



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

EPA Reg. Number:
5905-529

Date of Issuance:
OCT 22 1997

NOTICE OF PESTICIDE:
 X Registration
 Reregistration

Term of Issuance:
Conditional

Name of Pesticide Product:
Barrage HF

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company
6075 Poplar Avenue, Suite 500
Memphis, TN 38119

Note: 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 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. Make the following change before you release the product for shipment:

a. Revise the EPA Registration Number to read, EPA Reg. No. "5905-529".

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

Signature
9-30-97

Signature of Approving Official:

Date:

OCT 22 1997

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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)
Herbicide Branch
Registration Division (7505C)

Enclosure

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BARRAGE® HF

LOW VOLATILE HERBICIDE

ACTIVE INGREDIENT:

2-Ethylhexyl Ester of 2,4-Dichlorophenoxy-acetic Acid 78.1%

INERT INGREDIENTS: 21.9%

TOTAL 100.0%

Equivalent to 51.8% 2,4-D Acid or 4.7 lb./gal.

Isomer specific by AOAC Method 6.D01-5 (12th Ed.)

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE INSIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

ACCEPTED
with COMMENTS
In EPA Letter Dated

OCT 22 1997
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
5905-529

EPA REG. NO. 5905
EPA EST. NO.

NET CONTENTS:

MANUFACTURED BY
HELENA CHEMICAL COMPANY
MEMPHIS, TN 38119

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Avoid contact with skin, eyes, or clothing. Harmful if swallowed. Avoid inhaling vapor or spray mist. This product may cause skin irritation.

PERSONAL PROTECTIVE EQUIPMENT

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

Applicators and other handlers must wear:

- Long-Sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton.
- Shoes plus socks
- Protective Eyewear
- Chemical-resistant apron when cleaning equipment, mixing or loading

If this container contains over 1 gallon and less than 5 gallons, mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

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. After each day of use, clothing or PPE must not be reused until it has been cleaned.

Engineering Control Statements

If this container contains 5 gallons or more in capacity, do not open pour. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a nonrefillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use 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 requirements may be reduced or modified as specified in the WPS.

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

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF SWALLOWED: Call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

IF INHALED: Move victim to fresh air. Give artificial respiration if needed. Get medical attention.

ENVIRONMENTAL HAZARDS

For terrestrial uses, 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 apply when weather conditions favor drift from target area. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. Do not contaminate water by cleaning of equipment or disposal of washwaters. This product will kill or seriously injure many desirable forms of vegetation. Do not apply directly to flowers, fruits, vegetables, grapes, ornamentals, cotton or other desirable plants. Do not use when there is hazard from drifting mists. (Coarse sprays are less likely to drift.) Vapors from this product may injure susceptible plants in the immediate vicinity. Do not contaminate water used for domestic purposes and irrigation purposes. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth.

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water except as specified on this label. Do not contaminate water when disposing of equipment washwaters.

GROUNDWATER CONTAMINATION

Most cases of groundwater 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 groundwater 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 groundwater contamination.

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CHEMIGATION PROHIBITION

Do not apply this product through any type of irrigation system.

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.

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 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
- Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton.
- Shoes plus socks
- Protective Eyewear

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 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. Keep children and pets out of treated area until sprays have dried.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly.

STORAGE: Do not store below temperature of 0°F. If frozen, warm to 40°F and redissolve before using by rolling or shaking container. This product can be stored in an unheated building. Store in a safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

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

CONTAINER DISPOSAL:

Metal: 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.

Plastic: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WHERE TO USE

BARRAGE is used to control broadleaf weeds in cereal crops, corn, sorghum, weeds, and brush in rangeland, pastures, rights-of-way, similar noncrop uses, and for aquatic weed control.

WEEDS CONTROLLED

BARRAGE will kill or control the following as well as many other noxious plants susceptible to 2,4-D:

Alligatorweed	Chicory	Locoweed	Sagebrush
Arrowhead	Cocklebur	Mexicanweed	Shepherdspurse
Artichoke	Coffcebean	Morningglory	Smartweed
Bindweed (hedge, field, and European)	Creeping jenny	Mustard	Sowthistle
Bitter wintercress	Curly indigo	Nutgrass	Stinkweed
Boxelder	Duckweed	Parrotfeather	Sumac
Buckhorn	Elderberry	Pennywort	Sunflower
Bull thistle	Goldenrod	Pigweed	Virginia creeper
Bulrush	Ground ivy	Plantain	Water hyacinth
Burdock	Hemp	Poison ivy	Water lily
Bur ragweed	Hoary cress	Pokeweed	Water primrose
Buttercup	Honeysuckle	Povertyweed	Wild garlic
Canada thistle	Indigo	Puncturevine	Wild lettuce
Catnip	Ironweed	Purslane	Wild onion
Chickweed	Jimsonweed	Rush	Wild radish
	Lambsquarters	Russian thistle	Willow

USE DIRECTIONS

Add the recommended amount of product to about one-half the volume of water to be used in spraying. Mix well, then add remaining water and mix until spray mixture is uniform. Agitate thoroughly while spraying to assure uniform emulsion. Best results are obtained when applications are made while the plants are well-leafed and actively growing.

Avoid spray drift to susceptible plants as this product may injure cotton, beans, peas, ornamentals, etc. Coarse sprays are less likely to drift. Do not contaminate domestic or irrigating water supplies.

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Apply this product only as specified on this label. Vapors from this product may injure susceptible plants in the immediate vicinity. Do not seed lawns, gardens or fields until at least four weeks after application of spray to area. Do not apply in a manner not specified on the label.

ON FALL-PLANTED WHEAT, OATS, AND BARLEY - Use 7 to 10 fluid ounces of product in 1 to 10 gallons of water to cover one acre. Apply in early spring when weeds are small and before crop has reached the boot stage.

ON SPRING-PLANTED WHEAT, OATS, AND BARLEY - Use 7 fluid ounces of product in 1 to 10 gallons of water to cover one acre. Apply after the fully tillered stage, except during the boot to dough stage.

DO NOT forage or graze treated grain fields within two weeks after treatment with 2,4-D. **DO NOT** feed treated straw to livestock.

ON CORN AND SORGHUM - Use 7 fluid ounces of product in 1 to 10 gallons of water to cover one acre when weeds are in active growth. Local climatic conditions determine when treatment should be made. Best results are usually obtained when weeds are small and corn is 4 to 18 inches tall. **DO NOT** apply from tasseling to dough stage. Treat sorghum when 4 to 12 inches tall. Use drop nozzles when either crop is over 10 inches tall. Some injury to corn may occur.

FOR PREEMERGENCE ON CORN - Use 26 to 51 fluid ounces of product in 1 to 10 gallons of water per acre. Use the higher rate on heavy soils. **DO NOT** use on sandy soils. Plant corn as deep as feasible.

SOYBEANS (PREPLANT ONLY): For use in crop residue management systems: Apply 9.6 to 12.8 ounces not less than 7 days prior to planting soybeans or 12.8 to 25.6 ounces not less than 30 days prior to planting. For best weed control, apply to postemergent weeds when small, actively growing, and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of individual weed species is variable. Consult your local county agent or state Agricultural Extension Service or crop consultant for advice. Use the higher rate on larger weeds when perennials are present.

WEEDS CONTROLLED

alfalfa*	horseweed or maretail	ragweed, giant
bindweed*	ironweed	shepherdspurse
bullnettle	lambsquarters, common	smartweed, Pennsylvania*
bittercress, smallflowered	lettuce, prickly	sowthistle, annual
buttercup, smallflowered	morningglory, annual	speedwell
Carolina geranium	mousetail	thistle, Canada*
cinquefoil, common & rough	mustard, wild	thistle, bull
clover, red*	onion, wild*	velvetleaf
cocklebur, common	pennycress, field	vetch, hairy*
dandelion*	peppergrass*	Virginia copperleaf
dock, curly	plantains	
evening primrose, cutleaf	purslane, common	
garlic, wild	ragweed, common	

***Partially controlled**

Apply using air or ground equipment in sufficient gallonage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

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.

If desired, this product may be applied preplant to soybeans in tank mixtures with other herbicides such as Poast, Poast Plus, Roundup, Roundup D-Pak, Honcho, Gramoxone Extra, Prowl, Pursuit Plus, Scepter 70DG, Squadron, and others that are registered for preplant soybean use.

Compatible crop oil concentrates, agricultural surfactants, and fluid fertilizers approved for use on growing crops may increase the herbicidal effectiveness of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product.

NOTE: Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present. Injury is more likely under cool, rainy conditions and where there is less weed vegetation and crop residue present.

Not registered for use in California.

USE RESTRICTIONS AND LIMITATIONS

Do not apply this product prior to planting soybeans if you are not prepared to accept the results of soybeans injury, including possible loss of stand and yield.

Do not use on low organic sandy soils (less than 1.0%).

Do not apply this product when weather conditions such as temperature, air inversions, or wind favor drift from treated areas to susceptible plants.

Do not mow or cultivate weeds prior to meeting with this product as poor control may result.

Do not use any tillage operations between application and planting.

Do not feed treated hay, forage, or fodder. Restrict livestock from grazing treated fields. Do not feed or graze treated cover crops to livestock.

Only one application may be made prior to planting soybeans per growing season.

Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D use.

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FOR LAWNS, ORNAMENTAL TURF GRASS, GOLF FAIRWAYS - For large areas apply 1½ pints per acre; for small areas, 3 1/3 teaspoons in 3 to 5 gallons of water applied to 1, 000 square feet. Spray 3 to 5 days after mowing. Retreatment of perennial weed areas may be necessary. However, the maximum number of broadcast applications per growing season is two. May cause injury to bent grass, carpet grass, dichondra, St. Augustine and to clovers. DO NOT use on creeping grasses such as bent except for spot spraying. Newly seeded turf should not be treated until after the second mowing and the lowest dosage used. Protect ornamentals from spray drift.

ON RANGELAND, PASTURES, AND GENERAL WEED CONTROL - Use 14 to 56 fluid ounces of product in sufficient water to give good coverage to one acre, depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Keep dairy animals off treated areas for 7 days. Do not cut grass for hay for 30 days after treatment. Do not slaughter for meat animals for 3 days after treatment.

FOR AQUATIC WEEDS IN LAKES, PONDS, AND DRAINAGE DITCHBANKS - Use 35 to 63 fluid ounces of product in 50 to 100 gallons of water and apply to one acre. Application should be made when leaves are fully developed above waterline and plants actively growing. Treatment of dense weed areas can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, when treating water areas, aquatic weed control should proceed stepwise - in bands from the shore outwards. Treat only 1/3 to 1/2 of the water area every 10-14 days.

Perennial and other hard-to-control weeds may require a repeat application to give adequate control. Treatment of public waters requires a permit from appropriate state agencies in most states. Your State Conservation Department or Game and Fish Commission will aid you in securing a permit if required in your state.

NOTE

Do not apply this product to susceptible broadleaf plants that are desirable such as cotton, soybeans, tomatoes, grapes, clover, or ornamentals. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

**CONDITIONS OF SALE - LIMITED WARRANTY
AND LIMITATIONS OF LIABILITY AND REMEDIES**

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man, or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against the Company exceed the price of the product which causes the alleged loss, damage, injury, or other claim. The Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income.

The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability, and remedies.

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