

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY ADDRESS:**

ALBAUGH, LLC
Ankeny, IA 50021

EMERGENCY TELEPHONE NUMBERS:

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

PRODUCT NAME

: **COMMANDO**

CHEMICAL NAME

: Clopyralid, monoethanolamine salt & 2,4-D, triisopropanolamine salt

PRODUCT USE

: Herbicide

PRODUCT CODE

: EPA Reg. No 42750-92

SECTION 2 - HAZARDS IDENTIFICATION SUMMARY

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

Amber liquid

HEALTH HAZARDS: DANGER. Corrosive 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 is toxic to aquatic organisms.

**SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER
Clopyralid Monoethanolamine (MEA)	5.1	57754-85-5
2,4-D Triisopropanolamine (TIPA)	39.0	32341-80-3
Other materials	55.9	n/a

SECTION 4 - FIRST AID MEASURES

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

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 a product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5 - FIRE FIGHTING MEASURES

National Fire Protection Rating (NFPA)

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

FLASHPOINT: >100°C

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

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

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 runoff. Minimize use of water to prevent environmental contamination. Contact your State Pesticide or Environmental Control Agency, or nearest EPA Regional Office for guidance on disposal.

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

IN CASE OF SPILLS OR LEAKS: 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. Minimize use of water to prevent environmental contamination

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling concentrate.

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):**

COMPONENT	OSHA PEL	ACIGH TLV
Clopyralid Monoethanolamine (MEA)	Not Est	Not Est
2,4-D Triisopropanolamine (TIPA)	10 (for acid)	10 (for acid)

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, face shield 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.

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

Appearance:	Amber liquid
Odor:	Phenolic odor
pH:	4.7 – 5.7
Melting Point:	Not applicable
Boiling Point:	No data
Flash Point:	>100°C
Evaporation Rate:	No data
Flammability:	No data
Flammability Limits:	No data
Vapor Pressure:	1.33 mPa (pure, 24°C) (Clopyralid) 1.86 x 10 ⁻² mPa (25°C) (2,4-D Acid)
Vapor Density:	Not applicable
Density:	1.14 – 1.18 g/ml (9.51– 9.85 lb/gl)*
Solubility:	Emulsifies
Partition Coefficient:	log Pow = -1.81 (pH5), -2.63 (pH7), -2.55 (pH9), 1.07 (unionized, 25°C) (Clopyralid) log Pow = 2.58 – 2.83 (pH 1), 0.04 – 0.33 (pH 5), -0.75 (pH 7) (2,4-D Acid)
Auto-Ignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	20.8 cSt (20°C); 9.2 cSt (40°C)

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

SECTION 10 - STABILITY AND REACTIVITY

PRODUCT REACTIVITY: None known.

CHEMICAL STABILITY: Stable, however may decompose if heated

HAZARDOUS REACTION/POLYMERIZATION: Product will not undergo polymerization.

CONDITIONS TO AVOID: Avoid temperatures above (115°F, 46°C) and below 40°F (6°C).

INCOMPATIBLE MATERIALS: Acidic and oxidizing materials, halogenated organics, brass, copper, zinc and aluminum metals.

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

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity values from a similar but not identical formulation.

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	- > 3,000 mg/kg
Dermal LD ₅₀ (rat)	- > 3,000 mg/kg
Inhalation LC ₅₀ (rat)	- No data
Eye Irritation (rabbit)	- Severe irritant, corrosive
Skin Irritation (rabbit)	- Mild irritant
Sensitization (guinea pig)	- Potential sensitizer

CARCINOGEN STATUS:

OSHA	- Not listed
NTP	- Not listed
IARC (2,4-D)	- 2B (limited evidence if carcinogenicity in humans)

TERATOGENICITY: Not known to exhibit reproductive or teratogenic (birth defect) effects.

MUTAGENICITY: No evidence of mutagenic effects during in vivo or in vitro studies.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This pesticide may be 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.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical 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.

Refer to product label for complete environmental precautions.

FATE: Clopyralid MEA disassociates to the parent acid in the environment which is moderately persistent and highly mobile in soil. 2,4-D TIPA disassociates to the parent acid in the environment which is moderately persistent and moderately mobile in soil.

FISH TOXICITY: (2,4-D acid)
96 hour LC₅₀, Rainbow trout – unknown
96 hour LC₅₀, Bluegill – unknown

AVIAN TOXICITY: (2,4-D acid)
Oral LD₅₀, Bobwhite quail – 650 mg/Kg
Oral LD₅₀, Mallard duck - > 1,000 mg/Kg

FISH TOXICITY: (Clopyralid acid)
96 hour LC₅₀, Rainbow trout - >100 mg/L
96 hour LC₅₀, Bluegill - >100 mg/L

AVIAN TOXICITY: (Clopyralid acid)
Oral LD₅₀, Bobwhite quail - >2000 mg/Kg
Oral LD₅₀, Mallard duck - 1400 mg/Kg

BEE TOXICITY: (2,4-D acid) 0.1 mg/bee

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 acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. 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 or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. 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

SHIPPING DESCRIPTION:
(Ground transport)

Containers < 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)

TRANSPORT HAZARD CLASS:
IDENTIFICATION NUMBER:
DOT PACKING GROUP:

Class 9
UN3082
PG III

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

TSCA:

This product is exempted from TSCA because it is solely for FIFRA regulated use.

SECTION 16 - OTHER INFORMATION

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

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh's knowledge. Albaugh makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

REVISED DATE: May, 2017

REFERENCE: Revised Section 11 for IARC carcinogenicity classification