

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS:

ALBAUGH, INC.
Ankeny, IA 50021

EMERGENCY TELEPHONE NUMBERS:

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

PRODUCT NAME : OXYSTAR 2E
CHEMICAL NAME : Oxyflurofen
CHEMICAL FAMILY : Diphenyl ether herbicide
PRODUCT CODE : EPA Reg. No. 42750-136

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

| COMPONENT | PERCENTAGE | CAS NUMBER | OSHA PEL | ACIGH TLV |
|--|------------|------------|--------------------|------------|
| Oxyflurofen | 23% | 42874-03-3 | Not listed | Not listed |
| N-methyl-2-pyrilidone | < 10% | 872-50-4 | Not listed | Not listed |
| Aromatic solvents (contains naphthalene) | < 60% | 64742-20-3 | 100 ppm (supplier) | Not listed |
| Inert Ingredients | < 10 % | n/a | n/a | n/a |

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

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

HEALTH HAZARDS: Moderate eye irritant. Possible skin irritant.

PHYSICAL HAZARDS: May release toxic fumes if burned.

ENVIRONMENTAL HAZARDS: Toxic to aquatic organisms.

SECTION 4 - FIRST AID MEASURES

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 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 SWALLOWED: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. 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 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 the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT(method): > 150 F, (Pensky-Martens closed cup)

FLAMMABLE LIMITS: Unknown.

FIRE AND EXPLOSION HAZARD: May decompose in fire releasing irritating and toxic gases.

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

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.

Wear appropriate personal protection equipment. (See Section 8 Exposure Controls, Personal Protection.)

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Wear appropriate safety equipment when handling.

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): Refer to Section 3.

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 - Long-sleeved shirt and long pants, Shoes plus socks. Chemical resistant apron when mixing or loading.

GLOVES - Chemical resistant gloves made of any waterproof material.

RESPIRATOR - When handling in enclosed areas where exposure limits may be exceeded, use a respirator with either an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (NSHA/NIOSH approval number prefix TC-14G)

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

PHYSICAL DESCRIPTION: Amber liquid
ODOR: Aromatic solvent like
SPECIFIC GRAVITY: 1.03 – 1.09 g/ml (8.65 – 9.15 lb/gl)*
pH: 6 - 8
VAPOR PRESSURE: Unknown
VAPOR DENSITY: Unknown
WATER SOLUBILITY: Emulsifies.

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

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable, however may decompose if heated.
CONDITIONS TO AVOID: Avoid temperatures above (110°F, 43°C) and below 32°F (0°C).
INCOMPATIBILITY WITH OTHER MATERIALS: Acidic and oxidizing materials, halogens and sodium hypochlorite.
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, fluoride compounds, nitrogen oxides.
HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

| | |
|-----------------------------------|---------------------------------------|
| Oral LD ₅₀ (rat) | - > 2,000 mg/kg |
| Dermal LD ₅₀ (rat) | - > 4,000 mg/kg |
| Inhalation LC ₅₀ (rat) | - > 4.0 mg/L (4 hours with no deaths) |
| Eye Irritation (rabbit) | - Moderate |
| Skin Irritation (rabbit) | - Moderate to severe |
| Sensitization (guinea pig) | - Potential sensitizer |

CARCINOGEN STATUS:

OSHA - Not listed
 NTP - Not listed
 IARC - Not listed

MUTAGENIC DATA: No 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.

FISH TOXICITY: (technical)

96 hour LC₅₀, Rainbow trout – 410 ppb (highly toxic)

96 hour LC₅₀, Bluegill – 200 ppb (highly toxic)

AVIAN TOXICITY: (technical)

Oral LD₅₀, Bobwhite quail – > 2,000 mg/Kg

Oral LD₅₀, Mallard duck – unknown

BEE TOXICITY: (technical)

Non-toxic

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

DOT SHIPPING DESCRIPTION:

| | |
|---------------------------------|---|
| Containers < 119 gallons - | Not regulated by DOT |
| Containers \geq 119 gallons - | 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 |
| DOT PRIMARY/SECONDARY LABEL: | Class 9 (\geq 119 gallons) |
| DOT PRIMARY/SECONDARY PLACARD: | Class 9 (\geq 119 gallons) |
| DOT EMERGENCY RESPONSE GUIDE #: | 171 |

SECTION 15 - REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY: 100 lbs Naphthalene (\geq 148 gallons of product)

SARA TITLE III STATUS:

| | |
|-----------------------------|--|
| 311/312 Hazard Categories – | Immediate, delayed |
| 313 Toxic Chemicals – | Oxyfluorfen, Naphthalene N-methyl-2-pyrilidone |

CALIFORNIA PROP 65:

Listed, contains N-methyl-2-pyrrolidone

SECTION 16 - OTHER INFORMATION

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

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REVISED DATE: October, 2012

REFERENCE: Revise the Section 12 and Section 13 to match EPA approved label.