

MATERIAL SAFETY DATA SHEET

Quali-Pro® Oxyfluorfen 2E

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1. IDENTIFICATION

Product name: **Quali-Pro® Oxyfluorfen 2E**
Chemical name of active ingredient(s): Oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benzene
Manufacturer: FarmSaver.com, LLC.
4515 Falls of Neuse Road, Suite 300
Raleigh, NC 27609
Phone: 1-800-979-8994
For fire, spill, and/or leak emergencies, contact Chemtrec: Phone: 1-800-424-9300
Outside US: 1-703-527-3887
For medical emergencies and health and safety inquiries, contact Prozar: Phone: 1-800-308-5391

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Oxyfluorfen	42874-03-3	23	NA	NA	1.6 mg/m ³ (STEL)	NA
Aromatic Solvent	64742-94-5					
Contains Naphthalene (% of total)	91-20-3	7.6	10 ppm 52 mg/m ³ (TWA)	10 ppm 50 mg/m ³ (TWA)	15 ppm (STEL)	NTP – 2* IARC –2B**
N-methylpyrrolidinone (NMP)	872-50-4	10	NE	NE	NA	NA

NE=Not established

NA=Not available

* Substances which may reasonably be anticipated to be carcinogens.

** Substance is possibly carcinogenic to humans.

3. HAZARDOUS IDENTIFICATIONS

PHYSICAL PROPERTIES

Appearance: Amber liquid

Odor: Floral

EMERGENCY OVERVIEW: WARNING Causes substantial but temporary eye injury. Causes skin irritation. Harmful if swallowed or absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. DO NOT get in eyes, on skin or on clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PRIMARY ROUTES OF ENTRY: Eye, skin, ingestion and Inhalation.

EFFECTS AND SYMPTOMS OF EXPOSURE:

Eye Contact: Causes substantial but temporary eye injury. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. DO NOT get in eyes.

Ingestion: Harmful if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Inhalation: Excessive exposure may cause irritation to upper respiratory tract. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator especially if ventilation controls are inadequate. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

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Skin contact: Causes skin irritation. Harmful if absorbed through the skin. Brief contact may cause skin irritation with pain and local redness. DO NOT get on skin or clothing.

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

4. FIRST AID

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none">• 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 ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.• Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Call 1-800-308-5391 day or night, for emergency treatment information. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.	

5. FIRE FIGHTING MEASURES

FLASH POINT: 98°C (208°F)(SCC)

FLAMMABLE LIMITS (in air): LFL: 1.3% (NMP); UFL: 11.8% (Solvent naphthalene)

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical, water spray

UNUSUAL FIRE & EXPLOSION HAZARDS: Pesticide particles can become airborne. Combustion generates toxic fumes of the following: hydrogen fluoride, and nitrogen oxides. Dried product can burn. Flashback may occur along vapor trails.

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

SPECIAL FIRE FIGHTING PROCEDURES: Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

FIRE-FIGHTING EQUIPMENT: Contain run-off. Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Ventilate area. Avoid breathing vapors. Use MSHA/NIOSH self-contained breathing apparatus or airline respirator for large spills in confined areas. Dike the spill with inert material (sand, earth, etc.) and transfer the liquid or solid diking material to separate containers for recovery or disposal. Remove contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before reuse. Keep spill out of all sewers and bodies of water.

7. HANDLING AND STORAGE

Do not contaminate water, food or feed by storage or disposal.

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PRECAUTIONS TO BE TAKEN IN HANDLING: KEEP OUT OF REACH OF CHILDREN. Do not get in eyes, on skin, or clothing. Avoid breathing vapor and spray mist. Users should wash hands before eating, drinking, using tobacco, or using the toilet. For handling relative to the end-use of this product, read the product label. Store in original container in a dry storage area. Keep away from freezing.

PRECAUTIONS TO BE TAKEN IN STORAGE: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in cool, dry place. Keep from freezing. Store above 32°F.

STORAGE TEMPERATURE (MIN/MAX): Store above 32°F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATION AND ON-FARM APPLICATIONS, CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear (i.e. chemical goggles). If exposure causes eye discomfort, a NIOSH full-face respirator is recommended.

SKIN PROTECTION: Coveralls over short-sleeved shirt and short pants, shoes plus socks. Chemical-resistant headgear for overhead exposures. Chemical-resistant apron when cleaning equipment, mixing or loading.

HAND PROTECTION: Chemical-resistant gloves, such as barrier laminate, Nitrile, Butyl, Neoprene.

RESPIRATOR REQUIREMENTS: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH-approved air-purifying respirator.

ADDITIONAL PROTECTIVE MEASURES: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove contaminated clothing and wash clothing before reuse.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Use adequate ventilation to minimize airborne concentrations of this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Amber liquid

ODOR: Floral

FLASH POINT: 98°C (208°F)(SCC)

SPECIFIC GRAVITY: 1.08

SOLUBILITY IN WATER: Emulsifiable

pH: 7.2 - 7.5

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.

CONDITIONS AND MATERIALS TO AVOID: Avoid contact with ignition sources (e.g. sparks, open flame, and heated surface.) Avoid contact with the following: acids, alkali, amines, oxidizing agents, halogens, and sodium hypochlorite.

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

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

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ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD50 (Rat):	> 2,985 mg/kg (female); 4,594 mg/kg (male)
Acute Dermal LD50 (Rabbit):	> 4,000 mg/kg
Acute Inhalation LC50 (Rat):	> 4.8 mg/L (4-hr.)
Eye Irritation (Rabbit):	Severely irritating.
Dermal Irritation (Rabbit):	Moderately irritating.
Dermal Sensitization:	Not a skin sensitizer

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. This product is highly toxic to aquatic invertebrates, aquatic plants, wildlife and fish. Use with care when applying in areas frequented by wildlife or adjacent to any body of water or wetland area. Do not apply when weather conditions favor drift or erosion from target areas. Runoff may be hazardous to aquatic organisms in neighboring areas.

MOBILITY (Based on information for oxyfluorfen): Not mobile in soil. Adsorbed on soils with high organic content.

DEGRADATION & PERSISTENCE: Based on information for oxyfluorfen.

Soil: The product is persistent to some extent.

Half-life time ($t_{1/2}$): 30-40 days.

Degradation is primarily via photolysis.

ECOTOXICOLOGY: (Based on information for oxyfluorfen).

Rainbow Trout LC₅₀ (96 hours) = 0.1 ppm

Daphnia magna: EC₅₀ (48 hours) = 0.07 mg/L.

Mallard duck LC₅₀ (8 day feeding) > 5000 ppm

Bees: Not toxic @ 25 µg/bee

13. DISPOSAL CONSIDERATIONS:

PRODUCT 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: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION:

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (oxyfluorfen), 9, PG III, Marine Pollutant

IATA (air): Not regulated

15. REGULATORY INFORMATION:

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

Chronic health hazard (delayed)

Section 313: Oxyfluorfen (23%) CAS#: 42874-03-3

N-methylpyrrolidinone (10%) CAS#: 872-50-4

Naphthalene (7.6%) CAS#: 91-20-3

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CA PROPOSITION 65: This product contains a material (naphthalene) known to the State of California to cause cancer. This product contains a material (N-methylpyrrolidinone) known to the State of California to cause developmental toxicity.

CERCLA RQ: Naphthalene RQ = 100 lbs. (7.6% in the product)

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION:

HAZARD RATINGS	NFPA	
HEALTH:	3	0 LEAST
FLAMMABILITY:	1	1 SLIGHT
REACTIVITY:	0	2 MODERATE
		3 HIGH
		4 SEVERE

MSDS DATE: 2-19-09

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