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 : **TRICLOPYR 4E**
CHEMICAL NAME : Triclopyr [(3,5,6-trichloro-2-pyridyl)oxy]acetic acid, butoxy ethyl ester
CHEMICAL FAMILY : Pyridine herbicide
PRODUCT CODE : EPA Reg. No. 42750-126

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Triclopyr Butoxy Ethyl Ester	61.6	64700-56-7	Not listed	Not listed
Petroleum distillates	> 25.0	64742-94-5	10 mg/M3 (for acid)	10 mg/M3 (for acid)

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 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: 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.
NOTE TO PHYSICIAN: Contains petroleum distillates. 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

FLASHPOINT (method): >135 F (44 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 in enclosed areas 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

PHYSICAL DESCRIPTION: Amber liquid.
ODOR: Solvent like
SPECIFIC GRAVITY: 1.11 – 1.16 g/ml @ 20 C (9.25 – 9.70 lb/gal)*
pH: 4.0 – 5.0
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 (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_{50} (rat)	- > 1,000 mg/Kg
Dermal LD_{50} (rat)	- > 2,000 mg/Kg
Inhalation LC_{50} (rat)	- Unknown
Eye Irritation (rabbit)	- Minimally
Skin Irritation (rabbit)	- Moderate
Sensitization (guinea pig)	- Potential sensitizer after repeated exposure to concentrate

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

CARCINOGEN STATUS:
OSHA - Not listed
NTP - Not listed
IARC - Not listed

MUTAGENIC DATA: Little evidence of mutagenic effects during *in vivo* or *in vitro* studies.
ADDITIONAL DATA: Not known to exhibit reproductive or teratogenic (birth defect) effects.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Triclopyr in its ester form is very toxic to aquatic organisms. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.
Triclopyr is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

FISH TOXICITY: (triclopyr ester technical)
96 hour LC_{50}, Rainbow trout – < 1.0 mg/L
96 hour LC_{50}, Bluegill - < 1.0 mg/L
AVIAN TOXICITY: (triclopyr ester technical)
Oral LD_{50}, Bobwhite quail – 750 mg/Kg
Oral LD_{50}, Mallard duck – Unknown
BEE TOXICITY: (triclopyr acid) – 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:

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 ≤ 119 gallons -	Not regulated by DOT
Containers > 119 gallons -	NA1993, Combustible Liquid, N.O.S., PG III
DOT HAZARD CLASS:	Combustible Liquid (> 119 gallons)
IDENTIFICATION NUMBER:	NA1993
DOT PACKING GROUP:	PG III
DOT PRIMARY/SECONDARY LABEL:	N/A
DOT PRIMARY/SECONDARY PLACARD:	COMBUSTIBLE (> 119 gallons)
DOT EMERGENCY RESPONSE GUIDE #:	128

SECTION 15 - REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY: Not listed

SARA TITLE III STATUS:

311/312 Hazard Categories –	Immediate & Delayed Health Hazard, Fire Hazard
313 Toxic Chemicals –	None known

CALIFORNIA PROP 65: Not listed

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: August, 2011
REFERENCE: Revise Section 9 density value