****ACGIH (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation. May cause drowsiness or dizziness.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	Liver. Kidney. Respiratory system. Eyes. Skin. Central nervous system.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	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
Propanil 709-98-8	EC50: 0.22 - 0.39mg/L (72h, Desmodesmus subspicatus)	LC50: 7.7 - 9.5mg/L (96h, Pimephales promelas)	-	EC50: =6.7mg/L (48h, Daphnia magna) EC50: =3.55mg/L (48h,

		LC50: =0.23mg/L (96h, Pimephales promelas) LC50: <3.7mg/L (96h, Lepomis macrochirus) LC50: 8.4 - 31mg/L (96h, Lepomis macrochirus) LC50: =7.17mg/L (96h, Cyprinus carpio) LC50: 1.8 - 3mg/L (96h, Oncorhynchus mykiss) LC50: 10.0 - 15.0mg/L (96h, Oncorhynchus mykiss)		Daphnia magna EC50: 1 - 1.3mg/L (48h, Daphnia magna)
Isophorone 78-59-1	EC50: =475.4mg/L (72h, Desmodesmus subspicatus) EC50: 51.1 - 342mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 132 - 159mg/L (96h, Pimephales promelas) LC50: 180 - 250mg/L (96h, Lepomis macrochirus) LC50: 213 - 271mg/L (96h, Pimephales promelas)	-	EC50: =117mg/L (48h, Daphnia magna)
Distillates, petroleum, solvent-dewaxed light paraffinic 64742-56-9	-	LC50: >5000mg/L (96h, Oncorhynchus mykiss)	-	EC50: >1000mg/L (48h, Daphnia magna)

**Persistence and degradability** No information available.

#### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Propanil 709-98-8	3.07
Isophorone 78-59-1	1.67

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal 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** Not classified as a hazardous material / dangerous good under the hazardous material regulations.

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<b>IATA</b>	Not regulated in quantities not to exceed 5 liter per individual container.
<b>ID number</b>	UN3082
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propanil)
<b>Hazard Class(es)</b>	9
<b>Packing group</b>	III
<b>Hazard Label</b>	Class 9, Environmentally Hazardous

**IMDG** Not regulated in quantities not to exceed 5 liter per individual container.

<b>UID number</b>	UN3082
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propanil)
<b>Hazard Class(es)</b>	9
<b>Packing group</b>	III
<b>Hazard Label</b>	Class 9, Environmentally Hazardous
<b>Marine Pollutant/ Environmentally Hazardous Substance</b>	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 %
Propanil - 709-98-8	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 contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Isophorone 78-59-1	-	X	X	-

#### **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)
Isophorone 78-59-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

### 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
Propanil 709-98-8	X	-	-
Isophorone 78-59-1	X	X	X
Distillates, petroleum, solvent-dewaxed light paraffinic 64742-56-9	-	X	-

**U.S. EPA Label Information**

EPA Pesticide Registration Number 87290-32

**16. Other information**

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 1	<b>Physical hazards</b> 0	<b>Personal protection</b> X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

**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

**Issuing Date** 30-May-2023

Revision Date 31-Jan-2024

Revision Note Revise emergency telephone number.

**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**