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"For Chemical Emergency"
 Spill, Leak, Fire, Exposure or Accident, Call:
 Chemtrec (24 Hours): (800) 424-9300
 Outside U.S., call collect: (703) 527-3887

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME: <p style="text-align: center;">FarmSaver.com OxiFlo 2 EC</p>	CHEMICAL FORMULA: <p style="text-align: center;">2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benzene</p>
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SECTION 2 - HAZARDOUS INGREDIENT INFORMATION

Section 313 of SARA Title III: Ingredients subject to reporting are identified by asterisk (*)

CAS NO.	COMPONENT	%	ACGIH TLV	OSHA PEL (TWA)	OTHER
42874-03-3	Oxyfluorfen	23	N/E	0.2 mg/m3	N/E
64742-94-5	Other Ingredients, Total, Including Aromatic Solvent (Contains Naphthalene)	77		100 ppm	
91-20-3			10 ppm	10 ppm	
872-50-4	N-methylpyrrolidinone (NMP)		10 ppm	10 ppm	

SECTION 3 - PHYSICAL PROPERTIES

BOILING POINT: 395.1 F (201.7 C) (NMP)	MELTING POINT: -11.9 F (-24.4 C) (NMP)	SPECIFIC GRAVITY (H ₂ O=1) 1.08	VAPOR PRESSURE (mmHg) <1 X 10 E-07 mm Hg @ 25C (Oxyfluorfen) 0.29 mm Hg @ 20 C (NMP)
VAPOR DENSITY (AIR=1): 5.2 (solvent, naphtha)	% SOLUBILITY IN WATER: Emulsifiable		% VOLATILE BY WEIGHT: 62 to 64% (estimate)
APPEARANCE: Amber Liquid	ODOR: Floral		EVAPORATION RATE (Butyl Acetate=1) 0.06 (NMP)

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT & METHOD: No Ignition up to 208F (98 C) SCC	FLAMMABLE LIMITS IN AIR - LFL: 1.3% (NMP) UFL: 11.8% (solvent naphtha)
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EXTINGUISHING MEDIA:

When product is involved in a fire use carbon dioxide, dry chemical, water spray or foam.

SPECIAL FIRE FIGHTING PROCEDURES:

Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire. Contain run-off. Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

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

SECTION 5 - REACTIVITY DATA

STABILITY: **Stable under normal conditions. Avoid contact with ignition sources (e.g. sparks, open flame, and heated surface.)**

HAZARDOUS POLYMERIZATION: **Not known to occur.**

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

CONDITIONS & MATERIALS TO AVOID: **Avoid contact with the following: acids, alkali, amines, oxidizing agents, halogens, and sodium hypochlorite.**

SECTION 6 - PROTECTIVE EQUIPMENT & EXPOSURE CONTROL METHODS

RESPIRATORY PROTECTION:

Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection is needed.

VENTILATION	LOCAL EXHAUST: ADEQUATE	MECHANICAL: ACCEPTABLE	SPECIAL: NONE	OTHER: NONE
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PRODUCT NAME: OxiFlo 2 EC

PROTECTIVE GLOVES: Use chemical resistant gloves.	EYE PROTECTION: Use chemical goggles. If exposure causes eye discomfort, use a NIOSH full-face respirator.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, gloves or full body suit will depend on operation.	WORK/HYGIENIC PRACTICES: AVOID SKIN AND EYE CONTACT

SECTION 7 - HEALTH HAZARDS

PRIMARY ROUTES OF ENTRY:

Inhalation, skin, and eyes

CARCINOGEN: NONE KNOWN	NTP: N/A	IARC MONOGRAPHS: N/A	OSHA: N/A
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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. The aerosol LC₅₀ for rats is >4.8 mg/L for 4 hours.

EYE CONTACT:

May cause severe eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

SKIN CONTACT:

Brief contact may cause skin irritation with pain and local redness. Skin contact may cause allergic skin reaction. Prolonged skin contact is unlikely to result in absorption of harmful amounts (liver and kidneys are primary organ effects) and also may cause moderate skin irritation. The LD₅₀ for skin absorption in rats is >4,000 mg/kg.

INGESTION:

Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Give victim 2 glasses of water to drink. DO NOT induce vomiting. Careful gastric lavage using endotracheal cuff may be indicated. The oral LD₅₀ for rats is 2985 mg/kg (females) and 4594 mg/kg (males).

SECTION 8 - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT:

Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN CONTACT:

Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before use. Discard items, which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands.

INHALATION:

Remove person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration; if by mouth use rescuer protection (pocket mask etc.). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

INGESTION:

Immediately call a poison control center or a doctor. Give victim 2 glasses of water to drink. DO NOT induce vomiting; aspiration into the lungs of petroleum distillate present may occur during vomiting causing lung damage. Do not give anything by mouth to an unconscious person.

SECTION 9 - SPILL, LEAK & DISPOSAL INFORMATION

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Eliminate all ignition sources. Ventilate the spill area. Contain spills immediately with neutral absorbent e.g., sand or earth. Transfer liquids and solids contaminated to suitable containers for recovery or disposal. Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Launder clothing contaminated during cleanup.

WASTE DISPOSAL METHOD:

Do not contaminate food, feed, or water by storage or disposal. Wastes are toxic. Improper disposal of excess waste, spray mixture, or rinsate is a violation of federal law. Spray mixture or rinse water that cannot be used according to label instructions must be disposed of in accordance with applicable local, state, or federal requirements. Contact your local state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

SECTION 10 - SHIPPING DATA

DOT SHIPPING NAME:

Not regulated for transportation.

SECTION 11 – REGULATORY INFORMATION

SPECIAL INSTRUCTIONS:

TSCA STATUS: All components are listed on US EPA TSCA inventory or are not required to be listed.
SARA 313 (40CFR355.30): Naphthalene (CAS Number 91-20-3) 8%
 N-methylpyrrolidinone (CAS Number 872-50-4) 8-10%

SARA 311 and 312: This product has been reviewed according to the EPA “Hazard Categories” and SARA Title III and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm. N-methylpyrrolidinone is listed as a developmental toxin under **PROP 65**.

WARNING: This product contains a chemical known to the State of California to cause cancer. Naphthalene is listed as a carcinogen under **PROP 65**.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Naphthalene	91-20-3	NJ2 NJ3 PA1 PA3
N-methylpyrrolidinone	872-50-4	NJ2 PA1
Oxyfluorfen	42874-03-3	NJ2

NJ2= New Jersey Environmental Hazardous Substance (present at greater or equal to 1.0%)

NJ3=New Jersey Workplace Hazardous Substance (present at greater or equal to 1.0%)

PA1=Pennsylvania Hazardous Substance (present at greater or equal to 1.0%)

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%)

OSHA HAZARD COMMUNICATION STANDARD: This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as “Hazardous Substances” under CERCLA, which may require reporting of releases:

CHEMICAL NAME	CAS NUMBER	RQ	% in Product
Naphthalene	91-20-3	100 lbs.	8

RCRA Categorization

U.S. EPA Hazardous Waste #

Naphthalene (CAS # 91-20-3)= U165

PRODUCT NAME: OxiFlo 2 EC

SECTION 12 - SPECIAL PRECAUTIONS & OTHER INFORMATION

SPECIAL INSTRUCTIONS:

Store above 34 F (1 C). Do not store this material near food, feed, or drinking water. Store away from excessive heat (e.g. steam pipes, radiators), from sources of ignition and from reactive materials. Ground all metal storage containers during storage and handling.

OTHER INFORMATION/PRECAUTIONS:

Read and follow all label instructions before use. Avoid contaminating water. Do not reuse containers. Open dumping is prohibited.

COMMON ABBREVIATIONS THAT MAY HAVE BEEN USED: N/A = NOT APPLICABLE N/E = NOT ESTABLISHED

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DATE: 12/17/03