

## **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**

: **BROX-M ULTRA**

**CHEMICAL NAME**

: Bromoxynil Octanoate ester

: MCPA Ethylhexyl ester

**CHEMICAL FAMILY**

: Benzonitrile and phenoxy herbicides

**PRODUCT CODE**

: EPA Reg. No. 42750-103

### **SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Bromoxynil Octanoate	36.8	1689-99-2	Not listed	Not listed
MCPA ethylhexyl ester	40.0	29450-45-1	10 mg/M <sup>3</sup>	10 mg/M <sup>3</sup>
Naphthalene	< 3.0%	91-20-3	10 ppm	10 ppm
Inert Ingredients	< 25.0%	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.

**PHYSICAL HAZARDS:** May release toxic fumes if burned.

**ENVIRONMENTAL HAZARDS:** Toxic to wildlife and fish.

### **SECTION 4 - FIRST AID MEASURES**

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or, if these are not available, drink large quantities of water. Avoid alcohol.

**IF IN EYES:** Hold eye open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

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):** >200 F, (Pensky-Martens closed cup)

**FLAMMABLE LIMITS:** Unknown.

**FIRE AND EXPLOSION HAZARD:** May decompose in fire due to thermal decomposition, releasing irritating and toxic gases.

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

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid possible hazardous fumes and decomposition products. 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.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece and protective clothing.

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen chloride, Hydrogen bromide, Nitrogen oxides, Sulfur oxides

and Oxides of carbon.

## **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. After removal, scrub area with detergent and water and neutralize with dilute alkaline solutions of soda ash, or lime.

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. Combustible liquid, store in a well ventilated, dry place away from heat and sources of ignition. Store above 35° F. If crystallized, warm to 80-90 F and redissolve by shaking container before using product.

## **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** – Coveralls over a long-sleeved shirt and long pants, Chemical resistant footwear plus socks, Chemical resistant apron when mixing or loading.

**GLOVES** – Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber or viton.

**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 (MSHA/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:** Dark amber liquid

**ODOR:** Aromatic

**SPECIFIC GRAVITY:** 1.13 – 1.20 g/ml (9.45 – 10.00 #/gl)\*

**pH:** 4.0

**VAPOR PRESSURE:** 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 (115°F, 46°C) and below 25°F (-5°C).

**INCOMPATIBILITY WITH OTHER MATERIALS:** Acidic and oxidizing materials, halogenated organics, brass, copper, zinc and aluminum metals.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride, Oxides of nitrogen, Chlorinated pyridine.

**HAZARDOUS POLYMERIZATION:** Product will not undergo polymerization.

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

#### **ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat)	- 325 mg/kg
Dermal LD <sub>50</sub> (rat)	- >5,000 mg/kg (male)
Inhalation LC <sub>50</sub> (rat)	- >2.0 mg/L
Eye Irritation (rabbit)	- Mild
Skin Irritation (rabbit)	- Moderate
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.

**ADDITIONAL DATA:** Bromoxynil phenol is considered a possible developmental toxicant.

### **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** Bromoxynil and MCPA are toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or near any body of water. 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 apply when conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes.

#### **FISH TOXICITY: (Bromoxynil Octanoate acid)**

96 hour LC<sub>50</sub>, Rainbow trout – 0.05 ppm (highly toxic)

96 hour LC<sub>50</sub>, Bluegill – 0.05 ppm (highly toxic)

#### **AVIAN TOXICITY: (Bromoxynil Octanoate acid)**

Oral LD<sub>50</sub>, Bobwhite quail – 145 mg/Kg

Oral LD<sub>50</sub>, Mallard duck – 2,050 mg/Kg

#### **FISH TOXICITY: (MCPA acid)**

96 hour LC<sub>50</sub>, Rainbow trout – 230 mg/L

96 hour LC<sub>50</sub>, Bluegill - unknown

#### **AVIAN TOXICITY: (MCPA acid)**

Oral LD<sub>50</sub>, Bobwhite quail – 370 mg/Kg

Oral LD<sub>50</sub>, Mallard duck - unknown

### **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:** Metal Container Disposal: Do not reuse container. Triple rinse (or equivalent). Then offer for recycling, reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic Container Disposal: Do not reuse container. Triple rinse (or equivalent). Then offer for recycling,

reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **SECTION 14 - TRANSPORT INFORMATION**

##### **DOT SHIPPING DESCRIPTION:**

Containers < 325 gallons – Not regulated

Containers > 325 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 (> 325 gallons)  
**DOT PRIMARY/SECONDARY PLACARD:** CLASS 9 (> 325 gallons)  
**DOT EMERGENCY RESPONSE GUIDE #:** 171

#### **SECTION 15 - REGULATORY INFORMATION**

**CERCLA REPORTABLE QUANTITY:** Naphthalene – RQ 100 lbs (approx. 325 gallons of product)  
**SARA TITLE III STATUS:**  
     311/312 Hazard Categories – Immediate  
     313 Toxic Chemicals – Naphthalene  
**CALIFORNIA PROP 65:** Bromoxynil octanoate

#### **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:** September, 2008  
**REFERENCE:** Revised DOT description in Section 14