

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
: FIVE STAR
CHEMICAL NAME
: 2-Ethylhexyl ester of 2,4-Dichlorophenoxyacetic Acid
CHEMICAL FAMILY
: Phenoxy herbicide
PRODUCT CODE
: EPA Reg. No. 42750-49

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
2-Ethylhexyl ester of 2,4-Dichlorophenoxyacetic Acid	81.8 %	1928-43-4	10 mg/m ³	10 mg/m ³
Petroleum distillate	8.4%	64742-88-7	100 ppm	100 ppm
Inert Ingredients	9.8%	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 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 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 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 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: May cause chemical pneumonitis if aspirated. If lavage is performed, suggest endotracheal and/or esophagoscopy control.

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

FLASH POINT: 145 F

AUTOIGNITION TEMPERATURE: Not established

FLAMMABLE LIMITS: Not established

EXTINGUISHING MEDIA: Water spray, Foam

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,

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.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

HANDLING: Use only in a well-ventilated area. Do not reuse this container. Wear proper safety equipment.

STORAGE: Keep container closed when not in use. Keep away from food, feed and drinking water. Store away from heat (> 100 F) and keep from freezing (< 35 F).

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. Chemical resistant apron if mixing/loading or cleaning equipment.

GLOVES – Chemical resistant gloves made of any waterproof material.

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 and 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 the outside of gloves before removing. As soon as

possible, wash thoroughly and change into clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Dark amber liquid

ODOR: Phenolic like

SPECIFIC GRAVITY: 1.06 – 1.12 g/ml (8.85 – 9.35 lb/gal.)*

pH: N/A

VAPOR PRESSURE: Unknown

WATER SOLUBILITY: Emulsifies

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

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Avoid excessive heat.

MATERIALS TO AVOID: Oxidizing agents and acids.

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION: Thermal decomposition may release toxic gases such as Hydrogen chloride, oxides of nitrogen and carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	-	> 1,000 mg/Kg
Dermal LD ₅₀ (rat)	-	> 2,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 3.0 mg/L
Eye Irritation (rabbit)	-	Slight
Skin Irritation (rabbit)	-	Slight
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 aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget 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.

<p>FISH TOXICITY: (Acid Technical)</p> <p>96 hour LC₅₀, Bluegill – 524 mg/L</p> <p>96 hour LC₅₀, Rainbow trout – 250 mg/L</p>	<p>AVIAN TOXICITY: (Acid Technical)</p> <p>Oral LD₅₀, Quail – 500 mg/Kg</p> <p>Oral Dietary LC₅₀, Mallard Duck - > 5,500 ppm</p>
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BEE TOXICITY: Unknown.

SECTION 13 - DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law and may contaminate groundwater. 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 DISPOSAL: Triple rinse (or equivalent) adding rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or 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 < 20 gallons –	Not regulated by DOT
Containers ≥ 20 gallons –	NA1993, Combustible Liquid, N.O.S. (Aliphatic Solvent Naphtha), PG III, RQ (2,4-D Ester)

DOT HAZARD CLASS:	Combustible Liquid
IDENTIFICATION NUMBER:	NA1993
DOT PACKING GROUP:	PG III
DOT PRIMARY/SECONDARY LABEL:	N/A
DOT PRIMARY/SECONDARY PLACARD:	Combustible (≥ 20 gallons)
DOT EMERGENCY RESPONSE GUIDE #:	128

SECTION 15 - REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY: 100 lbs 2,4-D acid (approximately 20 gallons of Five Star)

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 HAZARD RATINGS	HEALTH	1
	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