

## MATERIAL SAFETY DATA SHEET

WINFIELD SOLUTIONS, LLC

**PRODUCT NAME(S)**

For Emergency Call: 800-424-9300  
(CHEMTREC, 24 hours) or  
Medical Emergency Call: 877-424-7452

**SWB 2,4-D LV 4**

Effective Date: 09/17/07

**I. IDENTIFICATION**

**CHEMICAL NAME OF PRIMARY COMPONENT(S):** Isooctyl ester of 2,4-Dichlorophenoxyacetic acid

**FORMULA:** C<sub>16</sub>H<sub>22</sub>O<sub>3</sub>**MOLECULAR WEIGHT:** 333.325**SYNONYMS:** 2,4-D Ester**CAS # & NAME:** 25168-26-7 2,4-D Isooctyl**EPA Reg No.** 42750-22-9779**II. INGREDIENTS/SUMMARY OF HAZARDS**

(H)/INGREDIENT(S)	CAS NUMBER	OSHA HAZARD NON-HAZARD (NH)	PERCENT
Isooctyl ester of 2,4- D	25168-26-7	H	61.74%
Formulation aids		NH	38.26%

	NFPA <sup>1/</sup>	HMIS <sup>2/</sup>
HEALTH	2	2
FIRE	0	0
REACTIVITY	0	0

1/ National Fire Protection Association Rating

2/ Hazardous Materials Identification System

(4 = Extreme/Severe 3 = High/Serious 2 = Moderate 1 = Slight 0 = Minimum)

**SARA TITLE III HAZARD CLASSIFICATION**

IMMEDIATE (ACUTE) HEALTH	Yes
DELAYED (CHRONIC) HEALTH	Yes
FIRE	No
SUDDEN RELEASE OF PRESSURE	No
REACTIVE	No

**III. PHYSICAL DATA**

**SPECIFIC GRAVITY:** 1.10  
**BOILING POINT:** Not determined  
**FREEZING POINT:** Not determined  
**VAPOR PRESSURE:** Not determined  
**SOLUBILITY IN WATER:** Soluble emulsion  
**APPEARANCE:** White liquid  
**ODOR:** No odor

**IV. FIRE AND EXPLOSION HAZARD DATA**

**FLASH POINT:** Not applicable  
**FLAMMABLE LIMITS IN AIR:** Not determined  
**AUTOIGNITION TEMPERATURE:** Not determined  
**EXTINGUISHING MEDIA:** Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer or ordinary) for large fires. Water stream may spread flames.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Noxious fumes may be emitted under fire conditions  
**SPECIAL FIRE FIGHTING PROCEDURES:** Fire fighters should use self contained breathing apparatus and full turnout gear. Prevent runoff of fire water. Avoid exposure to smoke.

**V. REACTIVITY DATA**

**STABILITY:** Stable under normal conditions.  
**CONDITIONS TO AVOID:** Excessive heat and open flames.  
**MATERIALS TO AVOID:** Mineral acids and strong bases.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride and carbon oxide may be emitted on combustion.  
**HAZARDOUS POLYMERIZATION:** Will not occur.

**VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES****TOXICOLOGY DATA:**

**Acute Oral LD<sub>50</sub> (rat):** 614 mg/kg (extrapolated from technical)  
**Acute Dermal LD<sub>50</sub> (rabbit):** Not determined  
**Acute Inhalation:** Not determined  
**Eye Irritation (rabbit):** Irritant  
**Dermal Irritation (rabbit):** Slight irritant  
**Dermal Sensitization:** Not determined

**EXPOSURE LIMITS:**

CHEMICAL NAME(S)	ACGIH (TLV)	OSHA (TWA)
2,4 D	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

**CARCINOGENICITY, TERATOGENICITY, MUTAGENICITY:** The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, limited evidence for carcinogenicity in humans. The Science Advisory Panel of EPA has given a Class D classification (not classifiable as to human carcinogenicity) and has required additional animal studies on 2,4 D. Animal studies with the active ingredients in this product have shown that they are not mutagenic or teratogenic.

**SIGNS OF POISONING:** When administered in large doses to animals, the most characteristic sign of poisoning is myotonia.

**PRIMARY ROUTES OF ENTRY:** Ingestion, skin and/or eye contact

**EFFECTS OF SINGLE OVEREXPOSURE:**

**Swallowing:** May cause nausea, vomiting, abdominal pain, muscle weakness, myotonia and fall in blood pressure. Chlorophenoxy compounds are absorbed across the gut wall. They are not significantly fat storable.

**Skin Absorption:** May lead to nausea, abdominal pain, muscle weakness, myotonia and fall in blood pressure.

**Inhalation:** Chlorophenoxy compounds are absorbed through the lungs. Excessive exposure may cause irritation to the upper respiratory tract. Inhalation may cause intoxication, nausea and loss of balance.

**EFFECTS OF REPEATED OVEREXPOSURE:** Repeated overexposure to phenoxy herbicides may cause liver, kidney, gastrointestinal, and muscular effects. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods.

**OTHER EFFECTS OF OVEREXPOSURE:** See NOTE TO PHYSICIAN.

**EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** Skin contact may aggravate preexisting skin conditions. Inhalation of mists may aggravate preexisting respiratory conditions.

**EMERGENCY AND FIRST AID PROCEDURES:**

**Swallowing:** Call physician or poison control center. If patient is alert and not convulsing give 1 - 2 glasses of water and induce vomiting by tickling the back of the throat or administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

**Skin:** Wash affected area with plenty of soap and water. Remove contaminated clothing. Launder contaminated clothing separately. Get medical attention if irritation develops and persists.

**Inhalation:** Remove victim to fresh air. If not breathing, administer artificial respiration. GET MEDICAL ATTENTION.

**Eyes:** Hold eyelids open and flush with a steady stream of water for at least 15 minutes. GET MEDICAL ATTENTION if irritation develops and persists.

**NOTES TO PHYSICIAN:** No specific antidote is available. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. If large amounts (greater than 1 ml/kg body weight) of the product have been ingested, the stomach should be evacuated by gastric intubation with the aid of a cuffed endotracheal tube. After removal of stomach contents, wash stomach by instilling 30-50 g of activated charcoal in 3-4 ounces of water through the stomach tube and again remove stomach contents. Avoid oily laxatives.

This product contains a phenoxy herbicide. Myotoxic effects may include muscle fibrillation, myotonia, and muscular weakness. Ingestion of massive doses may result in persistent fall of blood pressure. Myoglobin and hemoglobin may be found in urine. Elevations in lactate dehydrogenase (LDH), SGOT, SGPT and aldolase indicate the extent of muscle damage. It has been suggested that overexposure in humans may affect both the central and peripheral nervous systems. The acute effects on the central nervous system resemble those produced by alcohol or sedative drugs. In isolated cases, peripheral neuropathy and reduced nerve conduction velocities have been reported although these observation may be related to other factors.

---

**VII. PRECAUTIONS FOR SAFE HANDLING AND USE**


---

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Dike the area using absorbent or materials such as sand or clay. Recover and contain as much product as possible using absorbent. Clean spill area using a solution of water and detergent. Collect and contain wash water and all contaminated absorbent for disposal. If spilled on the ground, the affected area should be excavated to a depth of 1 - 2 inches. Prevent the spilled product or washings from reaching public sewers or waterways. Wear appropriate protective equipment during the cleanup. Ensure that tools and equipment are adequately decontaminated.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with federal, state and local regulations.

**CONTAINER DISPOSAL:** Dispose of in an approved facility according to federal, state and local regulations.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Store in a cool, dry, secure area.

---

**VIII. SPECIAL PROTECTION INFORMATION**


---

**PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:**

- Manufacture or formulation of this product.
- Repair and maintenance of contaminated equipment.
- Clean up of leaks and spills.
- Any other activity that may result in hazardous exposures.
- Refer to product label for PPE required for labeled use.

**RESPIRATORY PROTECTION:** Use NIOSH/MSHA approved respirator for organic vapors. Use positive pressure contained breathing apparatus where emergency conditions or where exposure limits are exceeded.

**VENTILATION:** Local exhaust

**PROTECTIVE CLOTHING:** Chemical resistant gloves, coveralls, apron and foot coverings.

**EYE PROTECTION:** Safety goggles

**USER SAFETY RECOMMENDATIONS:** Safety showers and eye wash should be easily accessible.

---

**IX. REGULATORY STATUS**


---

**TSCA INVENTORY STATUS:****TRANSPORTATION STATUS:****DOT INFORMATION:**

Container Capacity	Proper Shipping Name	Hazard Class	Label	Packing Group
Greater than 17 gallons	RQ, Environmentally hazardous substances, liquid, N.O.S. (contains 2,4 D), UN 3082	9	9	III

**SARA TITLE III**

**Section 302-304 (40 CFR 350):**

**Extremely Hazardous Substance (EHS):** Not applicable

**Section 312, Reporting (40 CFR 370):**

**SARA/OSHA Hazardous Chemical Reporting Quantity:** 10,000 pounds.

**Section 313, Toxic Chemicals:** 2,4 D

**Reportable Quantity (RQ):** 2,4-D - 100 lbs

**RCRA HAZARDOUS WASTE:** 2,4 -D U240

**International Right-To-Know Regulations:**

---

**X. REFERENCES**

---

- 1) Supplier sponsored studies.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH,  
BUT, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE.