



## 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:  
1-800-228-5635 Ext. 138

### 1. CHEMICAL IDENTIFICATION

Product Name: DUO 638 Product No.: 300108

EPA Reg. Number: 42750-36-72693

Active Ingredient (%) 2,4-Dichlorophenoxyacetic Acid, 13.8%

2-Butoxyethyl Ester of  
2,4-Dichlorophenoxyacetic Acid 24.5%

Chemical Name: 2-butoxyethyl 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 (CAS#1929-73-3)	N.E.	N.E.		NO
2-Butoxyethyl esters of 2,4-Dichlorophenoxyacetic Acid (CAS#94-75-7)	N.E.	N.E.		NO
NAPHTHALENE (CAS#91-20-3)	10 ppm	10 ppm		NO

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Hazardous chemical. Clear amber liquid. Phenoxy odor. May cause irreversible eye damage seen as corneal opacity. 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 irritation with corneal opacity.

**Skin:** Prolonged or frequent skin exposure may cause skin irritation.

**Ingestion:** Harmful if swallowed. Ingestion may cause nausea, vomiting, abdominal pain, mytonia, muscle weakness, and fall in blood pressure.

**Inhalation:** Expected to be harmful. May cause irritation to the respiratory tract, coughing and dizziness. Avoid breathing vapors or mist.

### **Physical Properties**

Appearance: Clear amber liquid.

Odor: Penoxy.

## **4. FIRST AID MEASURES**

Ingestion: Do not induce vomiting. 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 of breathing is difficult.

Medical Condition Likely to be Aggravated by Exposure: Skin irritation may be aggravated in persons with existing skin lesions. Breathing of vapors may aggravate conditions such as asthma, emphysema or chronic bronchitis.

## **5. FIRE FIGHTING MEASURES**

### **Fire and Explosion**

Flash Point (Test Method): 150<sup>0</sup>F (TCC)

Flammable Limits (% in Air): ND

Autoignition Temperature: ND

Flammability: ND

**Hazardous Combustion Products:** Toxic and/or hazardous gases produced under fire conditions may include: HCL, CO, CO2

**Extinguishing Media:** Foam, fog, dry chemical, water spray 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:** 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 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: Phenoxy

Boiling Point: >212<sup>0</sup>F

Specific Gravity/Density: 1.083 / 9.02

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

Vapor Pressure: <2 mmHg @68C

## 10. STABILITY AND REACTIVITY

### Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions to Avoid: ND

Incompatible Materials: Alkalies and oxidizing materials

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

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity/Irritation Studies:** Dermal: LLD50 (rabbits) >2000 mg/kg

**Carcinogenic Potential:** Ingredients in this product are not listed as carcinogens by NTP, IARC, or OSHA.

## 12. ECOLOGICAL INFORMATION

No data available

## 13. DISPOSAL CONSIDERATION

**Disposal Method:** Do not contaminate water, food, or feed by storage or disposal. If waste 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

## 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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