

## 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:** D-638

**CHEMICAL NAME:** 2-Butoxyethyl Ester of 2,4-Dichlorophenoxyacetic Acid & 2,4-Dichlorophenoxyacetic Acid

**CHEMICAL FAMILY:** Phenoxy herbicide

**PRODUCT CODE:** EPA Reg. No. 42750-36

### SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

| COMPONENT               | PERCENTAGE | CAS NUMBER | OSHA PEL | ACIGH TLV |
|-------------------------|------------|------------|----------|-----------|
| 2,4-D Butoxyethyl Ester | 24.5 %     | 1929-73-3  | NOT EST  | NOT EST   |
| 2,4-D Acid              | 13.8 %     | 94-75-7    | NOT EST  | NOT EST   |
| Naphthalene             | 4.0 %      | 91-20-3    | 10 PPM   | 10 PPM    |
| Inert Ingredients       | 54.0%      | n/a        | n/a      | n/a       |

### SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

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

**HEALTH HAZARDS:** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation.

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

**ENVIRONMENTAL HAZARDS:** 2,4-D ester is toxic to some 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 SWALLOWED:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

**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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by 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):** 170 F (80 C) (open cup method)

**FLAMMABLE LIMITS (LFL - UFL):** Unknown

**FIRE AND EXPLOSION HAZARD:** May decompose in fire 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 Category E, such as barrier laminate, neoprene rubber, nitrile rubber, or viton.

**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:** Clear amber to brown liquid.

**ODOR:** Phenolic like.

**SPECIFIC GRAVITY:** 1.05 – 1.12 g/ml (8.75 – 9.25 lb/gl)\*

**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.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride, Oxides of carbon and nitrogen.

**HAZARDOUS POLYMERIZATION:** Product will not undergo polymerization.

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

#### **ACUTE TOXICITY:**

Oral LD<sub>50</sub> (rat) - > 1,000 mg/Kg

Dermal LD<sub>50</sub> (rat) - > 2,000 mg/Kg

Inhalation LC<sub>50</sub> (rat) - Unknown

Eye Irritation (rabbit) - Severe

Skin Irritation (rabbit) - Moderate

Sensitization (guinea pig) - Non-sensitizer

#### **CARCINOGEN STATUS:**

**OSHA** - No

**NTP** - No

**IARC** - 2B

**MUTAGENIC DATA:** Not known to be mutagenic.

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

**ENVIRONMENTAL SUMMARY:** This product is toxic to fish. Drift or runoff may adversely affect fish and non-target plants. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes. Do not apply when weather conditions favor drift from treated areas. Avoid spray drift to susceptible plants such as cotton, beans, peas, ornamentals, and most vegetables, as injury may occur. Coarse sprays are less likely to drift. Under very high temperature, vapors from this product may injure susceptible plants in the immediate vicinity. Data indicate that 2,4-D ester de-esterifies to the parent acid in the environment. 2,4-D acid has an environmental half-life of a few days to a few weeks depending on local conditions and weather.

#### **FISH TOXICITY:**

Bluegill – 524 mg/l (96-hr LC50)

Rainbow trout – 250 mg/l (96-hr LC50)

#### **AVIAN TOXICITY:**

Quail – 500 mg/Kg (Oral LD50)

Mallard Duck - > 5,500 ppm (8-day Dietary LC50)

**BEE TOXICITY:** Not 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 < 29 gallons –

Not regulated by DOT

Containers ≥ 29 gallons –

NA1993, Combustible Liquid, N.O.S. (2-butoxyethanol, naphthalene), PG III, RQ (2,4-D Ester, 2,4-D)

**DOT HAZARD CLASS:**

Combustible Liquid

**IDENTIFICATION NUMBER:**

NA1993

**DOT PACKING GROUP:**

PG III

**DOT PRIMARY/SECONDARY LABEL:**

N/A

**DOT PRIMARY/SECONDARY PLACARD:**

Combustible (≥ 29 gallons)

**DOT EMERGENCY RESPONSE GUIDE #:**

128

### SECTION 15 - REGULATORY INFORMATION

**CERCLA REPORTABLE QUANTITY:**

100 lbs 2,4-D acid (approximately 29 gallons of D-638)

**SARA TITLE III STATUS:**

311/312 Hazard Categories -

Immediate & Delayed Health

313 Toxic Chemicals –

Ethylhexyl ester of 2,4-D

**CALIFORNIA PROP 65:**

Not listed

### SECTION 16 - OTHER INFORMATION

|                           |  |   |
|---------------------------|--|---|
| HMIS<br>HAZARD<br>RATINGS | HEALTH   | 2 |
|                           | FLAMMABILITY                                     | 1 |
|                           | PHYSICAL HAZARD                                  | 1 |
|                           | 4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal |   |

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**REVISED DATE:** September, 2008

**REVISED FOR:** Revised DOT description in Section 14

