



## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Weedone® LV6 EC Broadleaf Herbicide  
**EPA Reg. No.:** 71368-11  
**Product Type:** Herbicide  
**Company Name:** Nufarm Inc.  
 11901 S. Austin Avenue  
 Alsip, IL 60803  
 1-800-345-3330

**Telephone Numbers:** For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,  
 Call CHEMTREC Day or Night: 1-800-424-9300  
 For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

## 2. HAZARDS IDENTIFICATION

### HEALTH HAZARDS:

|  |            |
|--|------------|
| Acute toxicity, oral                               | Category 4 |
| Aspiration Hazard                                  | Category 1 |
| Specific target organ toxicity – Single Exposure   | Category 3 |
| Specific target organ toxicity – Repeated exposure | Category 2 |

### ENVIRONMENTAL HAZARDS:

|   |            |
|---|------------|
| Hazardous to aquatic environment, acute/chronic | Category 2 |
|---|------------|

### SIGNAL WORD:

DANGER

### HAZARD STATEMENTS:

Harmful if swallowed. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause damage to organs (liver, kidneys) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.



### PRECAUTIONARY STATEMENTS

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. 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.** Do not give anything by mouth to an unconscious person. Rinse mouth.

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.** Do not give anything by mouth to an unconscious person.

Avoid breathing mist, vapors or spray. Use only outdoors or in a well-ventilated area. 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 if you feel unwell.

Do not breathe mist, vapors or spray. Get medical advice/attention if you feel unwell.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENT  | CAS NO.    | % BY WEIGHT |
|--|------------|-------------|
| Acetic acid, (2,4-Dichlorophenoxy)-,isooctyl (2-ethylhexyl) ester  | 1928-43-4  | 87.3        |
| Other Ingredients including<br>Petroleum distillates   | 64742-47-8 | 12.7        |
| <b>Synonyms:</b> 2,4-D 2EHE; 2,4-D IOE; 2,4-Dichlorophenoxyacetic acid, Isooctyl (2-ethylhexyl ester);<br>2,4-D Ethylhexyl Ester |            |             |

### 4. FIRST AID MEASURES

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15 to 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:** 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 to 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:** No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

This product contains petroleum distillates. If large amounts, greater than 1 mg/kg body weight have been ingested, the stomach should be evacuated by gastric intubation with the aid of a cuffed endotracheal tube to prevent aspiration of petroleum distillates. After removal of stomach contents, wash stomach by instilling 30 to 50 grams of activated charcoal in 3 to 4 ounces of water through the stomach tube and again remove stomach contents. Avoid oily laxatives.

### 5. FIRE FIGHTING MEASURES

**Extinguishing Media:** Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

**Methods for Cleanup and Disposal:** Avoid creation of dusty conditions. If dry, sweep or scoop up material and place into container for disposal. If wet, pump any free liquid into an appropriate closed container. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

## 7. HANDLING AND STORAGE

**HANDLING:**

Avoid breathing vapor or spray mists. Do not get in eyes, on skin or on clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:**

Store in original container in a dry, secured storage area. Keep container tightly closed when not in use. Do not contaminate water, food, or feed by storage or disposal.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

**Personal Protective Equipment:**

**Eye/Face Protection:** To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin wear long-sleeved shirt and long pants, shoes plus socks, chemical resistant gloves. When mixing, loading, or cleaning equipment, a chemical resistant apron must be worn in addition to the other required PPE. An emergency shower or water supply should be readily accessible to the work area.

**Respiratory Protection:** Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

| Component                | OSHA |      | ACGIH |      | Unit              |
|--------------------------|------|------|-------|------|-------------------|
|                          | TWA  | STEL | TWA   | STEL |                   |
| 2,4-D 2-ethylhexyl ester | 10*  | NE   | 10*   | NE   | mg/m <sup>3</sup> |

\*Based on adopted limit for 2,4-D

NE = Not Established

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|  |   |
|--|---|
| <b>Appearance:</b>                                   | Amber colored liquid                          |
| <b>Odor:</b>   | Characteristic phenolic odor                  |
| <b>Odor threshold:</b>                               | No data available                             |
| <b>pH:</b>   | 2.5 – 3.5                                     |
| <b>Melting point/freezing point:</b>                 | No data available                             |
| <b>Initial boiling point and boiling range</b>       | No data available                             |
| <b>Flash point:</b>                                  | 218°F (103°C) Tag Closed Cup                  |
| <b>Evaporation rate:</b>                             | No data available                             |
| <b>Flammability (solid, gas):</b>                    | No data available                             |
| <b>Upper/lower flammability or explosive limits:</b> | No data available                             |
| <b>Vapor pressure:</b>                               | No data available                             |
| <b>Vapor density:</b>                                | No data available                             |
| <b>Relative density:</b>                             | 1.124 g/cm <sup>3</sup> (9.4 lbs/gal) @ 22° C |
| <b>Solubility(ies):</b>                              | Emulsifiable                                  |
| <b>Partition coefficient: n-octanol/water:</b>       | No data available                             |
| <b>Autoignition temperature:</b>                     | No data available                             |
| <b>Decomposition temperature:</b>                    | No data available                             |
| <b>Viscosity:</b>                                    | 48.8 cPs @ 22° C                              |

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

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| <b>10. STABILITY AND REACTIVITY</b> |
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**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Excessive heat. Do not store near heat or flame.

**Incompatible Materials:** Strong oxidizing agents: bases and acids.

**Hazardous Decomposition Products:** Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

**Hazardous Reactions:** Hazardous polymerization will not occur.

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| <b>11. TOXICOLOGICAL INFORMATION</b> |
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**Potential Health Effects:**

**Likely Routes of Exposure:** Inhalation, ingestion, eye and skin contact.

**Eye Contact:** May cause eye irritation, generally of minimal degree. Causes redness and tearing.

**Skin Contact:** Causes skin irritation. Overexposure by skin absorption may cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Ingestion:** Harmful or fatal if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.

**Inhalation:** Contains materials that may be moderately toxic. Vapors could cause headache, dizziness, respiratory irritation and symptoms similar to those from ingestion.

**Medical Conditions Aggravated by Exposure:** Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

**Toxicological Data:**

Data from laboratory studies conducted on a similar, but not identical, formulation:

**Oral:** Rat LD<sub>50</sub>: 1,380 mg/kg

**Dermal:** Rabbit LD<sub>50</sub>: >2,020 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >5.12 mg/l

**Eye Irritation:** Rabbit: Minimally irritating

**Skin Irritation:** Rabbit: Slightly irritating

**Skin Sensitization:** Guinea Pig: Not classified as a sensitizer.

**Subchronic (Target Organ) Effects:** Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. 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.

**Carcinogenicity / Chronic Health Effects:** Prolonged overexposure to phenoxy herbicides can cause liver, kidney and muscle damage. The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. The U.S. EPA has given 2,4-D a Class D classification (not classifiable as to human carcinogenicity). The emulsifier component may contain naphthalene, which is listed by IARC as a class 2B and the U.S. National Toxicology Program as reasonably anticipated to be a human carcinogen.

**Reproductive Toxicity:** No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies.

**Developmental Toxicity:** Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals

**Genotoxicity:** There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic.

**Assessment Carcinogenicity:**

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

| Component                | Regulatory Agency Listing As Carcinogen |      |     |      |
|--------------------------|---|------|-----|------|
|                          | ACGIH                                   | IARC | NTP | OSHA |
| Chlorophenoxy Herbicides | No                                      | 2B*  | No  | No   |

\*Reasonably anticipated to be a human carcinogen

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| <b>12. ECOLOGICAL INFORMATION</b> |
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**Environmental Hazards:**

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**Ecotoxicity:**

Data on 2,4-D 2EHE:

|   |          |  |              |
|---|----------|--|--------------|
| <b>Bluegill</b> 96-hour LC <sub>50</sub> :      | >5 mg/l  | <b>Bobwhite Quail</b> Oral LD <sub>50</sub> :        | >5,620 mg/kg |
| <b>Rainbow Trout</b> 96-hour LC <sub>50</sub> : | 7.2 mg/l | <b>Mallard Duck</b> 8-day Dietary LC <sub>50</sub> : | >5,620 ppm   |
| <b>Daphnia</b> 48-hour EC <sub>50</sub> :       | >5 mg/l  |  |              |

**Environmental Fate:**

In laboratory and field studies, 2,4-D 2-ethylhexyl ester rapidly de-esterified to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks.

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| <b>13. DISPOSAL CONSIDERATIONS</b> |
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**Waste Disposal Method:**

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 Handling and Disposal:**

**Nonrefillable Containers 5 Gallons or Less:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**Nonrefillable containers larger than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable containers larger than 5 gallons:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**14. TRANSPORTATION INFORMATION**

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

**DOT:****< 12 gallons per complete package**

Non Regulated – See 49 CFR 173.132(b)(3) & 172.101 Appendix A

**≥ 12 but < 119 gallons per complete package**

UN 3082, Environmentally hazardous substance, liquid, n.o.s.  
(2,4-D Ester), 9, III, RQ

**≥ 119 gallons per complete package**

UN 3082, Environmentally hazardous substance, liquid, n.o.s.  
(2,4-D Ester), 9, III, RQ, Marine Pollutant

**IMDG**

UN 3082, Environmentally hazardous substance, liquid, n.o.s.  
(2,4-D Ester), 9, III, Marine Pollutant

**IATA**

UN 3082, Environmentally hazardous substance, liquid, n.o.s.  
(2,4-D Ester), 9, III, Marine Pollutant

**15. REGULATORY INFORMATION****EPA FIFRA INFORMATION**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION. Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapors or spray mist. Do not get in eyes, on skin or on clothing.

**U.S. FEDERAL REGULATIONS**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:****Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):**

Immediate and Delayed

**Section 313 Toxic Chemical(s):**

2,4-D 2-ethylhexyl ester (CAS No. 1928-43-4)- 87.3% by weight in product

Expressed as Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7)-57.9% by weight in product

**Reportable Quantity (RQ) under U.S. CERCLA:**

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 pounds

**RCRA Waste Code:**

Under RCRA, 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.

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** WARNING. This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

**16. OTHER INFORMATION****National Fire Protection Association (NFPA) Hazard Rating:****Rating for this product: Health: 2 Flammability: 1 Reactivity: 0**

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

**Date of Issue:** October 1, 2014**Supersedes:** October 15, 2013

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