

PM23

264-535

14/15



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
264-535

Date of Issuance:  
NOV 7 1994

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration

Term of Issuance:  
Conditional

Name of Pesticide Product:  
2,4-D 2-EHE Gel  
Broadleaf Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Rhone-Poulenc AG Company  
P.O. Box 12014  
2 T.W. Alexander Drive  
Research Triangle Park, NC 27709

Notes: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Submit an acceptable acute inhalation toxicity study performed with this product within nine (9) months of the date of this Notice.

3. Submit an acceptable dermal sensitization study performed with this product within nine (9) months of the date of this Notice. We acknowledge that you currently have additional information pending with the Agency that regards the original dermal sensitization study submitted in connection with this product. If this information is determined to be acceptable to upgrade the original study, the requirement for a new study will be waived.

4. Make the following label changes before you release the product for shipment:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 264-535".

Signature of Approving Official:

Date:

NOV 7 1994

2/15

- b. Add the appropriate Net Contents statement.
- c. Rewrite the "IF SWALLOWED" and "NOTE TO PHYSICIAN" statements to read as follows:  
  
"IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution, or, if these are not available, drink large quantities of water. Avoid alcohol."  
  
"NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate use of gastric lavage."  
  
d. Rewrite the second sentence of the "IF INHALED" statement to read "If not breathing, give artificial respiration, preferably mouth-to-mouth."  
  
e. Revise the term "substantial eye injury" in the first sentence of the Precautionary Statements to read "irreversible eye injury".  
  
f. Revise the requirements for short-sleeved shirt and short pants for the personal protective equipment (for applicators and other handlers as well as for early reentry) to long-sleeved shirt and long pants.  
  
g. Revise the first two sentences of the Environmental Hazards section to read "This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants."  
  
h. Make the following changes to the section for the recommended use on preplant soybeans:
  - i. Revise the maximum application rate to 1 1/3 pints per acre. This restriction occurs both in the body of the rate chart and within the section for restrictions for use in soybeans at the end of the rate chart.
  - ii. Add a statement to specify that aerial applications must use at least 2 or more gallons of total spray volume and ground applications must use at least 10 or more gallons of total spray volume.

Please note that the conditional acceptance of this preplant use on soybeans is contingent upon the submission of acceptable residue data by the Industry Task Force II within the deadlines as specified by the Agency. The registration for this use will expire automatically on December 31, 1995.
- i. Within the section for Forest Management, revise the application directions for Budbreak Spray to incorporate "9 to 15 gallons of water plus 2 quarts of fuel oil".

3 of 15

page 3  
EPA Reg. No. 264-535

5. Submit one copy of the revised final printed label for the record before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Joanne I. Miller  
Product Manager (23)  
Fungicide-Herbicide Branch  
Registration Division (7505C)

} Enclosure

DK: 305-7546 : FHB/PM23

CONCURRENCES

SYMBOL	7505C						
SURNAME	D. KENNY						
DATE	11/4/94						

# 2,4-D 2-EHE GEL

## EMULSIFIABLE BROADLEAF HERBICIDE

### GEL-TEC™ Water Soluble Paks

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

4315

NOV 07 1994  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
264-535

Weed And Brush Control In Small Grains, Corn, Soybeans, Rangeland, Pastures,  
Roadsides Fencerows, Turf and other Non-Crop Areas.

#### ACTIVE INGREDIENT:

2,4-dichlorophenoxyacetic acid, 2-ethyl-hexyl ester\* ..... 86.4%

INERT INGREDIENTS: ..... 13.6%

\*Isomer specific by AOAC method No. 6.D01-5

2,4-Dichlorophenoxyacetic acid equivalent 57.3% or 5.4 lbs/gal.

E.P.A. Reg. No. 264-535

E.P.A. Est. No. 264-MO-01

## KEEP OUT OF REACH OF CHILDREN

## DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

For **PRODUCT USE** Information Call 1-800-334-9745

For **MEDICAL** Information **ONLY** Call 24 Hours A Day 1-800-334-7577

### STATEMENT OF PRACTICAL TREATMENT

**IF IN EYES:** Hold eyelids open and flush with a steady gentle stream of water for at least 15 minutes. Get medical attention, preferable an ophthalmologist.

**IF SWALLOWED:** If patient is conscious and alert, give 2 to 3 glasses of water to drink. Do not induce vomiting. Get medical attention. Do not give anything by mouth to an unconscious person.

**IF ON SKIN:** Immediately wash skin with plenty of soap and water. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration. Administer oxygen if necessary. Get medical attention.

#### NOTE TO PHYSICIAN

This product contains a phenoxy herbicidal chemical. There is no specific antidote. 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.

### PRECAUTIONARY STATEMENTS

#### DANGER

#### HAZARD TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes burns and substantial eye injury. Harmful if swallowed, absorbed through skin or inhaled. Do not get in eyes, on skin or clothing. Avoid breathing vapors or spray mist.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:** coveralls over short sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure and protective eye wear. A chemical-resistant apron should also be worn when cleaning equipment, mixing or loading.

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, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

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

BEST AVAILABLE COPY

### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Drift or runoff may adversely affect fish and non-target plants. Do not apply directly to water, to areas where surface water is present or to inter tidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Do not apply when weather conditions favor drift from treated areas. Do not use the same spray equipment for other purposes unless thoroughly cleaned. Do not contaminate water used for irrigation or domestic purposes.

**MIXING AND LOADING:** Most cases of ground water contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of ground water supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent ground water contamination.

Do not apply 2,4-D 2-EHE GEL Emulsifiable Broadleaf Herbicide directly to, or permit spray mist to drift onto cotton, okra, grapes, tomatoes, fruit trees, vegetables, flowers or other desirable crop or ornamental plants which are susceptible to 2,4-D herbicide. Do not apply near susceptible plants since very small quantities of the 2,4-D will cause severe injury during the growing or dormant periods. Crops contacted by 2,4-D 2-EHE GEL Emulsifiable Broadleaf Herbicide sprays or spray drift may be killed or suffer significant stand loss with extensive quality and yield reduction.

Do not apply when a temperature air inversion exists. Such a condition is characterized by little or no air movement and an increase in air temperature with an increase in height. In humid regions a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. If questions exist pertaining to the existence of an inversion, consult with local weather services before making an application.

Use coarse sprays to minimize drift. Do not apply with hollow cone type insecticide or other nozzles that produce fine spray droplets.

**Drift from aerial or ground application may be reduced by:** (1) applying as near to the target as possible in order to obtain coverage; (2) by increasing the volume of spray mix per acre; (3) by decreasing the pounds of pressure at the nozzle tips; (4) by using nozzles which produce a coarse spray pattern; (5) by not applying when wind is blowing toward susceptible valuable plants.

At high air or ground surface temperatures, vapors from this product may injure susceptible plants.

### DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label before using this label.**

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.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 entry into treated areas during the restricted entry interval (REI) of 12 hours.

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 over short sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure and protective eye wear.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

For ornamental turf uses (golf courses, cemeteries, parks and other turf grass areas, do not enter treatment areas until sprays have dried. Do not allow people (other than applicator) or pets on treatment area during application.

## STORAGE AND DISPOSAL

### STORAGE

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

### PESTICIDE DISPOSAL

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate ground water. 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

Do not reuse outer bag. Dispose of outer bag in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## GENERAL CAUTIONS AND RESTRICTIONS

Do not apply 2,4-D 2-EHE GEL through any type of irrigation system.

Do not use in or near a greenhouse.

## GENERAL INFORMATION

2,4-D 2-EHE GEL is formulated as a gelatinous mixture containing 5.4 lb of 2,4-D acid equivalent per gallon present as the 2-ethylhexyl ester (2-EHE). In cropland, 2,4-D 2-EHE GEL is more effective than amines for controlling hard-to-kill weeds such as bindweed, thistle, smartweeds, wild garlic, curled dock, tansy ragwort and wild onions.

**INJURY TO CROPS FROM THIS HERBICIDE MAY OCCUR. IF YOU ARE NOT PREPARED TO ACCEPT SOME DEGREE OF CROP INJURY, DO NOT USE THIS PRODUCT.**

Crop varieties vary in response to 2,4-D and some are easily injured. Apply 2,4-D 2-EHE GEL Emulsifiable Broadleaf Herbicide to varieties known to be tolerant to 2,4-D. If you are uncertain concerning tolerant varieties or local use situations that may affect crop tolerance to 2,4-D, consult your seed company, state Agricultural Extension Service or qualified crop consultant for advice.

## MIXING, LOADING AND HANDLING INSTRUCTIONS

**GENERAL HANDLING INSTRUCTIONS:** Each 2,4-D 2-EHE GEL water soluble bag comes sealed in a clear plastic outer sleeve. Do not break the seal until the time of use. To use, open the end of the outer sleeve by tearing along the printed solid black line. Do not use a knife to break the seal. Once the outer protective sleeve is open, the water soluble bag inside can be dropped into the spray tank at the appropriate time without touching it.

**2,4-D 2-EHE GEL ALONE:** Begin filling the spray tank with clean water. When bottom of spray tank is covered with water to a depth of 6-8 inches, add the recommended number of 2,4-D 2-EHE GEL soluble bags. Avoid dropping the soluble bags into the tank in such a way that the bags end up covering the recirculation and outlet holes. After adding bags, continue to fill tank with water. **Allow 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation.** Tank should be at least 1/2 full when agitation is started. Continue adding water to tank to achieve the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application.

**2,4-D 2-EHE GEL TANK-MIXTURES:** Begin filling the spray tank with clean water. When bottom of spray tank is covered with water to a depth of 6-8 inches, add the recommended number of 2,4-D 2-EHE GEL soluble bags. After adding bags, continue to fill tank with water. **Allow 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation.** Tank should be at least 1/2 full when agitation is started. Add the recommended amount of wettable powder, soluble powder, flowable, EC or soluble liquid product to be tank mixed to the spray tank. Continue adding water to tank to achieve the desired level, while maintaining agitation.

**2,4-D 2-EHE GEL TANK-MIXTURES WITH SPRAYABLE LIQUID FERTILIZERS.** Begin filling the spray tank with fertilizer solution. When bottom of spray tank is covered with fertilizer solution to a depth of 6-8 inches, add the recommended number of 2,4-D 2-EHE GEL soluble bags. After adding bags, continue to fill tank. **Allow 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation.** Tank should be at least 1/2 full when agitation is started. Continue adding fertilizer to tank to achieve the desired level. Apply immediately and continue agitation in the spray tank during application. Application during very cold weather (near freezing) is not advisable. Do not allow mixture to stand overnight. Incompatibility may be encountered with some fertilizer brands or under some environmental conditions. If in doubt, test a small sample in the dilution ratio planned for application.

**NOTE:** Fertilizers can increase foliage contact burn of herbicides. Reducing the fertilizer rate and concentration will reduce the hazard of leaf burn. Use fertilizer at rates recommended by supplier or Extension Service Specialist.

## HANDLING PRECAUTIONS

- Do not allow the empty outer sleeve or the tear-strip to fall into the spray tank as they are not water soluble and may clog the sprayer.
- Do not handle the inner bag with wet gloves as the bag will begin to dissolve on contact with even a small amount of water.
- Do not open the inner bags or attempt to remove the gel from them. The gel is not designed to be re-measured or subdivided.

- The PVA (polyblend) is a special formula of 1 bag per acre spray tank mix.
- The entire contents of the water soluble pak must be used.

## 2,4-D 2-EHE GEL RATE RECOMMENDATIONS

2,4-D 2-EHE GEL is a 5.4 lb per gallon formulation packaged in water-soluble bags. Each 2,4-D 2-EHE GEL water-soluble bag contains one liter of the herbicide. To determine how many bags of 2,4-D 2-EHE GEL to use, consult the application rate tables and recommendation charts for the crop to be sprayed. In those charts, the 2,4-D 2-EHE GEL use rates are given in pints/acre. Once the 2,4-D 2-EHE GEL application rate per acre is selected, consult the following tables to determine how many bags to use per acre when mixing the spray.

### 2,4-D 2-EHE GEL APPLICATION RATE CHART

- Directions:
- 1) Select the 2,4-D 2-EHE<sup>®</sup> GEL use rate in pints per acre, or in 2,4-D equivalents (lb/ai/A).
  - 2) Look down the selected rate column for the number of acres you desire to treat at that rate.
  - 3) When acreage to be sprayed is selected, follow the row to the far left column to find the number of 2,4-D 2-EHE GEL bags to add to the spray tank.

Conventional 6.0 lb. 2,4-D Product Use rate (Plnts/A)	1/3	2/3	1.0	1 1/3	2.0
Number of 2,4-D 2-EHE Gel bags to use	ACRES TREATED PER BAG				
1	6	3	2	1 1/2	1
2	12	6	4	3	2
3	18	9	6	4 1/2	3
4	24	12	8	6	4
5	30	15	10	7 1/2	5
6	36	18	12	9	6
7	42	21	14	10 1/2	7
8	48	24	16	12	8
9	54	27	18	13 1/2	9
10	60	30	20	15	10

### GENERAL WEED LIST

#### ANNUAL AND BIENNIAL WEEDS

annual yellow sweetclover	*knotweed	salsify (western or common)
*beggarticks	*mallow (venice, dwarf, little)	*smartweeds (annual species)
bull thistle	marshelder	sowthistle (annual or spiny)
coffeeweed	morning glory (common, ivy, woolly)	sunflower
*common broomweed	mustards (except blue mustard)	velvetleaf
common burdock	pepperweeds (except perennial)	*vervains
common cocklebur	**pigweeds (Amaranthus spp.)	vetches
common evening primrose	*prickly lettuce	*wild carrot
common lambsquarters	ragweed (common, giant)	wild lettuce
croton (Texas or woolly)	rough fleabane	wild parsnips
hairy galinsoga	*Russian thistle	wild radish
jimsonweed		

#### PERENNIAL WEEDS

*alfalfa	*goldenrod	sowthistle (perennial)
*bindweed (hedge, field & European)	*ground ivy	*tansy ragwort
blue lettuce	*hawkweed (orange)	*vervains
*Canada thistle	healall	*western ironweed
catnip	*hoary cress	*wild garlic
chicory	Jerusalem - artichoke	*wild onion
dandelion	*many-flowered aster	
*docks	*nettles (including stinging)	
*dogbanes	plantains	

\*These species may require repeat applications and/or use of the higher rate recommended on this product label even under ideal conditions for applications. \*\*Control of pigweeds in the High Plains area of Texas and Oklahoma may not be satisfactory with this product.

8 of 15

**SPECIFIC USE DIRECTIONS**

**CEREAL GRAINS: Wheat, Barley and Rye (not underseeded with legumes)**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
<b>Postemergence</b> Annual and biennial weeds Perennial broadleaf weeds	1/3 to 1 1/3 pints* 2/3 to 1 1/3 pints*	Apply after grain is fully tillered (usually about 4 to 8 inches high) but not forming joints in the stem. <b>Do not spray grain in boot to dough stage.</b>
<b>Wild onion or garlic</b>	1 to 1 1/3 pints*	Apply 1 pint when grain is fully tillered and wild garlic or onion plants are small. Apply 1 1/3 pints after harvest in the crop stubble. For control of new fall growth of wild onion or garlic, refer to FALLOWLAND use directions.
<b>Emergency Weed Control in Wheat</b> Perennial broadleaf weeds	2 pints*	Apply when weeds are approaching bud stage, but <b>do not spray grain during the boot to dough stage.</b> The 2 pints per acre application can produce injury to wheat. Balance the severity of your weed problem against the possibility of crop damage. Where perennial weeds are scattered, spot treatment is suggested to minimize the extent of crop injury.
<b>Preharvest</b>	2/3 to 1 1/3 pints*	Apply when grains are in the hard dough stage to suppress large weeds that may interfere with harvest. Best results will be obtained when soil moisture is sufficient to induce succulent weed growth.

\* Use the lower rate if small annual and biennial weeds are the major problem. Use the higher rate if perennial weeds or annual and biennial weeds are present which are in the hard-to-kill categories as determined by local experience. The higher rates increase the risk of grain injury and should be used only where the weed control problem justifies the risk of grain damage. Do not apply to grain in the seedling stage.

**TANK MIXTURES FOR CEREAL GRAINS**

**2,4-D 2-EHE and BUCTRIL® Tank Mixture on Wheat, Barley and Rye**

WEEDS IN CROP	AMOUNT OF 2,4-D 2-EHE PER ACRE	DIRECTIONS
<b>Cereal Areas</b> except Washington, Oregon, Idaho, Colorado, Wyoming and Montana	1/2 to 1 pint plus 1 to 1 1/2 pints BUCTRIL®	BUCTRIL® Broadleaf Herbicide will control some annual weeds that are resistant to 2,4-D 2-EHE and may be tank mixed with 2,4-D 2-EHE for broader spectrum weed control on cereal grains.
Washington, Oregon, Idaho, Colorado, Wyoming and Montana	1/3 to 2/3 pint plus 1 1/2 pints BUCTRIL®	<b>TO PREPARE THE SPRAY:</b> First mix 2,4-D 2-EHE in water then add the BUCTRIL®. Use the higher rates for larger weeds or where weed growth is slow due to dry or cold weather. Apply before weeds are 6 inches high. Use 10 to 20 gallons total spray volume per acre with ground equipment or use 5 to 10 gallons total spray volume with air application. Use higher volume on larger weeds.

**RESTRICTIONS AND LIMITATIONS FOR USE ON SMALL GRAINS**

For aerial application on grain: a minimum of 3-5 or more gallons of water per acre is recommended. Allow sufficient mixing to dissolve water soluble bag.

For ground application: a minimum of 10 - 15 gallons of water per acre is recommended for proper spray coverage.

Do not mix with oil for crop uses.

Do not permit dairy animals or meat animals being finished for slaughter to forage treated grain fields within 2 weeks after treatment.

Do not feed treated straw to livestock if a preharvest treatment or emergency treatment as described below is applied.

9/15

## FIELD CORN

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
<b>Preplant</b>	2/3 to 1 1/3 pints	To control emerged broadleaf weed seedlings or existing cover crops prior to planting corn, apply 7 to 14 days before planting. Do not use on light, sandy soil, or where soil moisture is inadequate for normal weed growth. Use high rate for control of less susceptible weeds or cover crops such as alfalfa.
<b>Preemergence</b>	1 1/3 to 2 pints	To control broadleaf weeds and suppress annual grasses, apply 3 to 5 days after planting, but before corn emerges. Use high rate on soil high in organic matter. Do not use on light, sandy soil, or where soil moisture is inadequate for normal weed growth.
<b>Postemergence</b> Annual broadleaf weeds	1/3 pint	Avoid spraying just after corn leaves unfold as injury may occur. Apply when weeds are small and corn is less than 8 inches tall. If corn more than 8 inches tall must be sprayed, use drop pipes.  Spray when weeds are in the bud to bloom stage. If corn is more than 8 inches tall, use drop pipes to keep spray off corn leaves. <b>Do not spray corn from tassel to dough stage.</b> 2,4-D may make corn brittle. Winds or cultivation may cause stalk breakage while brittle.
Perennial broadleaf weeds	1/2 pint	
<b>Preharvest</b>	2/3 to 1 1/3 pints	After the hard dough (denting) stage, to suppress weeds that interfere with harvest such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower and velvetleaf, and to decrease production of weed seeds, spray with air or ground equipment. The high rate will be needed for tough weeds under stress.

## POPCORN

WEEDS IN CROP	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
<b>Preharvest</b>	2/3 to 1 1/3 pints	After the dent stage to suppress weeds that interfere with harvest, such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower and velvetleaf, and to decrease production of weed seeds, spray with air or ground equipment. The high rate will be needed for weeds under stress.  <b>DO NOT USE IN CALIFORNIA.</b>

### RESTRICTIONS AND LIMITATIONS FOR USE ON FIELD CORN AND POPCORN

Do not forage or feed corn fodder for 7 days following application.

A minimum application volume of 3 to 5 gallons per acre by air or 10 gallons per acre by ground is recommended. Allow sufficient mixing to dissolve water soluble bag.

Note: Hybrids vary in response to 2,4-D and some are easily injured. Contact seed company or your Agricultural Experiment Station or Extension weed specialists for this information.

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10/15

**SOYBEANS (Preplant Only)**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
<p><b>Postemergence</b></p>	<p>1/2 to 2/3 pint</p>	<p>Apply not less than 7 days prior to planting soybeans, when weeds are small and actively growing. Use the higher rate on larger weeds and when perennials are present. Some weeds may require repeat treatment for adequate control (see GENERAL WEED LIST and below).</p>
	<p>&gt; 2/3 to 1 1/3 pints</p>	<p>Apply not less than 30 days prior to planting soybeans, when weeds are actively growing. Some weeds may require repeat treatment for adequate control (see GENERAL WEED LIST and below).</p>
		<p>In addition to those weeds found on the GENERAL WEED LIST, 2,4-D 2-EHE GEL will suppress or control the following broadleaf weeds frequently encountered in reduced tillage soybean production systems: bullnettle, smallflowered bittercress, Carolina geranium, smallflowered buttercup, common and rough cinquefoil, red clover*, horseweed or marestalk, mousetail, wild mustard, field pennycress, cutleaf evening primrose, common purslane, speedwell, and Virginia copperleaf.</p> <p>* These weeds are only partially controlled.</p> <p>Apply no more than 2.0 pints of 2,4-D 2-EHE GEL in one season prior to planting soybeans. After applying, plant soybean seed as deep as practical or at least 1 1/2 to 2 inches deep. Adjust the planter press wheel, if necessary, to ensure that planted seed is completely covered.</p> <p>If desired, 2,4-D 2-EHE GEL may be applied pre-plant to soybeans in tank mixtures with other herbicides such as Poast®, Poast Plus®, Roundup®, Roundup D-Pak®, Honcho®, Gramoxone® Extra®, Prowl®, Pursuit® Plus®, Scepter®, Scepter 70 DG, Squadron® and others that are registered for pre-plant soybean use.</p> <p>NOTE: Unacceptable injury to soybeans planted in fields previously treated with 2,4-D 2-EHE GEL may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather and agronomic factors such as the amount of weed vegetation and previous crop residue present that may be in effect between the time of 2,4-D 2-EHE GEL application and the emergence of the soybean plant.</p> <p><b>DO NOT USE IN CALIFORNIA.</b></p>

**RESTRICTIONS AND LIMITATIONS FOR USE IN SOYBEANS (PRE-PLANT)**

- Do not apply 2,4-D 2-EHE GEL when weather conditions such as temperature, air inversions, or wind favor drift from treated areas to susceptible plants.
- Apply no more than 2.0 pints of 2,4-D 2-EHE GEL per acre in one season prior to planting soybeans.
- Do not apply 2,4-D 2-EHE GEL prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.
- Do not replant fields treated with 2,4-D 2-EHE GEL in the same growing season with crops other than those labeled for 2,4-D pre-plant use.
- Do not mow or cultivate weeds prior to treating with 2,4-D 2-EHE GEL as poor control may result.
- Do not cut for feed treated hay, forage, or fodder or graze treated soybeans to livestock.
- Only one application of 2,4-D 2-EHE GEL may be made prior to planting soybeans per growing season.
- Do not cut for feed or graze treated cover crops to livestock.

11-8-15

**GRAIN SORGHUM (milo)**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds Perennial broadleaf weeds	1/2 pint 3/4 pint	Treat when sorghum is 6 to 15 inches tall (to top of canopy). If sorghum is taller than 8 inches to top of canopy, use drop nozzles to keep spray off crop foliage. Do not treat during boot, flowering, or early dough stages.

**RESTRICTIONS AND LIMITATIONS FOR USE ON SORGHUM**

Do not forage or feed fodder for 7 days following application.

A minimum application volume of 5 gallons per acre by air or 10 gallons per acre by ground is recommended. Allow sufficient mixing to dissolve water soluble bag.

**SUGARCANE**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Preemergence	1 1/3 pints	Apply before canes appear for control of emerged broadleaf weeds.
Postemergence	1 1/3 to 2 2/3 pints	Apply after cane emerges and through lay-by. DO NOT USE IN CALIFORNIA.

**GRASSES GROWN FOR SEED PRODUCTION**

WEEDS IN CROP	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds	2/3 to 1 pint	Apply to established stands in the spring before the seed head comes into the boot stage. <b>Do not spray in boot stage of growth.</b> In seedling grasses apply in the spring after the grass has tillered or has at least 5 leaves but before the boot stage. Use only the low rate on seedling grasses.
Biennial and Perennial broadleaf weeds	1 1/3 to 2 pints	DO NOT USE IN CALIFORNIA.

**RESTRICTIONS AND LIMITATIONS FOR USE ON GRASSES FOR SEED PRODUCTION**

Do not graze dairy animals or cut forage for hay within 7 days of application.

**WEEDS AND BRUSH IN PASTURES, RANGELAND, AND FALLOW LAND, ESTABLISHED GRASS PASTURES AND RANGELAND**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds Perennial and biennial broadleaf weeds	1 1/3 pints 2 to 2 2/3 pints	Apply when weeds are small and actively growing and prior to bud stage. Do not apply to newly seeded areas until grass is well established. Do not apply when grass is in the boot to milk stage if grass seed production is desired. Bentgrass and legumes may be injured by this treatment.
Sand sage, sagebrush, shinnery oak and other 2,4-D susceptible woody species	2/3 to 2 2/3 quarts	Apply aerially to brush in 2 or more gallons of water per acre. One gallon of fuel oil may be included in the mixture. Consult state or local brush control specialists for most effective rate, volume and timing of spray applications.

12715

FALLOW LAND AND OTHER AREAS

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds	2/3 to 1 1/3 pints	Use the lower rate when weeds are small (2 to 3 inches tall) and growing actively. Use the higher rate on older and drought-stressed plants.
Biennial broadleaf weeds	2/3 to 1 2/3 pints	Spray while musk thistles or other biennial species are in the seedling to rosette stage, and before flower stalks are initiated. The lower rate can be used in spring during rosette stage. In fall or after flower stalks have developed, use the highest rate.
Perennial broadleaf weeds	1 1/3 to 4 pints	Spray weeds in bud to bloom stage, or in good vegetative growth. Do not disturb treated area for at least 2 weeks after treatment, or until weed tops are dead.
Wild garlic or onions	2 2/3 to 4 pints	Apply to new regrowth of wild onion or garlic which occurs in the fall following harvest of small grains, soybeans, corn or grain sorghum.

**RESTRICTIONS AND LIMITATIONS FOR USE ON PASTURES, RANGELAND, AND FALLOW LAND**

- For ground application: a minimum of 10-15 gallons of water per acre is recommended for proper spray coverage.
- For aerial application, a minimum of 3-5 gallons of water per acre is recommended. Allow sufficient mixing to dissolve water soluble bag.
- Do not graze animals on treated areas within 7 days after treatment.
- Do not plant treated fallow land until 3 months after treatment or until chemical has disappeared from soil.
- Do not cut grass for hay within 30 days after application.
- Do not permit dairy animals or meat animals being finished for slaughter to forage treated fields within 3 days of slaughter.

**WEEDS IN ORNAMENTAL TURF AREAS**  
Golf Courses, Cemeteries, Parks, and other Turf Areas

WEEDS IN CROP	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds	1 1/3 pints	Apply any time weeds are growing vigorously. Cool-season weeds such as common chickweed, henbit and pepperweeds should be sprayed when they appear in fall or early spring. Warm-season weeds such knotweed respond best when they are small. If there is additional germination, repeat treatment. Also controls cocklebur, galinsoga, lambquarters, pigweed, ragweed and sunflower.
Perennial and biennial broadleaf weeds	2 to 2 2/3 pints	To control dandelion, plantain and most other common broadleaf weeds in turf, apply in spring or fall when these weeds are growing actively. Treat wild garlic or onion in three successive seasons (Example: spring, fall, spring). Do not apply to newly seeded areas until sod is formed and grass has been cut at least twice. Do not use 2,4-D 2-EHE GEL for susceptible southern grasses such St. Augustine. Bentgrass and clover may be injured by this treatment. Also controls bindweed, chicory, docks, ground ivy, hawkweed, thistles (Canada, musk, bull and Scotch), smartweed, fanny ragwort, wild onion and wild garlic.

**RESTRICTIONS AND LIMITATIONS FOR USE IN TURF AREAS**

- Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried or dust has settled.
- The maximum number of broadcast applications per treatment site is 2 per year. This does not exclude spot treatment.
- For ground application in turf areas, use enough water for good coverage (minimum 10 gallons per acre). Allow sufficient mixing to dissolve water soluble bag.
- Do not graze animals on treated areas within 7 days after treatment.
- If needed, irrigate ornamental turf thoroughly before application. Spray when air is calm to avoid drift. Avoid treatment when temperatures exceed 85° F or are expected to do so within 24 hours after application.

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**FENCEROWS, ROADSIDES, DRAINAGE DITCHBANKS, VACANT LOTS, AIRFIELDS, RAILROAD, HIGHWAY AND UTILITY RIGHTS-OF-WAY, AND**

WEEDS	2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Annual broadleaf weeds	1 1/3 to 2 2/3 pints	Apply when most weeds are still young and growing vigorously.
Perennial and biennial broadleaf weeds	2 to 4 pints	Apply when weeds are actively growing and near the bud stage, but before flowering. For best results on tansy ragwort and musk thistle, treat in rosette stage, before bolting. A second application is usually needed for best results on thistle, nettle and bindweed. Treat wild onion or garlic in early spring and in fall when they are young and growing actively.
Cattails and tules	1 to 1 2/3 gallons	Mix 1 1/3 quarts 2,4-D 2-EHE GEL in 2 quarts kerosene or diesel oil then add this mixture to 100 gallons of water. Apply 300 to 500 gallons of spray per acre, depending on the stand. The addition of a wetting agent is suggested.
Woody plants	2/3 to 1 1/3 gallons	Apply in 30 to 100 gallons of spray per acre, preferably through low volume equipment such as DIRECTA-SPRA WOBBLER, MINI-WOBBLER or SPIROMETER. Treat when 2,4-D susceptible species are in full leaf and growing actively. Repeated applications, oil or wetting agent and/or high volume spraying (300 to 500 gallons of spray per acre) may be needed for acceptable control of some species or if brush is dense.

**TANK MIXTURES FOR NON-CROP AREAS**

**2,4-D 2-EHE GEL And Garlon-4 Or Garlon-3A Tank Mixtures For Non-Crop Areas**

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
Broadleaf weed control	1 1/3 to 2 2/3 pints 2,4-D 2-EHE GEL plus 2 to 6 pints Garlon-4 or 3 to 8 pints Garlon-3A	For wider spectrum control of broadleaf weeds and woody plants: Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing.
Woody plant control Broadcast foliar spray	2/3 to 1 1/3 gallons 2,4-D 2-EHE GEL plus 1 1/2 to 3 quarts Garlon-4 or 2 to 4 quarts Garlon-3A	Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when woody plants are actively growing.
Woody plant control High volume leaf-stem treatment with ground equipment	2/3 to 5 1/3 quarts 2,4-D 2-EHE GEL plus 1 1/2 to 12 pints Garlon-4 or 2 to 16 pints Garlon-3A	Mix 2/3 to 1 1/3 quarts of 2,4-D 2-EHE GEL plus 1 1/2 to 3 pints Garlon-4 or 2 to 4 pints Garlon-3A in enough water to make 100 gallons of spray. Apply at a volume of 100 to 400 gallons of total spray per acre depending on size and density of woody plants. Thoroughly wet all leaves, stems and root collars of plants to be controlled.
Woody plant control Aerial application (helicopter only)	2/3 to 1 1/3 gallons 2,4-D 2-EHE GEL plus 3 to 4 quarts Garlon-4 or 4 to 6 quarts Garlon-3A	Apply in a total spray volume of 10 to 30 gallons per acre using drift control equipment such as the MICRO-FOIL boom or an effective drift control agent. Use the higher rates and volumes when plants are dense or under drought conditions.

14815

## 2,4-D 2-EHE GEL And Banvel<sup>2</sup> Herbicide Tank Mixtures For Non-Crop Areas

WEEDS	AMOUNT OF 2,4-D 2-EHE GEL PER ACRE	DIRECTIONS
<b>Annual broadleaf weeds</b>	1 1/3 to 2 2/3 pints 2,4-D 2-EHE GEL plus 1/2 to 1 1/2 pints Banvel	For wider spectrum control of broadleaf weeds and woody plants: Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing. Use the higher rates when treating dense or tall vegetative growth.
<b>Perennial and biennial broadleaf weeds</b>	2 to 4 pints 2,4-D 2-EHE GEL plus 1/2 to 6 pints Banvel	Apply as a broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre. Apply when broadleaf weeds are actively growing but prior to flowering. Use the lower rates for biennials less than 3 inches rosette diameter. Use the higher rates for perennial weeds or for biennial weeds past the 3-inch rosette stage.
<b>Woody plant control</b> Broadcast, high volume, stem foliage or aerial application	2/3 to 1 1/3 gallons 2,4-D 2-EHE GEL plus 2 to 8 quarts Banvel	Apply as broadcast spray in enough water to deliver 20 to 100 gallons total spray per acre or apply as a high volume stem foliage spray in enough volume to thoroughly wet leaves, stems and root collars (100 to 400 gallons per acre) or apply aerially in enough water to deliver total spray volume of 10 to 30 gallons per acre using drift control equipment such as the MICRO-FOIL boom or an effective drift control agent. Use the higher rates and volumes when plants are dense or under drought conditions.

### RESTRICTIONS AND LIMITATIONS FOR USE IN NON-CROP AREAS

For aerial application to solid stands of susceptible brush, use 1 1/3 to 2 2/3 quarts in 3 to 12 gallons volume per acre. Two to 4 quarts of fuel oil may be included in this mixture.

Applications will be less effective when conditions such as deficient soil moisture reduce brush growth.

## FOREST MANAGEMENT

### CONIFER RELEASE

To control alder, apply 1 to 1 1/3 quarts 2,4-D 2-EHE GEL Broadleaf Herbicide in 9 1/2 to 15 gallons water per acre as a foliage spray. Treat when 3/4 of the brush foliage has attained full size leaves and before new conifer growth reaches 2" in length. This is usually between early May and mid-June. Adjust treatment date depending on stage of growth of conifers and brush species. This may cause leader deformation on exposed firs, but they should overcome this during the second year after spraying.

To control tanoak, madrone, ceanothus, canyon live oak, and manzanita, and to release Douglas fir, hemlock, Sitka spruce or grand fir, apply 2 quarts 2,4-D 2-EHE GEL plus 3 quarts fuel oil in 8 1/2 to 15 gallons water per acre before new growth on Douglas fir is 2" long. To control manzanita and ceanothus in ponderosa pine, apply 2 quarts 2,4-D 2-EHE GEL before pine growth begins in spring.

To control hazel brush in the Lake states, apply 1 1/3 quarts 2,4-D 2-EHE GEL in 6 to 25 gallons of water per acre when new shoot growth of hazel is complete (usually mid-July).

In northern areas, if possible conifer injury can be tolerated, 1 1/3 to 2 quarts of 2,4-D 2-EHE GEL applied aerially in 8 to 25 gallons of water per acre after conifers such as jack pine, red pine, black spruce, and white spruce have hardened off (usually mid-July) will provide control of competing hardwoods including alder, aspen, birch, hazel, and willow.

### SITE PREPARATION

**Budbreak Spray:** To control alder and other susceptible species before planting forest seedlings, apply 1 1/3 to 2 2/3 quarts 2,4-D 2-EHE GEL in 9 to 15 gallons fuel oil per acre after alder buds break, but before foliage is 1/4 full size.

**Foliage Spray:** To control alder before planting forest tree seedlings, apply 1 1/3 quarts 2,4-D 2-EHE GEL plus 2 quarts fuel oil in 9 to 15 of gallons water per acre after most alder leaves are full size.

Consult your regional or extension forester or state herbicide specialist for recommendations to fit local conditions.

15 of 15

## LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants that this product conforms to the chemical description on the label; that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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2,4-D 2-EHE GEL Broadleaf Herbicide (PENDING) Resubmitted 10/5/94.

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