

Devrinol® 2-EC

Selective Herbicide – Emulsifiable Liquid

*A preemergence herbicide for
weed control for use
on Tomatoes, Peppers,
Strawberries and Tobacco*

ACTIVE INGREDIENT

Napropamide (CAS No. 15299-99-7)..... 24.1%

OTHER INGREDIENTS 75.9%

TOTAL 100.0%

Contains 2 pounds active ingredient per gallon

Contains petroleum distillates.

EPA Reg. No. 70506-64

EPA Est. No. 5905-IA-01

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID

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.
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 swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: contains petroleum distillates. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance call the Rocky Mountain Poison Control Center at 1-866-673-6671.

**For chemical emergency: spill, leak, fire, exposure, or accident,
call CHEMTREC 1-800-424-9300.**

Manufactured for:

 **United Phosphorus, Inc.**

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1-800-438-6071 • www.upi-usa.com

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Harmful if swallowed or absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, made of any waterproof material.
- Shoes plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- 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 clothing/PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

GENERAL USE PRECAUTIONS

- Read all label directions before using.
- Use only for specified purposes at specified rates. Do not overdose.
- Do not apply more than once per season.
- DEVRINOL 2-EC is recommended for use on mineral soils only. Not recommended for use on soils with over 10% organic matter. Spraying on ground heavily covered with leaves or trash may adversely affect weed control.
- Do not apply this product through any type of irrigation system.
- Do not contaminate irrigation water or water used for domestic purposes.
- Do not store near seeds or fertilizer.
- Do not use this product in a greenhouse.
- Do not allow people or pets to enter the treated area until all sprays have dried.
- Do not apply by air.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

For orchard/vineyard airblast applications, do not direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3-10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

Net Contents: 2.5 gallons

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, DEVRINOL 2-EC is a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to DEVRINOL 2-EC and other Group 15 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of DEVRINOL 2-EC or other Group 15 herbicides with different herbicide groups that control the same weeds species in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM (Integrated Pest Management) program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact a company representative at 1-800-438-6071

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks.
- Protective eyewear.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, OR ILLEGAL RESIDUES.

GENERAL INFORMATION

Devrinol 2-EC is a selective, surface-applied herbicide for use in strawberries. It is also recommended for weed control in tomatoes, peppers, and tobacco, applied and incorporated prior to planting.

Devrinol 2-EC controls weeds before they emerge. It does not control established weeds. All weed growth and crop stubble in fields intended for tomatoes and peppers or tobacco must be thoroughly worked into the soil prior to planting.

Spray equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern. Apply the recommended rate of Devrinol 2-EC in 20 to 100 gallons of water per acre.

CROP USE DIRECTIONS

Strawberries (Post Transplant and Established)

Weeds Controlled

Devrinol 2-EC does not control established weeds.

Common Name	Scientific Name
Annual Grasses:	
Annual Bluegrass	<i>Poa annua</i>
Barnyardgrass – Watergrass	<i>Echinochloa</i> spp.
Bristly Foxtail	<i>Setaria verticilla</i>
Large (Hairy) Crabgrass	<i>Digitaria sanguinalis</i>
Ripgut Brome	<i>Bromus rigidus</i>
Southwestern Cupgrass	<i>Eriochloa gracilis</i>
Wild Barley	<i>Hordeum leporinum</i>
Wild Oats	<i>Avena fatua</i>
Annual Broadleaf Weeds:	
Chickweed	<i>Stellaria media</i>
Common Fiddleneck	<i>Amsinckia intermedia</i>
Common Knotweed	<i>Polygonum aviculare</i>
Common Purslane	<i>Portulaca oleracea</i>
Common Sowthistle	<i>Sonchus oleraceus</i>
Filaree	<i>Erodium</i> spp.
Groundsel	<i>Senecio</i> spp.
Little Mallow*	<i>Malva parviflora</i>
Lambsquarters	<i>Chenopodium album</i>
Pineappleweed	<i>Matricaria matricarioides</i>
Prickly Lettuce	<i>Lactuca scariola</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>

*From seed.

NOTE: All rates given below are broadcast rates. Reduce rates proportionately for band or strip treatment.

For control of all weeds listed above, apply a maximum of 2 gallons (8 quarts) Devrinol 2-EC per broadcast acre (equivalent to 4 lbs. A.I./A) per crop cycle to the soil surface. Apply in the fall through early spring, prior to weed emergence. Do not apply Devrinol 2-EC to frozen ground. Do not apply Devrinol 2-EC from bloom through harvest. Make only one application per year. Do not apply more than 2 gallons of product per acre per crop cycle. For best results, the treatment must reach the zone of weed seed germination. Treatments made other than in November through February must be irrigated-in within 24 hours (sprinkler or flood) with sufficient water to wet the soil to a depth of at least 2 to 4 inches. Irrigation or shallow incorporation is recommended for treatments made from November through February if no rainfall occurs within one week of application.

Options for Strawberries Grown on Plastic Mulch on Plant Beds:

1. For **plant bed treatment** for new plantings, preplant incorporate 2 gallons (8 quarts) Devrinol 2-EC to a weed free soil before the laying of plastic mulch. Soil should be well worked yet moist enough to permit a thorough incorporation to a depth of 2 inches. Incorporate within 24 hours of application before laying of plastic mulch using equipment, which will result in uniform incorporation of the herbicide to desired depth. If weed pressure is from small seeded annuals apply 2 gallons (8 quarts) of Devrinol 2-EC on the surface of the bed immediately in front of the laying of the plastic mulch. If soil is dry, water or sprinkler irrigate with sufficient water to wet to a depth of 2 to 4 inches before covering with plastic mulch. Apply the plastic mulch over the treated soil the same day.
2. For **application between rows** of plastic mulch (middles or aisles), using a shielded sprayer or properly spaced drop nozzles, apply up to 2 gallons (8 quarts) per acre of Devrinol 2-EC on a broadcast basis to a weed-free soil surface between the rows of plastic. Mechanically incorporate or irrigate Devrinol 2-EC into the soil to a depth of 1 to 2 inches within 24 hours of application. In the event or emerged weed growth being present, tank mix up to 2 gallons (8 quarts) of Devrinol 2-EC with the correct amount of Gramoxone Extra to get burndown and residual control. Do not apply Devrinol 2-EC between bloom and harvest.

Tomatoes, Peppers, and Tobacco

Weeds Controlled

Devrinol 2-EC does not control established weeds.

Common Name	Scientific Name
Annual Grasses:	
Barnyardgrass	<i>Echinochloa</i> spp.
Crabgrass	<i>Digitaria</i> spp.
Fall Panicum	<i>Panicum dichotomiflorum</i>
Goosegrass	<i>Eleusine indica</i>
Seedling Johnsongrass	<i>Sorghum halepense</i>
Annual Broadleaf Weeds:	
Carpetweed	<i>Mollugo verticillata</i>
Common Purslane	<i>Portulaca oleracea</i>
Lambsquarters	<i>Chenopodium album</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>

Use Directions

On flat-planted or bedded crops apply, before planting, to well worked soil that is dry enough to permit thorough incorporation to a depth of 1 to 2 inches. Incorporate within 24 hours of application, using equipment which will result in uniform incorporation of the herbicide to the desired depth.

After harvest or prior to planting of succeeding crops, a deep moldboard or disc plowing operation must be carried out.

To avoid injury, do not seed to alfalfa, small grains, sorghum, corn, lettuce or sugar beets for 12 months after Devrinol 2-EC application.

Tomatoes and Peppers (Direct Seeded and Transplanted)

Devrinol 2-EC can be applied and mixed (incorporated) into the soil before planting for weed control on seeded or transplanted tomatoes or peppers, or it can be applied as a surface application before laying plastic mulch. Devrinol 2-EC controls weeds by interfering with normal seed germination and seedling development. It does not control established weeds. All weed growth and crop stubble should be thoroughly worked into the soil before treatment. Refer to the list of weeds controlled.

The soil should be well-worked and dry enough to permit good soil mixing (incorporation). Pour the recommended amounts of Devrinol 2-EC into a spray tank during the filling operations.

IMPORTANT: In each case where a range of rates is given, the lower rates should be used on light (coarse) textured soils and soils low in organic matter. The higher rates should be used on heavy (fine) textured soils or on soils which experienced heavy weed infestation the prior year.

RESTRICTION: Make only one application per season.

All rates given below are broadcast rates. Reduce rates proportionately for band or strip treatment.

Apply 1/2 to 1 gallon (2 to 4 quarts) Devrinol 2-EC per broadcast acre. Do not apply more than 1 gallon Devrinol 2-EC per acre per crop cycle.

Options for Tomatoes and Peppers (Direct Seeded and Transplanted) Grown in Beds with Plastic Mulch:

1. For incorporated treatments with plastic mulch, apply 1/2 to 1 gallon (2 to 4 quarts) Devrinol 2-EC per acre before bedding and incorporate. Use the higher rate for heavier soils and for soils which experienced heavy weed infestation the prior year. Apply to well worked soil that is dry enough to permit thorough incorporation to a depth of 2 to 4 inches, then form beds. Incorporate within 24 hours of application using equipment which will result in uniform incorporation of the herbicide to the desired depth.
2. For surface treatments where plastic is used, apply 1/2 to 1 gallon (2 to 4 quarts) Devrinol 2-EC as a surface application to the bed tops after bedding but before plastic application. Use the higher rate for heavier soils and for soils which experienced heavy weed infestation the prior year.
3. For use between beds where plastic mulch is used, apply 1 gallon (4 quarts) Devrinol 2-EC per broadcast acre as a surface application between beds. Rainfall and/or overhead irrigation sufficient to wet soil to 1 inch depth should follow treatment within 24 hours.
4. Do not apply more than 1 gallon of product per acre per crop cycle.

Tobacco (Transplanted)

Before transplanting, apply 1/2 to 1 gallon (2 to 4 quarts) Devrinol 2-EC per broadcast acre. Use the lower rate on light soils (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay) and for soils which experienced heavy weed infestation the prior year. Do not apply more than 1 gallon Devrinol 2-EC per acre per season. Do not make more than 1 application per season.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse container.

PESTICIDE STORAGE: Store in a cool dry place. Do not store below 30°F. Keep container closed when not in use.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). 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.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

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Rev. 5/08

EPA approved 4/29/08