

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY ADDRESS:**

ALBAUGH, LLC
Ankeny, IA 50021

EMERGENCY TELEPHONE NUMBERS:

(800) 424-9300 (CHEMTREC, transportation and spills)

PRODUCT NAME

: **OXYSTAR 2E**

CHEMICAL NAME

: Oxyfluorfen

PRODUCT USE

: Herbicide

PRODUCT CODE

: EPA Reg. No. 42750-136

SECTION 2 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

Amber liquid

HEALTH HAZARDS: WARNING. Moderate to severe eye irritant. Possible skin irritant.

PHYSICAL HAZARDS: May release toxic fumes if burned.

ENVIRONMENTAL HAZARDS: Highly toxic to aquatic organisms.

**SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER
Oxyfluorfen	23.0	42874-03-3
N-methyl-2-pyrrolidone	10.0	872-50-4
Aromatic solvents (contains)*	60.0	64742-20-3
*Naphthalene	8 – 9	91-20-3

SECTION 4 - FIRST AID MEASURES

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: 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 INHALED: 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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5 - FIRE FIGHTING MEASURES

National Fire Protection Rating (NFPA)

HEALTH	1
FLAMMABILITY	2
REACTIVITY	0
4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

FLASHPOINT: 147°F (63.9°C)

EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

FIRE AND EXPLOSION HAZARD: Can form explosive mixtures at temperatures at or above the flashpoint. Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

FIRE FIGHTING INSTRUCTIONS: Evacuate nonessential persons from area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

Minimize use of water to prevent environmental contamination. Contact your State Pesticide or Environmental Control Agency, or nearest EPA Regional Office for guidance on disposal.

FIRE FIGHTING EQUIPMENT: Full fire fighting turn-out gear (Bunker gear) including self-contained breathing equipment.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

SMALL SPILL: Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

LARGE SPILL: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. Keep spill and cleaning runoff from entering sewer system and open bodies of water.

Minimize use of water to prevent environmental contamination

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling concentrate.

HANDLING: Use only in a well-ventilated area.

STORAGE: Store in original container with lid tightly closed. Keep away from food, feed and drinking water. Store in a well ventilated, dry place away from heat and other sources of ignition. Store above 32° F (0 C).

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS (8 hour TWA, ppm):

COMPONENT	OSHA PEL	ACIGH TLV
Oxyfluorfen	Not listed	Not listed
N-methyl-2-pyrrolidone	Not listed	Not listed
Naphthalene	10 ppm	10 ppm TWA 15 ppm ST

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Local mechanical exhaust ventilation may be required. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - Safety goggles or full face respirator if vapors cause eye discomfort.

CLOTHING - Coveralls over long-sleeved shirt and long pants, Chemical-resistant footwear plus socks. Chemical-resistant headgear when exposed overhead. Chemical-resistant apron when exposed to the concentrate during mixing or loading.

GLOVES – Chemical resistant gloves.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber liquid
Odor:	Characteristic of aromatic compounds
pH:	4.9 – 5.9
Melting Point:	Not applicable
Boiling Point:	No data
Flash Point:	63.9°C
Evaporation Rate:	No data
Flammability:	No data
Flammability Limits:	No data
Vapor Pressure:	0.0267 mPa (25°C) (Oxyfluorfen)
Vapor Density:	Not applicable
Density:	0.99 – 1.03 g/ml (8.26 – 8.60 lb/gal)*
Solubility:	Emulsifies
Partition Coefficient:	log Pow = 4.47 (Oxyfluorfen)
Auto-Ignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	5.26 cSt (20°C); 3.22 cSt (40°C)

*Listed density is an approximate value and does not necessarily represent that of a specific batch.

SECTION 10 - STABILITY AND REACTIVITY

PRODUCT REACTIVITY: None known.

CHEMICAL STABILITY: Stable, however may decompose if heated.

HAZARDOUS REACTION/POLYMERIZATION: Product will not undergo polymerization.

CONDITIONS TO AVOID: Avoid temperatures above (110°F, 43°C) and below 32°F (0°C).

INCOMPATIBLE MATERIALS: Acidic and oxidizing materials, halogens and sodium hypochlorite.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, fluoride compounds, nitrogen oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity values based on similar but not identical formulation.

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	> 2,000 mg/Kg
Dermal LD ₅₀ (rat)	> 2,000 mg/Kg
Inhalation LC ₅₀ (rat)	> 2.02 mg/L
Eye Irritation (rabbit)	Moderate irritant
Skin Irritation (rabbit)	Moderate irritant
Sensitization (guinea pig)	Potential sensitizer

CARCINOGEN STATUS:

OSHA	- Not listed
NTP	- Naphthalene
IARC	- Naphthalene: 2B

TERATOGENICITY: Evidence of toxicity only at maternally toxic dose levels.

MUTAGENICITY: Limited evidence of mutagenic effects during in vivo or in vitro studies.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water or 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. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water.

FATE: Oxyfluorfen is moderately persistent in soil with a half-life of 60-90 days and primarily degraded by photolysis. Oxyfluorfen binds strongly to organic matter and is relatively immobile in soil.

FISH TOXICITY: (technical)

96 hour LC ₅₀ , Rainbow trout –	410 ppb (highly toxic)
96 hour LC ₅₀ , Bluegill –	200 ppb (highly toxic)

AVIAN TOXICITY: (technical)

Oral LD ₅₀ , Bobwhite quail –	> 2,000 mg/Kg
Oral LD ₅₀ , Mallard duck –	unknown

BEE TOXICITY: (technical) 200 ug/bee

SECTION 13 - DISPOSAL CONSIDERATIONS

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

WASTE: Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations at an approved facility.

CONTAINER: Non-refillable containers: Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Refillable container: Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Refer to the container label to determine if it is refillable and for complete cleaning and disposal instructions.

SECTION 14 - TRANSPORT INFORMATION**SHIPPING DESCRIPTION:**

Containers \leq 119 gallons -

Not regulated by DOT

Containers > 119 gallons -
(For ground transport)

UN3082, Environmentally Hazardous Substances, Liquid, N.O.S.,
9, PG III, RQ (Naphthalene)

DOT HAZARD CLASS:

Class 9

IDENTIFICATION NUMBER:

UN3082

DOT PACKING GROUP:

PG III

SECTION 15 - REGULATORY INFORMATION**CERCLA REPORTABLE QUANTITY:**

100 lbs Naphthalene (\geq 130 gallons of product)

SARA TITLE III STATUS:

311/312 Hazard Categories –
313 Toxic Chemicals –

Immediate, delayed
Oxyfluorfen
Naphthalene
N-methyl-2-pyrrolidone

CALIFORNIA PROP 65:

Listed, contains N-methyl-2-pyrrolidone and Naphthalene

TSCA:

This product is exempted from TSCA because it is solely for FIFRA regulated use.

SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS	HEALTH	1
	FLAMMABILITY	2
	PHYSICAL HAZARD	0
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh's knowledge. Albaugh makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

REVISED DATE: May 2019

REFERENCE: Updated for Naphthalene (Section 3, 8, 11 & 15)