

# MATERIAL SAFETY DATA SHEET

Emergency Phone: 877-424-7452

Winfield Solutions, LLC

St. Paul, MN 55164-0589

Effective Date: 09-14-07

MSDS:



## E-99 HERBICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** E-99 Herbicide

#### COMPANY IDENTIFICATION:

Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164-0589

### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

2,4-Dichlorophenoxy-, CAS # 001929-73-3 87.4%  
acetic acid, 2-butoxy-  
ethyl ester

Other Ingredients, Total, Including: 12.6%

Ethoxylated Castor Oil CAS # 061791-12-6

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

### 3. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Hazardous Chemical. Yellow liquid with an ester odor. May cause eye and skin irritation. May cause corneal injury. LD<sub>50</sub> for skin absorption is >5000 mg/kg. Oral LD<sub>50</sub> is 934 and 1605 mg/kg. Inhalation LC<sub>50</sub> is >5.0 mg/L for 4 hours. Toxic to aquatic organisms.

**EMERGENCY PHONE NUMBER:** 877-424-7452

**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 eye irritation. May cause slight temporary corneal injury.

**SKIN:** Prolonged excessive exposure may cause adverse effects. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rats is >5000 mg/kg. Has caused allergic skin reactions when tested in guinea pigs.

**INGESTION:** Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. The oral LD<sub>50</sub> for rats is 934 mg/kg (males) and 1605 mg/kg (females).

**INHALATION:** Prolonged excessive exposure may cause adverse effects. The LC<sub>50</sub> for rats is >5.0 mg/L for 4 hours.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** For the active ingredient, in animals, effects have been reported on the following organs: blood, kidney, liver, thyroid, eye, gastrointestinal tract, and muscles. Observations in animals include lethargy, gastrointestinal effects and vomiting.

**CANCER INFORMATION:** No relevant information found.

**TERATOLOGY (BIRTH DEFECTS):** For the active ingredient, birth defects are unlikely. Exposure having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.

**REPRODUCTIVE EFFECTS:** No relevant information found.

### 4. FIRST AID:

**EYES:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**SKIN:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items, which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands.

**INGESTION:** 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. Never give anything by mouth to an unconscious person.

**INHALATION:** Move person to fresh air; if effects occur, consult a physician.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** >200°F (>93°C)

**METHOD USED:** SCC

**FLAMMABLE LIMITS:**

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Water fog, foam, CO<sub>2</sub>, dry chemical.

**FIRE & EXPOSURE HAZARDS:** Noxious vapors formed under fire conditions. Contain water from fire-fighting to prevent entry to water supplies.

**FIRE-FIGHTING EQUIPMENT:** Wear positive pressure, self-contained breathing apparatus and full protective clothing.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS/LEAKS:** Absorb small spills with an inert material such as sand. Dike the area of large spills and report to State Lead Agency for Agricultural Chemical spills.

### 7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Avoid contact with eyes, skin, and clothing. Do not take internally. Avoid breathing mists or vapors. Users should wash thoroughly after mixing, loading, or applying this product. Read the product label for further information concerning the use of personal protective equipment relative to the Worker Protection Standard of 1993.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

**EXPOSURE GUIDELINE(S):**

2,4-D Butoxyethyl ester: none established for ester; ACGIH TLV and OSHA PEL are 10 mg/M<sup>3</sup> for the acid.

**ENGINEERING CONTROLS:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required, use a NIOSH approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use a NIOSH approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

**SKIN PROTECTION:** Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items that cannot be decontaminated, such as shoes, belts, and watchbands, should be removed and disposed of properly. Use chemical protective clothing resistant to this material, where there is any possibility of skin contact.

**EYE/FACE PROTECTION:** Use chemical goggles.

**APPLICATORS AND ALL OTHER HANDLERS:** Refer to the product label for personal protective clothing and equipment.

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** Not determined

**VAPOR PRESSURE:** Not determined

**DENSITY:** 1.208 g/mL

**SOLUBILITY IN WATER:** Not determined

**SPECIFIC GRAVITY:** Not determined

**APPEARANCE:** Yellow liquid

**ODOR:** Ester

**pH:** 3.71

### 10. STABILITY AND REACTIVITY:

**STABILITY:** Stable under normal storage conditions.

**INCOMPATIBILITY:** Acid, base.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Noxious gases and fumes under fire conditions - hydrogen chloride and others.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

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### 11. TOXICOLOGICAL INFORMATION:

**MUTAGENICITY:** For the active ingredient, in-vitro mutagenicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

#### MOVEMENT & PARTITIONING:

Based largely or completely on information for the active ingredient.

Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow between 3 and 5).

Based largely or completely on information for ethoxylated castor oil.

No bioconcentration of the polymeric component is expected because of its high molecular weight.

#### DEGRADATION & PERSISTENCE:

Based largely or completely on information for the active ingredient.

Chemical degradation (hydrolysis) is expected in the environment within minutes to hours.

Based largely or completely on information for ethoxylated castor oil.

Material is expected to be readily biodegradable.

#### ECOTOXICOLOGY:

Based largely or completely on information for the active ingredient.

Material is highly toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is between 0.1 and 1 mg/L in the most sensitive species tested).

Based largely or completely on information for ethoxylated castor oil.

Not expected to be acutely toxic to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** Excess wastes are toxic. Improper disposal of excess wastes are a violation of federal law and may contaminate groundwater. If these wastes cannot be disposed 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.

### 14. TRANSPORT INFORMATION:

#### U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

**Winfield Solutions, LLC DOES NOT RECOMMEND SHIPPING THIS MATERIAL BY AIR.**

**FOR PACKAGE SIZES <113 POUNDS:**  
THIS MATERIAL IS NOT REGULATED

**FOR PACKAGE SIZES >113 POUNDS:**  
ENVIRONMENTALLY HAZARDOUS SUBSTANCES,  
LIQUID, N.O.S./(CONTAINS 2,4-D ESTER)/9/UN3082/  
PGIII/RQ(2,4-D ESTER)

### 15. REGULATORY INFORMATION:

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

#### U.S. REGULATIONS

**SARA 313 INFORMATION:** This product contains the following substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
2,4-D ESTERS	001929-73-3	88.3%

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard  
A delayed health hazard

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### TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
2,4-D Esters	001929-73-3	NJ2 NJ3 PA1 PA3

NJ2 = New Jersey Environmental Hazardous Substance (present at > or = to 1.0%).

NJ3 = New Jersey Workplace Hazardous Substance (present at > or = to 1.0%).

PA1 = Pennsylvania Hazardous Substance (present at > or = to 1.0%).

PA3 = Pennsylvania Environmental Hazardous Substance (present at > or = to 1.0%).

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

CATEGORY	RATING
Health	2
Flammability	1
Reactivity	0

**COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS Number	RQ	% in Product
2,4-D Esters	001929-73-3	100 lb.	88.3%

### 16. OTHER INFORMATION:

**MSDS STATUS:** New

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made.