

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:**
TRADE NAME: SALVO® POSTEMERGENCE BROADLEAF HERBICIDE
- 1.2 **RECOMMENDED USE:** CONTROL OF BROADLEAF WEEDS IN CERTAIN CROPS AND NONCROP AREAS
- 1.3 **SUPPLIER DETAILS:**
 LOVELAND PRODUCTS, INC.
 P.O. Box 1286 • Greeley, CO 80632-1286
- 1.4 **24 Hour Emergency Phone:** 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 – **Product Information:** 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Acute Toxicity – Oral	Category 4	H302
Eye Damage/Irritation	Category 2B	H320
Sensitization – Skin	Category 1	H317
Specific Target Organ Toxicity (Single Exposure)	Category 1	H370
Specific Target Organ Toxicity (Repeated Exposure)	Category 1	H372

2.2 Label elements



Signal word: DANGER

Hazard Statement: H302 – Harmful if swallowed.
 H313 – May be harmful in contact with skin.
 H320 – Causes eye irritation.
 H317 – May cause an allergic skin reaction.
 H370 – Causes damage to organs.
 H372 – Causes damage to organs through prolonged or repeated exposure.
 H401 – Toxic to aquatic life.

Precautionary Statement: (Prevention): P264 – Wash face, hands and any exposed skin thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
 P271 – Use only outdoors or in a well-ventilated area.
 P201 – Obtain special instructions before use.
 P202 – Do not handle until all safety precautions have been read and understood.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.
 P260 – Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statement: (Response): P301+P312: IF SWALLOWED: CALL A POISON CENTER or doctor/physician if you feel unwell.
 P330 – Rinse mouth.
 P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
 P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
 P308+P313 – If exposed or concerned: Get medical advice/attention.
 P307+P311 – If exposed: Call a POISON CENTER or doctor/physician.
 P321 – Specific treatment (see NOTE TO PHYSICIAN on the product label).
 P314 – Get medical advice/attention if you feel unwell.

Precautionary Statement: (Storage): P405 – Store locked up.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container to an approved waste disposal to an approved waste disposal facility.



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2.3 Other hazards
None known.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Classification	Concentration [%]
2-ethylhexyl ester of 2,4-D	1928-43-4	Oral tox. 4; H302 Eye dam/irrit. 2B; H320	81.8
Other ingredients*, contains	n/a	Sens. skin; 1; H317 Aquatic tox. 2; H401	18.2
Benzenesulfonic acid, dodecyl-, branched	27176-87-0		<4
Distillates (Petroleum) Hydrotreated Light	64742-47-8		<10
Ethoxylated castor oil	61791-12-6		<1
Proprietary surfactant blend	Proprietary		<6

*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

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.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Central nervous system effects.

4.3 Immediate Medical Attention and Special Treatment

Treatment: This product contains petroleum distillates.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565
Take container, label or product name with you when seeking medical attention.

NOTES TO PHYSICIAN: This product is contains petroleum distillates. Vomiting may cause aspiration pneumonia.



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5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Foam, carbon dioxide (CO₂), dry chemical, soft stream or water fog only if necessary.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: None known.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark except as noted on appropriate labels. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters 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.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.
Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: 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.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Open dumping is prohibited. Avoid contamination of fertilizers, seeds, plants, insecticides, and fungicides in storage. Store in original container and out of reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If product is stored below freezing, it is suggested that it be allowed to warm to at least 40°F and be agitated before use. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. Do not contaminate water, food or feed by storage or disposal.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
2,4-D (CAS: 94-75-7)	TLV	10 mg/m ³ (Skin) Measured as inhalable fraction of the aerosol

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No listings	TWA	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

Pilots must use an enclosed cockpit that meets the requirements listed in WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long-sleeved shirt and long pants. Shoes plus socks. Chemical-resistant gloves, except for pilots. Chemical-resistant apron for mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

Respiratory Protection: Not normally required. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 APPEARANCE : Liquid
 ODOR: Mild.
 ODOR THRESHOLD: No data available.
 COLOR: Light amber.
 pH: 3.29
 MELTING POINT / FREEZING POINT: No data available
 BOILING POINT: No data available
 FLASH POINT: 178°F / 81°C (TCC).
 FLAMMABILITY (solid, gas): No data available.
 UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
 VAPOR PRESSURE: No data available.
 SOLUBILITY: Emulsifies.
 PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.
 AUTO-IGNITION TEMPERATURE: No data available.
 DECOMPOSITION TEMPERATURE: No data available.
 VISCOSITY: 26.5 cP @ 25°C.
 SPECIFIC GRAVITY (Water = 1): 1.104 g/ml
 DENSITY: 9.21 lbs./gal / 1.1 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

Excessive heat.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizers.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known; however, some chlorine-containing compounds or other hazardous products may be formed in a fire situation. Incomplete combustion may lead to formation of oxides of carbon and/or other asphyxiants.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Eye contact. Skin absorption. Skin contact.

LC₅₀ (rat): 5.43 mg/L (4 HR)

LD₅₀ Oral (rat): 1250 mg/kg

LD₅₀ Dermal (rabbit): > 2,000 mg/kg

Acute Toxicity Estimates: No data available

Skin Irritation (rabbit): May cause mild irritation.

Eye Irritation (rabbit): Moderate eye irritation.

Specific Target Organ Toxicity: Skin, Central Nervous System, Liver, Kidneys.

Aspiration: Vomiting may cause aspiration pneumonia.

Skin Sensitization (guinea pig): Sensitizer

Carcinogenicity: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen)

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product is toxic to fish and aquatic invertebrates. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Information below is based on the technical ingredient 2,4-D acid.

Ecotoxicological Data

	Species	Test Results
2,4-D Acid	Rainbow trout	245 mg/L – 96-hour LC ₅₀
	Bluegill	524 mg/L – 96-hour LC ₅₀
	Fathead minnow	344 mg/L – 96-hour LC ₅₀
	Pink shrimp	181 mg/L – 96-hour LC ₅₀
	Daphnia magna	184 mg/L – 96-hour LC ₅₀
	Tidewater silverside	469 mg/L – 96-hour LC ₅₀
	Eastern oyster	136 mg/L – 48-hour EC ₅₀

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Biochemical oxygen demand is 0.72 for 5, 10 and 20 days. Chemical oxygen demand is 0.72. Under aerobic soil conditions the half-life is 4 – 23 days. Under aerobic aquatic conditions, the half-life is 0.5 – 11 days.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or log Pow < 3).

12.4 MOBILITY IN SOIL

High (50 < Koc < 150). Soil organic carbon/water partition coefficient (Koc) is 72-136.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.



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13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: Less than 19 gallons: NOT REGULATED BY DOT

DOT Shipping Description: Greater than 20 gallons: RQ UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III (2,4-D), ERG GUIDE 171

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS: 60)

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS			
2	Health	0	Least	2	Health
2	Flammability	1	Slight	2	Flammability
0	Instability	2	Moderate	0	Reactivity
		3	High	D	PPE
		4	Severe		

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>Y</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: 2,4-D Acid (CAS: 94-75-7) 100 pounds.

SARA, Title III, Section 313: 2,4-D 2-ethylhexyl ester (CAS: 1928-43-4): 81.8%

RCRA Waste Code: U240; D016.

CA Proposition 65: Not listed.

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. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed or absorbed through skin.

Causes moderate eye irritation.

Avoid contact with skin, eyes, or clothing.

Avoid breathing spray mist.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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