

MATERIAL SAFETY DATA SHEET

Emergency Phone: Chemtrec 800-424-9300

Effective Date: June 15, 2011

Replaces MSDS of November 15, 2010

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Willowood OxyFlo 2EC

DESCRIPTION: A liquid herbicide.

EPA Reg. No. 87290-8

COMPANY IDENTIFICATION:

Willowood LLC

1600 NW Garden Valley Blvd. #120

Roseburg, OR 97471

Tel: 877-679-9963

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Chemical Name</u>	<u>Chemical Formula</u>	<u>CAS Number</u>	<u>Composition</u>
Oxyfluorfen	2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene	$C_{15}H_{11}ClF_3NO_4$	42874-03-3	22.3%
Naphthalene			91-20-3	< 8%

3. HAZARD IDENTIFICATION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: Causes skin irritation. Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin.

ENVIRONMENTAL HAZARDS: This product is toxic to aquatic invertebrates and wildlife. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

4. FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.

IF ON SKIN OR CLOTHING: Call a poison control center or doctor for treatment advice. Take off contaminated clothing. Rinse skin immediately with water for 15-20 minutes.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Contains petroleum distillates. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically and give supportive therapy.

5. FIRE-FIGHTING MEASURES

Flash point (SCC): 208.4°F (98°C)

Flammable Limits (LFL-UFL): 1.3 – 11.8

Fire and Explosion Hazards: Dried product can burn. Pesticide particulates may become airborne in a fire.

Means of Extinction: Use foam, dry chemical, carbon dioxide or water spray.

Fire Fighting Instructions: Evacuate area and fight fire upwind a safe distance to avoid hazardous vapors and decomposition products. Use as little water as possible and use spray or fog and avoid heavy hose streams to prevent runoff. Dike and collect water used to fight fire to prevent environmental damage due to runoff. Foam or dry chemical extinguishing systems are preferred to prevent environmental damage due to runoff.

Firefighting Equipment: Self-contained breathing apparatus with full face piece.

Hazardous Combustion Products: Hydrogen chloride, hydrogen fluoride, nitrogen oxides.

NFPA Ratings: Health – 2 / Flammability – 2 / Reactivity – 0

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately observing the precautions in Section 8 of this MSDS. Isolate the hazard area and keep unnecessary and unprotected personnel from entering. Prevent material from contaminating soil or from entering sewage and drainage systems and bodies of water. Transfer liquids and solid diking materials to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Do not get on skin, in eyes or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Keep from freezing, store above 40°F. Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, water, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Chemical-resistant gloves such as Viton or barrier laminate. Coveralls over long-sleeved shirt, long pants and chemical resistant footwear plus socks. Chemical resistant headgear for overhead exposure. When exposed to product concentrate, wear a chemical resistant apron.

General: Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Odor: Solvent

pH: 4.5 – 5.5

Density: 1.0471 g/ml

Solubility in Water: Emulsifies

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Freezing temperatures and contact with ignition sources.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield hydrogen chloride and hydrogen fluoride.

INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizing agents, bromine and chromic acid.

POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY

Oral LD₅₀ (rat): > 2,985 mg/kg

ACUTE DERMAL TOXICITY

Dermal LD₅₀ (rabbit): > 4,000 mg/kg

ACUTE INHALATION TOXICITY

Inhalation LC₅₀ (rat): > 4.08 mg/L (4-hour)

EYE IRRITANT

Rabbit – Moderately irritating.

SKIN IRRITATION

Rabbit – Severely irritating

SENSITIZATION

Guinea Pig – Not a Contact Sensitizer

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

CARCINOGENICITY:

ACGIH: Not listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

MUTAGENIC DATA: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

ADDITIONAL DATA: Not known to cause reproductive or birth defects at normal exposure levels.

12. ECOLOGICAL INFORMATION

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

AQUATIC TOXICITY

Bluegill (LC₅₀): 0.20 mg/L

Rainbow Trout (LC₅₀): 0.41 mg/L

Diatom (EC₅₀): 0.031 mg/L

Duckweed (EC₅₀): 0.0003 mg/L

OTHER TOXICITY

Birds (LD₅₀): > 2,000 mg/kg

Mallard Duck (LC₅₀): > 5,620 ppm

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Refer to the product label for specific instructions.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by DOT

MARINE POLLUTANT: No

15. REGULATORY INFORMATION

FIFRA –

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

SARA Title III – Section 302 Extremely Hazardous Substances

Not Listed

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed

SARA Title III – Section 312 Threshold Planning Quantity

N/A

SARA Title III – Section 313 Reportable Ingredients

Naphthalene (7.6%) – CAS No. 91-20-3

CERCLA –

Naphthalene (100 lbs.) CAS No. 91-20-3

CALIFORNIA PROP 65 STATUS –

This product contains a chemical (naphthalene) known to the state of California to cause cancer.

16. OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

REASON FOR ISSUE: New International ANSI Z400 format.

APPROVAL DATE: 06/15/2011

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Abbreviations

AICS	Australian Inventory of Chemical Substances
CAS#	Chemical Abstract Service Number
⁰ C	Celsius temperature scale
CI	China
DSL	Canada Domestic Substances List
ECL	Korean Existing Chemicals List
EEC	European Economic Commission
ENCS	Japanese existing Chemical List
EINECS #	European Inventory of Existing Chemical Substance Number
EU	European Union
(Israel)	2001 proposed list of chemical substances to be regulated under Israel Hazardous Substances Law and Regulations List of 1993
MAC	Netherlands
MAK	Germany
MITI	Ministry of International Trade and Industry
NA	Not Applicable
ND	Not Determined
NE	Not Established
PICCS	Philippines
PPE	Personal Protective Equipment
Prop	Proprietary
SWISS	Giftliste 1 and Inventory of Notified New Substances
TSCA	Toxic Substances Control Act
(Taiwan)	List of Toxic Chemical Substances regulated under Taiwan Toxic Chemical Substances Control Act of November 26, 1986
UK	United Kingdom
USA	United States of America

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