

## 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** : **COMMANDO**

**CHEMICAL NAME** : 3,6-Dichloro-2-pyridinecarboxylic acid, monoethanolamine salt

: 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt

**CHEMICAL FAMILY** : pyridine (clopyralid) and phenoxy (2,4-D) herbicides

**PRODUCT CODE** : EPA Reg. No. 42750-92

### SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Clopyralid Monoethanolamine (MEA)	5.1	57754-85-5	Not Est	Not Est
2,4-D Triisopropanolamine (TIPA)	39.0	32341-80-3	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:** Severe eye irritant with permanent corneal injury possible. Blindness possible.

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

**ENVIRONMENTAL HAZARDS:** Clopyralid is highly mobile in certain soil types. 2,4-D TIPA is 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:** 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 further treatment advice.

**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**

**FLASHPOINT (method):** >200 F (93 C) (SCC 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.

## **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. Store above 40° F (7 C). 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** - Long-sleeved shirt and long pants, Shoes plus socks. For containers of over 1 gallon, but less than 5 gallons: Mixers and loaders who do not use a mechanical system to transfer the contents of this container must wear coveralls or a chemical-resistant apron.

**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 (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:** Phenolic

**SPECIFIC GRAVITY:** 1.12 – 1.18 g/ml @ 20 C (9.35 – 9.85 lb/gal)\*

**pH:** 7.0 – 8.0

**VAPOR PRESSURE:** Unknown

**VAPOR DENSITY:** Unknown

**WATER SOLUBILITY:** Miscible

\*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 40°F (6°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)	- > 2,800 mg/Kg
Dermal LD <sub>50</sub> (rat)	- > 4,000 mg/Kg
Inhalation LC <sub>50</sub> (rat)	- Unknown
Eye Irritation (rabbit)	- Severe, can cause blindness
Skin Irritation (rabbit)	- Moderate to severe
Sensitization (guinea pig)	- Non-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:** Not known to exhibit reproductive or teratogenic (birth defect) effects.

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

**ENVIRONMENTAL SUMMARY:** Do not contaminate water when disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils that would allow direct introduction into an aquifer.

**FISH TOXICITY:** (2,4-D acid)96 hour LC<sub>50</sub>, Rainbow trout – unknown96 hour LC<sub>50</sub>, Bluegill – unknown**FISH TOXICITY:** (Clopyralid acid)96 hour LC<sub>50</sub>, Rainbow trout - >100 mg/L96 hour LC<sub>50</sub>, Bluegill - >100 mg/L**BEE TOXICITY:** (2,4-D acid) 0.1 mg/bee**AVIAN TOXICITY:** (2,4-D acid)Oral LD<sub>50</sub>, Bobwhite quail – 650 mg/KgOral LD<sub>50</sub>, Mallard duck - > 1,000 mg/Kg**AVIAN TOXICITY:** (Clopyralid acid)Oral LD<sub>50</sub>, Bobwhite quail - >2000 mg/KgOral LD<sub>50</sub>, Mallard duck - 1400 mg/Kg**BEE TOXICITY:** (Clopyralid 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:** 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 &lt; 30 gallons –

Not regulated by DOT

Containers ≥ 30 gallons -

UN3082, Environmentally Hazardous Substances, Liquid,  
N.O.S., 9, PG III, RQ (2,4-D Salt)**DOT HAZARD CLASS:**

Class 9

**IDENTIFICATION NUMBER:**

UN3082

**DOT PACKING GROUP:**

PG III

**DOT PRIMARY/SECONDARY LABEL:**

None

**DOT PRIMARY/SECONDARY PLACARD:**

Class 9

**DOT EMERGENCY RESPONSE GUIDE #:**

171

**SECTION 15 - REGULATORY INFORMATION****CERCLA REPORTABLE QUANTITY:**100 lbs 2,4-D acid, (approximately 50 gallons of product)  
5,000 lbs Ethylenediamine-tetraacetic acid (EDTA),**SARA TITLE III STATUS:**311/312 Hazard Categories –  
313 Toxic Chemicals –Immediate & Delayed Health Hazard  
2,4-D acid**CALIFORNIA PROP 65:**

Not listed

**SECTION 16 - OTHER INFORMATION**

HMIS HAZARD RATINGS	HEALTH	3
	FLAMMABILITY	1
	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