

## 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**

: **CROSSROAD**

**CHEMICAL NAME**

: Triclopyr [(3,5,6-trichloro-2-pyridyl)oxy]acetic acid, butoxy ethyl ester  
2,4-D ester

**CHEMICAL FAMILY**

: Pyridine and chlorophenoxy herbicide

**PRODUCT CODE**

: EPA Reg. No. 42750-124

### SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Triclopyr Butoxy Ethyl Ester	16.5%	64700-56-7	Not listed	Not listed
2,4-D Butoxy Ethyl Ester	34.4%	1929-73-3	10 mg/M3	10 mg/M3
Naphthalene	< 5.0 %	91-20-3	10 mg/M3	10 mg/M3

### 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:** Triclopyr is highly toxic to certain terrestrial plant and aquatic organisms in its ester form. It is moderately persistent and mobile in certain soil types.

### SECTION 4 - FIRST AID MEASURES

**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 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 treatment advice.

**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.

**NOTE TO PHYSICIAN:** 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**

**FLASHPOINT (method):** > 200 F (60 C) (Closed cup method)

**FLAMMABLE LIMITS (LFL - UFL):** 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, Oxides of nitrogen, Chlorinated pyridine, Phosgene.

## **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, clean contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container.

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 other sources of ignition.

## **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.

**GLOVES** – Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC) or viton.

**RESPIRATOR** - When handling where exposure limits may be exceeded, use a respirator approved for pesticides.

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.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL DESCRIPTION:</b>	Clear brown liquid.
<b>ODOR:</b>	Paint like
<b>SPECIFIC GRAVITY:</b>	1.00 – 1.05 g/ml @ 20 C (8.4 – 8.8 lb/gal)
<b>pH:</b>	3.5 – 4.0
<b>VAPOR PRESSURE:</b>	0.1 mm @ 37C (kerosene)
<b>WATER SOLUBILITY:</b>	Emulsifies

## **SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable, however may decompose if heated.

**CONDITIONS TO AVOID:** Avoid temperatures above (105°F, 40°C) and below 40°F (6°C).

**INCOMPATIBILITY WITH OTHER MATERIALS:** Strong acids and oxidizing materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** May decompose to hydrogen chloride, oxides of nitrogen and phosgene when burning.

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

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

### **ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat)	- > 2,000 mg/Kg
Dermal LD <sub>50</sub> (rat)	- > 5,000 mg/Kg
Inhalation LC <sub>50</sub> (rat)	- Unknown
Eye Irritation (rabbit)	- Moderate
Skin Irritation (rabbit)	- Slight
Sensitization (guinea pig)	- Potential sensitizer after repeated exposure to concentrate

### **CARCINOGEN STATUS:**

OSHA	- Not listed
NTP	- Not listed
IARC	- 2B (chlorophenoxy herbicides)

**MUTAGENIC DATA:** Little evidence of mutagenic effects during *in vivo* or *in vitro* studies.

## **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. Apply this product only as directed on label.

2,4-D and Triclopyr have properties and characteristics associated with chemicals detected in groundwater. The use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

**Mixing and Loading:** Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

### **FISH TOXICITY:** (triclopyr ester technical)

96 hour LC<sub>50</sub>, Rainbow trout – < 1.0 mg/L

96 hour LC<sub>50</sub>, Bluegill - < 1.0 mg/L

**BEE TOXICITY:** (triclopyr acid) – Non-toxic

### **AVIAN TOXICITY:** (triclopyr ester technical)

Oral LD<sub>50</sub>, Bobwhite quail – 750 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.

**WASTES:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. 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:** 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances. 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 < 34 gallons –	Not regulated by DOT
Containers ≥ 34 gallons –	NA1993, Combustible Liquid, N.O.S., (contains petroleum solvent), PG III, RQ (2,4-D Ester)

<b>DOT HAZARD CLASS:</b>	Combustible Liquid
<b>IDENTIFICATION NUMBER:</b>	NA1993
<b>DOT PACKING GROUP:</b>	PG III
<b>DOT PRIMARY/SECONDARY LABEL:</b>	N/A
<b>DOT PRIMARY/SECONDARY PLACARD:</b>	Combustible (> 119 gallons)
<b>DOT EMERGENCY RESPONSE GUIDE #:</b>	171

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

<b>CERCLA REPORTABLE QUANTITY:</b>	100 lbs (2,4-D acid)
<b>SARA TITLE III STATUS:</b>	
311/312 Hazard Categories –	Immediate & Delayed Health Hazard, Fire Hazard
313 Toxic Chemicals –	None known
<b>CALIFORNIA PROP 65:</b>	Not listed

### **SECTION 16 - OTHER INFORMATION**

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

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<b>REVISED DATE:</b>	November, 2012
<b>REFERENCE:</b>	Revise Section 4, Section 12 and Section 13 to match current EPA approved label.