



2,4-D/ LV4

SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: 2,4-D / LV-4
 EPA Registration No.: 33270-20
 Product Type: Herbicide
 Active Ingredient: 1,4-dichlorophenoxyacetic acid, 2-Ethylhexyl Ester
 Manufacturer/Registrant: WINFIELD SOLUTIONS, LLC
 P.O. Box 64589
 St. Paul, MN 55164-0589
 Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (CST)
 For Medical Emergencies: Contact 1-877-424-7452 (24 hrs)
 For Chemical Emergency: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

THE FOLLOWING HAZARDS ARE IDENTIFIED ACCORDING TO OSHA HCS CLASSIFICATION (29 CFR 1910.1200).

Hazard Classifications:

Acute Inhalation Toxicity: Category 4
 Eye Damage/Irritation: Category 2B
 Skin Irritation: Category: 2
 Aspiration Hazard: Category 1
 Specific Target Organ Toxicity (Single Exposure): Category 3
 Specific Target Organ Toxicity (Repeated Exposure): Category 2
 Flammable Liquid: Category 4

Signal Word: DANGER

Pictograms:



Hazard Statements:

- Harmful if inhaled
- Cause eye irritation
- Causes skin irritation
- May be fatal if swallowed and enters airways
- May cause drowsiness or dizziness
- Combustible liquid
- Very toxic to aquatic life with long lasting effects

Precautionary Statements:

- Avoid breathing dust, mist, vapor or spray. Use in a well-ventilated area. If inhaled, remove victim to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
- Wash hands and face thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/ attention.
- Wash hands and face thoroughly after handling. Wear protective gloves. If on skin: wash with plenty of water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse.
- If swallowed, immediately call a poison center or a doctor. Do not induce vomiting. Store locked.
- Avoid breathing dust/fume/gas/mist/vapors or spray. Use only in a well-ventilated area. If inhaled, remove victim to fresh air and keep comfortable for breathing. If inhaled, call poison center or a doctor if you feel unwell. Store in a well-ventilated place. Keep container tightly closed.



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- Keep away from flames and hot surface. No smoking. Wear protective gloves and eye/face protection or. In case of fire, follow instructions under Section 5.

Contact 1-877-424-7452 (24 hrs) for emergency medical treatment.

Physical or Chemical Hazards: Combustible. Do not use or store near heat or open flame.

Storage and Disposal: See Section 7 and 13.

Other Hazards: See Section 11 and 12.

SECTION 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>CAS No.</u>	<u>Percentage (%) by Weight:</u>
2,4-Dichlorophenoxy acetic acid, 2-ethylhexyl ester	1928-43-4	65.9
Kerosene	8008-20-6	26 - 29
Polyglycol 26-3	69029-39-6	1 - 2

SECTION 4. FIRST AID MEASURES

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.

If Swallowed: Call a poison control center or doctor immediately for treatment advice.

Do not give any liquid to the person.

Do not induce vomiting unless told to do so by the poison control center or doctor.

If in Eyes: Do not give anything by mouth to an unconscious person.
Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.

Call a poison control center or doctor for treatment advice.

Note to Physician: Contains petroleum distillate, vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may also contact 1-877-424-7452 (24 hrs), for emergency medical treatment information.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 150°F (65°C)

Flammable Limits (LFL & UFL): Not established

Extinguishing Media: Use dry foam, dry chemical, carbon dioxide, water spray or fog.

Unusual Fire and Explosion Hazards: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

Hazardous Decomposition Products: Thermal decomposition may product oxides of carbon, nitrogen and hydrogen chloride.

Special Fire Fighting procedures: Evacuate the area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. 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 runoff.

Fire Fighting Equipment: Self-contained breathing apparatus with full face-piece. Equipment should be thoroughly decontaminated after use.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled: In case of leak or spill, contain material and dispose as waste. Do not contaminate any body of water. Pick up spilled liquid with absorbent material and sweep up for disposal. Place it and damaged



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unusable containers in appropriate containers for proper waste treatment. Check local, state and federal regulations for proper disposal. **NOTE:** Prevent spilled material from flowing onto adjacent land, or into municipal sewers and open bodies of water. Always wear proper protective equipment when working with the product.

SECTION 7. HANDLING AND STORAGE

HANDLING: Wash hands after handling, and 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.

STORAGE: Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and mixed thoroughly before using. Store in original container with lid tightly closed, away from children and animals. Keep away from water, foodstuffs, feed or seed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Hand Protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye Protection: Use chemical goggles. Eye wash fountain should be located in immediate work area.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Personal Protective Equipment (PPE): Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users should:

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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.

Engineering Controls: Refer to product label. Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Exposure Limits:

Chemical Name	CAS NO.	ACGIH/TLV	OSHA/PEL	NIOSH/REL
2,4-dichlorophenoxyacetic acid, 2-ethylhexyl ester *	1928-43-4	10 mg/m ³	10 mg/m ³ (TWA)	10 mg/m ³ (TWA) 100 mg/m ³ (IDLH)
Kerosene	8008-20-6	200 mg/m ³ (TWA)	NE	100 mg/m ³ (TWA)

*Exposure limits based on 2,4-D acid



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown liquid
Odor: Musty
Odor Threshold: Not available
pH: 3 - 5 (1% solution) **Flash**
Point: 150°F (65°C)
Flammability: Not available
Density: 8.6 lbs/gal
Water Solubility: Soluble
Viscosity: Not available
Flammability (Solid, Gas): Not available
Upper/Lower Flammability/Explosive Limits: Not available
Auto-ignition Temperature: Not available
Explosibility: Not available
Solubility: Not available
Partition Coefficient (n-Octanol/Water): Not available
Vapor Pressure: Not available **Vapor**
Density: Not available **Freezing point:**
 Not available **Boiling Point:** Not
 available **Evaporation Rate:** Not
 available
Decomposition Temperature: Not available

SECTION 10. STABILITY AND REACTIVITY STABILITY:

Stability: Stable under normal use and storage conditions. May decompose if heated.
Conditions and Materials to Avoid: Avoid elevated temperatures as the active ingredient will decompose..
Incompatibility: Avoid contact with oxidizers and acids.
Hazardous Polymerization: Will not occur.
Hazardous Decomposition Products: Thermal decomposition may product oxides of carbon, nitrogen and hydrogen chloride.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (End-Use Product)

Acute oral toxicity:	LD ₅₀ (rat)	3,129 mg/kg (female rat)
Acute Dermal toxicity:	LD ₅₀ (rabbit):	> 5,000 mg/kg (combined male & female rat)
Acute inhalation toxicity:	LC ₅₀ (rat):	2.6 mg/L (4-hr)

Eye irritation: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Skin irritation: Prolonged contact may cause slight skin irritation with local redness. Repeated contact may cause skin burns.

Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause more severe response on covered skin (under clothing, gloves).

Skin Sensitization: Not a skin contact sensitizer

Toxicological Information (Based on 2,4-Dichlorophenoxyacetic acid):

Chronic/Subchronic Toxicity: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.

Reproductive/Developmental Effects: In a 2-generation reproduction study in rats, effects observed in offspring exposed to 2,4- D included reductions in pup body weight gains and a reduction in pup body weights at birth and during lactation. These effects were



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observed in conjunction with maternal toxicity. In a developmental toxicity study in rats treated with 2,4-D, developmental effects were observed in conjunction with maternal toxicity. In a developmental toxicity study in rabbits, 2,4-D did not produce any developmental effects.

Mutagenicity: In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were inconclusive

Carcinogenicity: EPA's Cancer Peer Review Committee has classified 2,4-D as a Group D chemical : not classifiable as to human carcinogenicity, based on the results of carcinogenicity studies in rats and mice.

Carcinogenicity Assessment: (2,4-dichlorophenoxyacetic acid, 2-ethylhexyl ester)

ACGIH: None

NTP : None

IARC : 2B*

OSHA : None

*Chlorophenoxy herbicide - IARC Group 2B: The chemical is possibly carcinogenic to humans.

Toxicological Information for Other Ingredients:

Aspiration Hazard: Kerosene – Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Specific Target Organ Toxicity (Single Exposure): Kerosene – High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Specific Target Organ Toxicity (Repeated Exposure): Kerosene – Kidney: caused kidney effects in male rats which are not considered relevant to humans.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Hazards: This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Draft and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Ecotoxicity Information:

Data based on 2,4-D acid:

Rainbow Trout LC₅₀ (96-h): 358 mg/L

Bluegill sunfish LC₅₀ (96-h): 263 mg/L

Fathead minnow (96-h) LC₅₀: 320 mg/L

Daphnia magna LC₅₀ (96-h): 25 mg/L

Green algae EC₅₀: 26.4 mg/L

Mallard duck LD₅₀: > 5,620 mg/kg

Data based on 2,4-D 2-Ethylhexyl Ester:

Rainbow Trout LC₅₀ (96-h): 4.82 mg/L

Bluegill sunfish LC₅₀ (96-h): 22 mg/L

Fathead minnow LC₅₀ (96-h): 18 mg/L

Daphnia magna EC₅₀ (48-h): 52 mg/L

Green algae EC₅₀: > 30 mg/L (NOAEC: 3.75 mg/L)

Mallard duck LD₅₀: > 3000 mg/kg

Honey bee LD₅₀ (contact): > 100 µg ai/bee

Environmental Fate: 2, 4-D has low soil persistence. The half-life in soil is less than 7 days. Soil microbes are primarily responsible for its disappearance.

Bioaccumulative Potential: Bioconcentration potential is low (BCF less than <100 or log Pow less than 3). Potential for mobility in soil is high (Koc between 50 and 150).



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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: Refer to product label for container disposal. Dispose of product containers, waste containers, and residues according to local, state and federal health and environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT:

Packaging size < 18 gallons : Not regulated

Packaging size ≥ 18 : RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s, (2,4-D Ester), 9, III

IMDG/IMO

UN3082, Environmentally Hazardous Substance, Liquid, n.o.s, (2,4-D Ester), 9, III, Marine Pollutant

ICAO/IATA

UN3082, Environmentally Hazardous Substance, Liquid, n.o.s, (2,4-D Ester), 9, III

SECTION 15. REGULATORY INFORMATION

FIFRA INFORMATION:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves (category E may be used). Wear protective eyewear (goggles, face shield, safety glasses). Wash thoroughly with soap and water after handling and before eating. Drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SARA 311/212 Hazard Categories:

Section 311/312 Acute Health Hazard

Chronic Health Hazard

Section 313 Chemical(s) 2,4-D, 2-ethylhexyl ester (CAS 1928-43-4) (65.9%); expressed as Acetic acid (2,4-Dichlorophenoxy) (CAS No. 94-74-7)(44.1%)

CERCLA/SARA 302 Reportable Quantity (RQ): Acetic acid (2,4-Dichlorophenoxy) (CAS No. 94-75-7) 100 lbs.

RCRA Hazardous Waste Classification (40 CFR 261): Under RCA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA List: The ingredients of this product are listed on the TSCA inventory or are exempt.

CA Proposition 65:

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

STATE RIGHT-TO-KNOW:

Kerosene (CAS No. 8008-20-6): MA, PA, NJ

SECTION 16. OTHER INFORMATION

SDS DATE: July 12, 2017

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions