

**MATERIAL SAFETY DATA SHEET**

Universal Crop Protection Alliance LLC  
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Eagan, MN 55121

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

Medical Emergency Contact:  
1-800-228-5635 Ext. 138

**1. CHEMICAL IDENTIFICATION**

Product Name: 2,4-D Lo-V Ester Weed Killer Product No.: 0105

EPA Signal Word Caution

EPA Reg. Number: 1386-60-72693

Active Ingredient (%) 2,4-Dichlorophenoxyacetic Acid, 65.1% CAS No.: 001928-43-4  
isooctyl esters

Chemical Name: Isooctyl (2-ethylhexyl) ester of 2,4-dichlorophenoxyacetic acid

Chemical Class: Phenoxy Herbicide

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
2,4-Dichlorophenoxyacetic Acid, isooctyl esters	10mg/m3	10mg/m3		

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** Hazardous chemical. Clear amber liquid. Slightly aromatic odor. May cause slight eye irritation. Corneal injury is unlikely. A single prolonged skin exposure may cause skin irritation or even a burn. Harmful if absorbed through the skin. 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 slight irritation with corneal injury unlikely.

**Skin:** A single prolonged skin exposure may result in the material being absorbed in harmful amounts. Exposure may cause skin irritation or burn.

**Ingestion:** Single dose oral toxicity is moderate. Ingestion may cause gastrointestinal irritation of ulceration.

**Inhalation:** Single exposure to vapors is not likely to be hazardous. Avoid breathing vapors or mist.

**Systemic (other Target Organs) Effects:** Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Birth defects are unlikely to occur.

**Physical Properties**

Appearance: Clear amber liquid.

Odor: Slightly aromatic.

#### 4. FIRST AID MEASURES

Ingestion: Induce vomiting if large amounts are ingested. Contact a physician or poison control center 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.

Medical Condition Likely to be Aggravated by Exposure: Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Birth defects are unlikely to occur.

#### 5. FIRE FIGHTING MEASURES

##### **Fire and Explosion**

Flash Point (Test Method): 145°F (TCC)  
Flammable Limits (% in Air): ND  
Autoignition Temperature: ND  
Flammability: ND

**Hazardous Combustion Products:** Noxious fumes produced under fire conditions may include hydrogen chloride and nitrogen oxides

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

**Fire Fighting Instructions:** Prevent human exposure to fire, fumes, and smoke.

**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. Absorb spill with sand, floor clay or dirt. Shovel or sweep up and mop affected area. Prevent liquid from entering sewers, waterways, or low areas. \_\_\_\_\_

#### 7. HANDLING AND STORAGE

**Precautions to be Taken in Handling and Storage:** Good housekeeping and controlling of dusts are necessary for safe handling of product. 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 store in original container above 40°F. If frozen, poor weed control may result. Do not store near heat or open flame.

## 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: Normal room ventilator should be satisfactory. 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: Clear amber liquid

Odor: Slightly aromatic

Boiling Point: >400°F

Specific Gravity/Density: 1.037 / 8.64

pH: ND

Solubility in H<sub>2</sub>O: Emulsifiable

Vapor Pressure: <1 mmHg @20C

Vapor Density: ND

## 10. STABILITY AND REACTIVITY

### Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions to Avoid: Elevated temperatures

Incompatible Materials: Acids and oxidizing materials

**Hazardous Decomposition Products** HCL, Nitrogen oxides, CO<sub>2</sub>, CO - under fire conditions

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies

Ingestion: LD<sub>50</sub> (rats) = 1250 mg/kg

Dermal: LLD<sub>50</sub> (rabbits) = >2000 mg/kg

Inhalation: Single exposure to vapors is not likely to be hazardous

Mutagenicity: Mutagenic effects are unknown, studies were inconclusive.

**Reproductive Hazard Potential:** Excessive dietary levels of 2,4-D caused toxic effects(weight and viability reduction) in rats on a reproduction test.

**Teratology (Birth Defects):** Birth defects are unlikely. Exposures having no effect on the mother had other harmful effects on the fetus in laboratory test on animals.

**Carcinogenic Potential:** Various animal cancer tests have shown no reliable positive association between 2,4-D exposure and cancer.

## 12. ECOLOGICAL INFORMATION

No data available

## 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

**DOT Classification:** Greater than RQ;  
RQ; Combustible, liquid, toxic, n.o.s., 3, UN NA1993, PG III (kerosene, 2,4-D)  
**B/L Freight Classification:** Compounds tree or weed killing, N.O.I.

## 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: Acute health hazard  
Chronic health hazard  
Fire hazard

Section 313 chemical(s): This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the emergency planning and community right-to-know act (EPCRA) of 1986 and of 40 CFR 372

<u>Chemical Name</u>	<u>CAS Number</u>	<u>RQ</u>	<u>% In Product</u>
2,4-Dichlorophenoxyacetic acid, isooctyl	001928-43-4	26 gal	65.1

**RCRA Classification:** NA

**TSCA Status:** NA

## 16. OTHER INFORMATION

### NFPA Hazard Ratings

Health: 2  
Flammability: 2  
Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Issued Date: September 9, 1999

Supersedes: September 9, 1997

**Reference MSDS:** DowElanco 2,4-D 2-Ethylhexyl ester-technical dated 8/10/1995  
Riverdale 2,4-D L.V. 4 Ester dated 8/29/1997

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