PM 23 5905-505

HELENA CHEMICAL COMPANY

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CORPORATE OFFICE

Suite 500 6075 Poplar Avenue Memphis, Tennessee 38119 Telephone: 901/761-0050 Telex: 8105911595

Joanne I. Miller, Product Manager 23 U. S. Environmental Protection Agency Office of Pesticide Programs Registration Division (H7505C) 401 M Street, S.W. Washington, D.C. 20460

RE: WEED RHAP LV-4D, EPA REG. NO. *5905-505 2,4-D EXPOSURE REDUCTION MEASURES

Dear Ms. Miller:

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February 12, 1993

I, being an authorized representative of Helena Chemical Company certify that all containers of Weed Rhap LV-4D, EPA Reg. No. 5905-505, produced by October 23, 1993 will bear revised labeling in accordance with the revised labeling required for Task Force technical and manufacturing-use products. I further certify that all containers of said product sold or distributed by this company by April 15, 1994 will bear revised labeling in accordance with the revised labeling required for Task Force technical and manufacturing-use products.

Sincerely,

HELENA CHEMICAL COMPANY

Judy Oldbam

Judy Oldham Manager, Registration Services

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WEED RHAP LV-4D

2,4-D LOW VOLATILE HERBICIDE

ACTIVE INGREDIENT:

Isooctyl Ester of 2,4-Dichlorophenoxyacetic Acid	65.4%
INERT INGREDIENTS:	34.6%
TOTAL	100.0%

Equivalent to 43.4% of 2,4-Dichlorophenoxyacetic acid or 3.8 lb./gal. Isomer specific by AOAC Method 6.275, 13th Ed., 1980.

KEEP OUT OF REACH OF CHILDREN

CAUTION - CAUCION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

See Side Panel For Additional Precautionary Statements.

EPA REG. NO. 5905-505 EPA EST. NO. **NET CONTENTS:**

MANUFACTURED BY HELENA CHEMICAL COMPANY MEMPHIS, TN 38137

PRECAUTIONARY STATEMENTS

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HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Avoid contact with skin, eyes, or clothing. Harmful if swallowed. Avoid inhaling vapor or spray mist. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

When mixing, loading, or applying this product or repairing or cleaning equipment used with this product, wear eye protection (face shield or safety glasses), chemical-resistant gloves, long-sleeved shirt, long pants, socks, and shoes. For aerial applicators in enclosed cockpits and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required.

Wash hands, face, and arms with soap and water as soon as possible after mixing, loading, or applying this product. Wash hands, face, and arms with soap and water before eating, smoking, or drinking. Wash hands and arms before using toilet. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry. Remove saturated clothing as soon as possible and shower.

If this container contains over 1 gallon and less than 5 gallons, persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron.

If this container contains 5 gallons or more in capacity, a mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

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. Do not induce vomiting or give anything by mouth to an unconscious person.

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

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

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ENVIRONMENTAL HAZARDS

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Do not apply directly to water. 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 a hazard from drifting mists. (Coarse sprays are less likely to drift.) Vapors from this product may injure susceptible plants in the immediate vicinity. Avoid contamination of 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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DIRECTIONS FOR USE

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

CHEMIGATION PROHIBITION

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

AGRICULTURAL USE REQUIREMENTS

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

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, wear:

--long-sleeved shirt and long pants

--chemical-resistant gloves such as butyl or nitrile or barrier laminate

--shoes and socks

--protective eyewear (face shield or safety glasses)

For Turf Sites (excluding sod farms): Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure.) When oral warnings are given, warnings must be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: CAUTION: Area treated with 2,4-D Amine Herbicide on (date of application). Do not enter without appropriate protective clothing for 12 hours. (Insert here Statements of Practical Treatment as under Precautionary Statements.)

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 the 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. Personnel should use clothing and equipment consistent with good pesticide handling.

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.

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This product can reach groundwater as a result of mixing and loading. To minimize groundwater contamination from spills during mixing, loading, and cleaning of equipment, take the following steps:

Mixing and Loading: When mixing, loading, or applying this product, wear personal protective clothing listed under the Hazards to Humans and Domestic Animals section of this label.

The mixing and loading of spray mixtures into the spray equipment must be carried out on an impervious pad (i.e., concrete slab, plastic sheeting) large enough to catch any spilled material. If spills occur, contain the spill by using an absorbent material (e.g., sand, earth, or synthetic absorbent). Dispose of the contaminated absorbent material by placing in a plastic bag and following disposal instructions on this label.

Triple rinse empty containers and add the rinsate to the mixing tank.

Cleaning of Equipment: When cleaning equipment do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources.

General Information: Performance of this product may be affected by local conditions, crop varieties, and application method. User should consult local extension service, agricultural experiment station, or university weed specialists, and state regulatory agencies for recommendations in your area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. Application rates lower than recommended will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry area of the western states, where control is difficult, the higher recommended rates should be used.

When product is used for weed control in crops, the growth stage of the crop must be considered.

Some plants and weeds, especially woody varieties, are difficult to control and may require repeat applications. Application rates should be 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. In either case, use the same amount of 2,4-D recommended per acre. For crop uses, do not mix with oil, surfactants, or other herbicides selectivity and could result in crop damage.

Aerial application should be used only when there is no danger of drift to susceptible crops. Many states have regulations concerning aerial application of 2,4-D formulations. Consult local regulatory authorities before making applications. Although this product is a low volatile formulation, at temperatures above 95°F vapors may damage susceptible crops growing nearby.

Because coarse sprays are less likely to drift than fine, do not use equipment (such as hollow cone small orifice nozzles) or conditions (such as high pressure) that produce such sprays.

Product should not be allowed to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes, and other vegetables. Product should not be used in greenhouses. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

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Users should note that herbicide treatment of public water 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 in your state.

If stored below freezing, it may be necessary to warm product to 40°F and agitate before using. This does not affect the efficiency of the product.

Spray equipment used to apply 2,4-D should not be used for any other purpose until thoroughly cleaned with a suitable chemical cleaner.

Spray Preparation: Add the recommended amount of product to approximately one-half the volume of water to be used for spraying. Agitate well, then add the remainder of the water. Continue agitation during application until spray tank is empty.

Use in Liquid Nitrogen Fertilizer: Product may be combined with liquid nitrogen fertilizer suitable for foliage application on corn, grass. pastures, or small grains in one operation. Use product according to directions on this label for those crops. Use liquid fertilizer at rates recommended by supplier or extension service specialist. Mix the product and fertilizer according to the following instructions:

Fill the spray tank approximately 1/2 full with the liquid fertilizer. Add the product while agitating the tank. Add the remainder of the liquid fertilizer while continuing to agitate. Apply immediately maintaining agitation during application until tank is empty. DO NOT APPLY DURING COLD (NEAR FREEZING) WEATHER. Spray mixture must be used immediately and may not be stored.

WHERE TO USE

This product is used to control broad-leaved weeds in cereal crops, corn, sorghum, weeds, and brush in rangeland, pastures, rights-of-way, and similar noncrop uses; and for aquatic weed control.

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PLANTS CONTROLLED

Product will kill or control the following in addition to many other noxious plants susceptible to 2,4-D:

alligatorweed arrowhead artichoke beggarticks bindweed, hedge bindweed, field bindweed, European bitterweed bitter wintercress blueweed, Texas boxelder broomweed buckbrush buckhorn buckwheat, wild bull thistle bulrush burdock burhead bur ragweed buttercup carpetweed catnip chamise chickweed chickory cocklebur coffeebean coffeeweed comflower coyotebrush creeping jenny croton curly indigo dandelion docks logfennel duckweed elderberry galinsoga goatsbeard goldenrod ground ivy haloge.on

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hemp hoary cress honeysuckle indigo ironweed jewelweed iimsonweed ladysthumb lambsquarters loco weed loco, big bend mallow, venice manzanita marshelder mexican weed milkvetch morningglory mustard nettles parrotfeather pennycress (fanweed) pennywort pepperweed pigweed plantains poison ivy pokeweed poorjo povertyweed puncturevine purslane rabbitbrush ragweed rape, wild redstem sage rush russian thistle sagebrush, big coast sagebrush, sand salisfy sand shinnery oak shepherdspurse sicklepod smartweed, annual

sneezeweed, bitter sowthistle spanishneedles, annual stinkweed sumac sunflower sweet clover tansyragwort thistle, musk tumbleweed velvetweed vervains vetch virginia creeper waterhyacinth waterlily water plantain waterprimrose wild garlic wild lettuce wild mustard wild onion wild radish willow witchweed wormwood yellow rocket

yellow starthistle

CROPS:

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Small Grains Not Underseeded With a Legume (Barley, Oats, Wheat, Rye): See table for recommended use rates.

Spray when weeds are small after grain begins tillering but before boot stage (usually 4 to 8 inches tall). Do not apply before the tiller stage nor from early boot through milk stage. To control large weeds that will interfere with harvest or to suppress perennial weeds, preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

Spring Planted Oats: Use 1/2 pint per acre in sufficient water to give good coverage. Apply after the fully tillered stage, except during the boot to dough stage.

Fall Planted Oats: Apply 1/4 to 1-1/4 pints per acre after full tillering but before early boot stage. Some difficult weeds may require higher rates of 3/4 to 1-1/4 pints per acre for maximum control, but injury may result. Do not spray during or immediately following cold weather.

Note: Oats are less tolerant to 2,4-D than wheat or barley and more likely to be injured. Do not forage or graze treated grain fields within 2 weeks after treatment with 2,4-D. Do not feed treated straw to livestock.

Corn: See table for recommended use rates.

Preemergence: Apply product from 3 to 5 days after planting but before corn emerges. Do not use on very light, sandy soils. Use the higher rates on heavy soils. Plant corn as deep as practical.

Post Emergence: Best results are usually obtained when weeds are small and corn is 4 to 18 inches tall. When corn is over 8 inches tall, use drop nozzles. Do not apply from tasseling to dough stage. If corn is growing rapidly and temperature and soil moisture content is high, use 1/2 pint per acre rate to reduce possibility of crop damage. Delay cultivation for 8 to 10 days to prevent stalk breakage due to temporary brittleness caused by 2,4-D. Application rates of up to 1 pint per acre may be used to control some hard to control weeds. However, the possibility of injury to the corn is increased.

If corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. Do not use with oil, atrazine, or other adjuvants. Since the tolerance to 2,4-D of individual hybrids varies, consult your local Extension Service, Agricultural Experiment Station, or University Weed Specialist for information.

Pre-Harvest: After the hard dough or denting stage, apply 1 to 2 pints of product per acre by air or ground equipment to suppress perennial weeds, decrease weed seed production, and control tall weeds such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower, velvetleaf, and vines that interfere with harvesting. Do not forage or feed corn fodder to livestock for 7 days following application.

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Sorghum (Milo): See table for recommended rate.

Apply to sorghum when crop is 4 to 12 inches high with secondary roots well established. Use drop nozzles when crop is over 10 inches high. Do not apply from flowering to dough stage. Rates of up to 1 pint per acre may be used to control some hard to control weeds. However, the chance of crop injury is increased with the higher rates. Do not use with oil. Use lower rate if conditions of high temperature and high soil moisture exist.

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Crop (See Detailed Instructions Above)	Rate, Average Conditions	Rate, Dry Conditions as in Western States*	
Small Gains (Wheat Barley, Rye***):			
Annual Weeds	1/2 to 1 pint	1 to 2 pints	
Perennial Weeds	1 pint	1-1/4 to 2 pints	
Preharvest	1 to 2 pints		
Oats:			
Spring	1/2 pint		
Fall	1/2 to 3/4 pint		
Corn:			
Preemergence	1 to 2 quarts		
Postemergence	1/2 pint	• 1/2 to 3/4 pint	
Preharvest	1 to 2 pints	-	
Sorghum (Milo):			
Postemergence	1/2 pint	1/2 to 3/4 pint	
*Arizona, Idaho, Montana, Ne	vada, Orcgon, Utah, Washing	-	

Recommended Rates of Weed Rhap LV-4D Per Acre**

egon, Utah, Washington, Wyoming.

**If band treatment is used, base the dosage rate on the actual area sprayed.

***Not for use on rye in California.

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Sugarcane:

Use one quart per acre as a preemergence application before canes appear or 2 quarts per acre as a blanket spray after cane emerges and through layby, to aid in the control of Johnsongrass seedlings and susceptible broadleaf weeds.

Ornamental Turf:

Use 1 to 3 pints of product for each application in enough water to give good coverage to one acre on established stands of perennial grasses, depending on type of weeds and stage of growth. Do not use on creeping grasses such as bent grass except for spot spraying. Newly seeded turf should not be treated until after the second mowing and the lower dosage rate should be used.

NOTES FOR ALL TURF SITES: (excluding sod farms)

Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

The maximum number of broadcast applications per treatment site is 2 per year.

When using this product, wear long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves.

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

Grass Seed Crops:

Apply 1 to 4 pints of product per acre in the Spring or Fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 3/4 to 1 pint per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4 pints per acre can be used to control hard to kill annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth. Do not use on bent grass unless injury can be tolerated. 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.

Fallow Land:

On established perennial species such as Canada thistle and field bindweed, apply up to 3 quarts per acre of product. For annual broadleaf weeds, apply 1 to 2 quarts per acre. Do not plant any crop for 3 months after treatment or until 2,4-D has disappeared from soil.

Established Pastures and Rangelands:

For each application, use 1 to 4 pints per acre per site 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.

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General Weed Control (Airfields, Roadsides, Vacant Lots, Drainage Ditch Banks, Fence Rows, Industrial Sites, and similar areas):

Use 1 to 3 quarts of product per acre per site. Usually 2 quarts per acre will give adequate control. Do not use on herbaceous ground covers or creeping grass such as bent grass. Legumes will usually be damaged or killed. Deep-rooted perennials may require repeat applications. Do not use on freshly seeded turf until grass is well established. Delay reseeding for 30 days or until 2,4-D has disappeared from soil. (See NOTES FOR ALL TURF SITES above).

Woody Plant Control:

To control woody plants susceptible to 2,4-D, such as alder, buckbrush, elderberry, sumac, and willow on non-crop areas, use 2 to 3 quarts of product per acre in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of runoff. Higher volumes of up to 400 gallons per acre are necessary where the brush is very dense and over 6 to 8 feet high. Applications are more effective when made on actively growing plants. Treatment should not be made during time of severe drought or in early Fall when leaves lose their green color. Hard to control species may require re-treatment next season.

USES IN FOREST MANAGEMENT

Conifer Release:

For control of alder, for each application apply 1-1/2 to 2 quarts of product per acre per site in 8 to 25 gallons of water, and apply as a foliage spray between mid-May and mid-June.

For control of madrone, manzanita, oak, tanoak, and similar species to release hemlock, spruce, and firs, for each application apply 3 quarts of product per acre per site in 8 to 25 gallons of water, just prior to or during budbreak of Douglas fir.

After northern conifers, jack pine, red pine, black spruce, and white spruce cease growth and "harden off" in late summer, a spray of 1-1/2 to 3 quarts of product for each application in 8 to 25 gallons of water per acre per site may be applied by air to control certain competing hardwood species such as alder, aspen, birch, hazel, and willow. Since this treatment may cause occasional conifer injury, do not use if such injury cannot be tolerated. Consult your regional or extension forester or state herbicide specialist for recommendations to fit local conditions.

For control of hazel brush and similar species in the Lake States area, for each application apply 2 quarts of product per acre per site in 8 to 25 gallons of water, when new shoot growth of hazel is complete.

Site Preparation:

(As Budbreak Spray) - For control of alder prior to planting seedlings, for each application apply 2 to 4 quarts of product per acre per site in 8 to 25 gallons of water, after alder budbreak but before foliage is 1/4 full size.

(As Foliage Spray) - For control of alder prior to planting seedlings, apply 2 quarts of product per acre in 8 to 25 gallons of water, after most alder leaves are full size.

AQUATIC APPLICATIONS

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For Aquatic Weeds in Lakes, Ponds, Drainage Ditches, and Marshes:

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Use 2-1/2 to 4-1/2 pints of product in 50 to 100 gallons of water per acre. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed above water line and plants are actively growing. Your State Conservation Department or Game and Fish Commission will assist you in determining the best time and rate for application under local conditions.

DO NOT APPLY to more than 1/3 to 1/2 of a lake or pond in any one month, because excessive decaying vegetation may deplete oxygen content of water, killing fish.

Perennial and other hard to control weeds nay require a repeat application to give adequate control.

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.