



UCPA LLC

MATERIAL SAFETY DATA SHEET

Universal Crop Protection Alliance LLC
1300 Corporate Center Curve
Eagan, MN 55121

In Case of Emergency, Call:
24 Hour Emergency Number
CHEMTREC: 800-424-9300

Medical Emergency Contact:
1-800-308-1241

1. CHEMICAL IDENTIFICATION

Product Name: **Crossbow Specialty Herbicide** Product No.: 300205
Low Volatile Weed and Brush Herbicide
EPA Reg. Number: 62719-260-72693
EPA Signal Word: CAUTION
Active Ingredient (%) 2,4-Dichlorophenoxyacetic acid, butoxyethyl ester 34.4%
Triclopyr, butoxyethyl ester 16.5%
Chemical Class: Herbicide

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
2,4-Dichlorophenoxyacetic acid, butoxyethyl ester (001929-73-3)	10 mg/m ³	10 mg/m ³		See Section 11
Triclopyr, butoxyethyl ester (064700-56-7)	ND	ND		No
Kerosene (008008-20-6)	10 mg/m ³	10 mg/m ³		

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Hazardous chemical. Reddish brown liquid with sweet odor. May cause moderate eye and skin irritation. Effects have been reported on the following organs: blood, gastrointestinal tract, kidneys, liver, muscles, and respiratory tract. Flash Point: 148° F (64° C). Combustible material. Produces noxious fumes. Emergency personnel should wear a self-contained breathing apparatus because noxious fumes are produced under fire conditions.

Potential Health Effects: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

Eye: May cause moderate irritation. Corneal injury is unlikely.

Skin: A single dose exposure to the material is slightly toxic and irritating. Prolonged or repeated exposure may cause moderate irritation. The LD 50 for skin absorption is >5000 mg/kg.

Ingestion: Single dose oral toxicity is low. Amounts ingested incidental to normal handling conditions are not likely to cause injury. Ingestion may cause gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea. Oral ingestion of large amounts may cause injury including aspiration into the lungs leading to damage or even death when ingesting and vomiting.

Inhalation: Excessive exposure may cause irritation to upper respiratory tract and central nervous system.

Systemic (other Target Organs) Effects: Effects have been reported on the following organs: blood, gastrointestinal tract, kidneys, liver, muscle, and respiratory tract. Birth defects are unlikely to occur.

Physical Properties

Appearance: Reddish brown liquid

Odor: Sweet odor

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. May cause gastrointestinal tract irritation. Contact a physician and/or transport to a medical facility immediately.

Eye Contact: Flush eyes with water immediately and continuously for 15 minutes. Consult a physician.

Skin Contact: Wash skin with plenty of soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Consult a physician if irritation develops.

Inhalation: Remove to fresh air. Consult a physician if irritation develops or breathing is difficult.

Note to Physician: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and condition of the patient.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): 148°F (64.4°C) (Setaflash)

Flammable Limits (% in Air): ND (Not Determined)

Autoignition Temperature: ND

Hazardous Combustion Products: Combustible. Noxious fumes produced under fire conditions.

Extinguishing Media: Water fog, foam, carbon dioxide, dry chemical. Do not allow runoff to enter sewers or waterways.

Fire Fighting Instructions: Prevent human exposure to fire, fumes, and smoke. Avoid heavy hose streams and dike area to prevent runoff.

Protective Equipment for Fire Fighters: Emergency personnel should wear full face, self contained breathing apparatus and impervious protective clothing.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak: Contain spill. Use appropriate safety equipment. Absorb spill with sand, floor clay or dirt. Shovel or sweep up and mop affected area with soap and water. Prevent liquid from entering sewers and waterways. Large spills that soak into the ground should be dug up, placed in drums and disposed of properly.

7. HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: Keep out of reach of children. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with eyes, skin and clothing. Good housekeeping is necessary. No smoking, open flames or sources of ignition in handling and storage area. Wash thoroughly with soap and water after handling. Do not contaminate water, food or feed by storage or disposal. Do not store near seeds, fertilizers, insecticides or fungicides. Do not exceed 140°F. Do not store near acids, bases, or oxidizing materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

These precautions are suggested for conditions with a high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

Engineering Controls: Provide general local exhaust ventilation to control airborne levels below the exposure guidelines. Eyewash stations and safety showers should be easily accessible.

Eye Contact: Use chemical goggles. Eye wash station should be located in the immediate work area.

Skin Contact: Use protective clothing impervious to this material.

Inhalation: Use a NIOSH approved respirator when protection is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Reddish brown liquid.

Odor: Sweet odor

Vapor Pressure: 0.1 mm @ 37.8° C (kerosene)

Boiling Point: >175° C (kerosene)

Specific Gravity: 1.013 @ 20° C

Solubility in Water: Forms an emulsion

10. STABILITY AND REACTIVITY

Reactivity

Stability: Stable at normal conditions.

Hazardous Polymerization: Not known to occur.

Conditions to Avoid: Avoid temperatures above or near the flash point.

Incompatible Materials: Acid, base and oxidizing materials.

Hazardous Decomposition Products Noxious fumes, nitrogen oxide, hydrogen chloride and phosgene may result under fire conditions.

11. TOXICOLOGICAL INFORMATION

Mutagenicity: For the components tested, in-vitro and animal mutagenicity studies were predominately negative.

Carcinogenic Potential: Ingredients are not specifically listed as carcinogens by NTP or OSHA.. IRAC supplement 7 lists chlorophenoxy herbicides as a class 2B carcinogen-Limited evidence in Humans. The Science Advisory Panel of EPA has given a Class D Status- Not classifiable as to Human Carcinogenicity.

12. ECOLOGICAL INFORMATION

Movement and Partitioning: Based largely or completed on information for triclopyr and 2,4-D. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log POW 3 and 5).

Degradation and Persistence: Based largely or completed on information for triclopyr and 2,4-D. Chemical degradation (hydrolysis) is expected in the environment within minutes to hours. Based largely or completely on information for kerosene. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD is > 40%)

Ectotoxicology: Based largely or completed on information for triclopyr and 2,4-D. Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 is between 0.1 and 1 mg/L in most sensitive species). Based largely or completely on information for kerosene. EC50 is above the water solubility.

13. DISPOSAL CONSIDERATION

Disposal Method: Do not contaminate water, food, or feed by storage or disposal. If wastes cannot be disposed of by use according to label instructions, contact the appropriate state, local, or federal agency for guidance on disposal according to current environmental laws, rules and regulations.

14. TRANSPORT INFORMATION

B/L Freight Classification:

For 4 ounce, 12x1 Quart, 4x1 Gallon, and 2x2.5 Gallon

By land or air: Not regulated for transportation

By vessel: Environmentally hazardous substance, liquid, N.O.S. (2,4-D Acid)/9/UN3082/PGIII/ Marine Pollutant

For 55 Gallon Drums

By land or air: Environmentally Hazardous Substance, Liquid, N.O.S. (2,4,D Acid)/9/UN3082/PGIII/RQ(2,4,D Acid)

By vessel: Environmentally hazardous substance, liquid, N.O.S. (2,4-D Acid)/9/UN3082/PGIII/RQ(2,4,D Acid)/ Marine Pollutant

Bulk Shipments

By domestic or vessel: Combustible liquid, N.O.S./(3,5,6-Trichloro-2-Pyridinyloxy-Acetic Acid Ethyl Ester)/ Combustible liquid/NA 1993/PG III/ RQ(2,4,D Acid)/ Marine Pollutant

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the issue or revision date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another, it is users responsibility to ensure that its activities comply with federal, state and local laws and regulations.

SARA Title III Classification

Section 311/312:

Hazard Classes:

Immediate.
Delayed
Fire Hazard

Section 313 chemical(s):

Chemical
2,4-D Esters

CAS Number
001929-73-3

Concentration
34.4 %

TSCA Status: All components are on the US EPA's TSCA inventory list or not required to be listed on the TSCA inventory.

CERCLA Substances:

2,4-Dichlorophenoxyacetic acid, butoxyethyl ester (001929-73-3) RQ100

34.4% in product

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

16. OTHER INFORMATION**NFPA Hazard Ratings**

Health: 1
Flammability: 2
Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Revision: To update information in MSDS.

Updated: January, 2006

Supersedes: March 11, 2005

The information herein is presented in good faith and believed to be accurate as of the issue or revised date shown above. However, since the actual use of the product is beyond manufacturers control, no warranty, expressed or implied, is given and no responsibility assumed. Regulatory requirements governing this product are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that the buyer's activities comply with federal, state and local laws.