

PM 23

19713-345

7-2-96

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Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0080. Approval expires 05-31-98



United States  
**Environmental Protection Agency**  
 Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

242988

### Application for Pesticide - Section I

1. Company/Product Number 19713-345	2. EPA Product Manager Joanne Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Drexel 4# Low Volatile Ester Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Drexel Chemical Company P. O. Box 13327 Memphis, TN 38113-0327  <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

### Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input checked="" type="checkbox"/> Resubmission in response to Agency letter dated <u>6/3/96</u>	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Deletion of Uses - Revocation of Generic Data Exemption

### Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
* Certification must submitted		If "Yes" Unit Packaging wgt.	No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
		If "Yes" Package wgt.	No. per container	<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

### Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Barbara Brown	Title Registration Specialist	Telephone No. (Include Area Code) 901/774-4370
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received  <b>(Stamped)</b>
2. Signature <i>Barbara Brown</i>	3. Title Registration Specialist	
4. Typed Name Barbara Brown	5. Date 7/1/96	

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# DREXEL 4# LOW VOLATILE ESTER HERBICIDE

## ACTIVE INGREDIENT:

\*Isooctyl ester of 2,4-Dichlorophenoxyacetic  
Acid.....

65.4%

## INERT INGREDIENTS:

34.6%

TOTAL.....

100.0%

\*Equivalent to 43.4% 2,4-D Acid or 3.76 pounds per gallon.  
Isomer specific by AOAC Method No. 6,D01-5 (12th ed)

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

### STATEMENT OF PRACTICAL TREATMENT

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

Manufactured By:  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-0327

EPA Reg. No. 19713-345  
EPA Est. No. 19713-GA-1

June 25, 1996 - Deletion of uses; Agency Ltr 6/3/96

### PRECAUTIONARY STATEMENTS

**CAUTION**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if swallowed or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing. May produce skin sensitization reaction in certain individuals. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. 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.

**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 E on an EPA chemical resistance category selections chart.

Applicators and other handlers, including persons repairing or cleaning equipment 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 such as face shield or safety glasses (brow and temple protection recommended). Eye protection is not required for ground or aerial applicators in completely enclosed cabs or cockpits.

**NOTE:** For containers of over 1 gallon, but less than 5 gallons: Persons engaged in pouring this product must also wear coveralls or chemical-resistant apron. 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.

For containers 5 gallons or more: 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. 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.

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's use clothing or PPE must not be reused until it has been cleaned.

**USER SAFETY RECOMMENDATIONS**

Users should:

Wash hands, face and arms with soap and water as soon as possible after mixing, loading or applying this product and before eating, smoking, or drinking. Wash hands and arms before 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. After work, remove all clothing, shower using soap and water and change into clean clothing.

Laundry clothing worn during mixing, loading, application or cleaning and repairing equipment before reuse.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget 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.

**MIXING AND LOADING**

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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.

#### 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 through any type of irrigation system.

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 exemptions 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.

#### GENERAL INFORMATION

4# LOW VOLATILE ESTER is intended for the control of many broadleaf weeds, herbaceous perennials and woody plants susceptible to 2,4-D in grass pastures, certain crops, and non-crop areas.

Apply 4# LOW VOLATILE ESTER as water or spray oil during warm weather when weeds or brush are actively growing. Application under drought conditions often will give poor results. Use low spray pressure to minimize drift. On cropland and along roadsides, do not exceed 20 psi pressure. Apply enough spray volume to provide uniform coverage of weeds and brush, usually 5 to 20 gallons per acre by ground equipment and 3 to 5 gallons by aircraft. Higher gallonage may be used if desired to improve spray coverage. Generally, the lower dosages recommended on this label will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species and under conditions where control is more difficult, the higher dosages will be needed. For crop uses, do not mix with oil or other adjuvants unless specifically recommended on this label. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated applications for maximum control. Do not apply 4# LOW VOLATILE ESTER where spray drift may contact nearby susceptible crops or other desirable plants or may contaminate water for irrigation or domestic use. Read and follow all Use Precautions given on this label.

NOTE: If there are uncertainties concerning special local use situations or specific crop variety tolerances to 2,4-D, consult your State Agricultural Experiment Station or local Extension Service weed specialist for advice.

#### GENERAL USE PRECAUTIONS

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

**Avoid Contact With 2,4-D Susceptible Crops and Other Desirable Broadleaf Plants:** Do not apply directly to or otherwise permit even minute amounts to contact cotton, grapes, tobacco, fruit trees, vegetables, flowers, ornamentals, or other desirable plants susceptible to 2,4-D. Do not use in or near a greenhouse.

**DO NOT APPLY IN THE VICINITY OF COTTON, GRAPES, TOBACCO, TOMATOES OR OTHER DESIRABLE 2,4-D SUSCEPTIBLE CROPS OR PLANTS. DO NOT SPRAY WHEN WIND IS BLOWING TOWARDS SUSCEPTIBLE CROPS OR ORNAMENTAL PLANTS.**

**Avoid Spray Drift:** Applications should be made only when there is no hazard from spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible crops during both growing and dormant periods. Use coarse sprays to minimize drift since, under adverse weather conditions, fine spray droplets may drift a mile or more. A spray thickening agent such as NALCO-TROL, may be used with this product to aid in reducing spray drift. If used, follow all use recommendations and precautions on the product label.

**Ground Equipment:** With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using no more than 20 pounds spraying pressure at large droplet producing nozzle tips; by spraying when wind velocity is low; and by stopping all spraying when wind exceeds 6 to 7 miles per hour. Do not apply with hollow cone-type insecticide or other nozzles that produce a fine-droplet spray.

**Determine Air Movement and Direction Before Foliar Application:** Use a smoke generator or other means at or near the application site for the detection of air movement, air stability or temperature inversions. Such a condition exists when there is little or no wind and air temperature is lower near the ground than at higher levels. Use appropriate drift control measures or avoid application when smoke is moving toward nearby desirable susceptible plants and sensitive areas.

**Aerial Application:** With aircraft, drift can be lessened by applying a coarse spray; by using no more than 20 pounds spray pressure at the nozzles; by using straight stream nozzles directed straight back, by using a spray boom no longer than 3/4 the wing or rotor span of the aircraft; and by spraying only when wind velocity is less than 6 mph.

Excessive amounts of this herbicide in the soil may temporarily inhibit seed germination or plant growth. Violent wind storms may move soil particles. If 2,4-D is on soil particles and they are blown onto the susceptible plants, visible symptoms may appear. Serious injury is unlikely. The hazard of movement of 2,4-D on dust is reduced if treated fields are irrigated or if rain occurs shortly after application.

At high temperatures, vapors from this product may injure susceptible plants growing nearby. To avoid injury to desirable plants, do not handle or apply other agricultural chemicals with the same equipment used for 4# LOW VOLATILE ESTER unless appropriately cleaned first. Local conditions may affect the use of herbicides. Consult your State Agricultural Experiment Station or Extension Service weed specialists for cleaning methods which are in compliance with local regulations and for advice in selecting treatments from this label to best fit local conditions. Be sure that use of this product conforms to all applicable regulations.

**WEEDS CONTROLLED**

4# LOW VOLATILE ESTER is recommended for control of numerous broadleaf weeds and certain 2,4-D susceptible woody plants without injury to most established grasses. Species controlled include the following, plus many others:

Beggarticks	Jimsonweed	Salsify
Bitterweed	Ladysthumb	Sand shinnery oak
Blueweed, Texas	Lambsquarter	Shepherdspurse
Broomweed	Loco, bigbend	Sicklepod
Buckbrush	Mallow, venice	Smartweed (annual)
Buckwheat, wild	Manzanita	Sneezeweed, bitter
Burdock	Marshelder	Sowthistle, annual
Burhead	Milkvetch	Spanishneedles
Carpetweed	Morningglory, annual	Sumac
Catnip	Nettles	Sunflower
Chamise	Onion, wild	Sweetclover
Chicory	Pennycress (fanweed)	Thistle, bull
Cocklebur	Pepperweed, field	Thistle, musk
Coffeeweed	Pigweed*	Thistle, Russian
Cornflower	Plantains	Tumbleweed
Coyotebrush	Poorjoe	Velvetleaf
Croton	Rabbitbrush	Vervains
Dandelion	Radish, wild	Vetch
Docks	Ragweed	Water plantain
Dogfennel	Ragwort, tansy	Wild mustard
Elderberry	Rape, wild	Willow
Galinsoga	Redstem	Witchweed
Garlic, wild	Sage, coastal	Wormwood
Goatsbeard	Sagebrush, big	Yellow rocket
Hemp, wild	Sagebrush, sand	Yellow sandthistle
Jewelweed		

\*The control of "hybrid" pigweeds appears to be less satisfactory from 2,4-D products than formerly experienced on "non-hybrid" varieties. Since 2,4-D herbicides are not as effective on the "hybrid" pigweeds, it is necessary to apply higher rates of 2,4-D for control, especially later in the growing season. Higher rates injure some crops, so less than satisfactory pigweed control may be experienced by the highest tolerated crop dosages.

**TO PREPARE THE SPRAY**

(1) Fill the spray tank about half full with water, then add the required amount of 4# LOW VOLATILE ESTER with agitation, and finally the rest of the water.

NOTE: 4# LOW VOLATILE ESTER in water forms an emulsion which tends to separate unless the mixture is kept agitated.

(2) If oil is added, first mix the 4# LOW VOLATILE ESTER and the oil and then add this mixture to the water. However, with adequate agitation, the oil can be added after 4# LOW VOLATILE ESTER is mixed with water.

(3) If straight oil is used, a solution is formed and separation does not occur. Do not allow any water to get into the oil-herbicide mixture to avoid formation of an invert emulsion.

**USE IN LIQUID NITROGEN FERTILIZER**

This product may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish broadleaf weed control and fertilization of corn, small grains or pastures in single operation. Use 4# LOW VOLATILE ESTER in accordance with recommendations for these crops provided in this label. Use liquid fertilizer at rates recommended by the supplier or Extension Service Specialist. Test for mixing compatibility by mixing spray ingredients in correct proportions in a clear glass jar before mixing in spray tank. A compatibility aid such as Unite or Compex may be needed in some situations. Compatibility is best with liquid fertilizer solutions containing only nitrogen. Mixing with N-P-K solutions may not be satisfactory, even with the addition of a compatibility aid. Pre-mixing 4# LOW VOLATILE ESTER with 1 to 4 parts water may help in situations when mixing difficulty occurs.

Fill the tank about half full with the liquid fertilizer, then add the required amount of 4# LOW VOLATILE ESTER with agitation. Maintain agitation and complete filling the tank with liquid fertilizer. Apply immediately and continue agitation in spray tank during application. Do not store the spray mixture. Application during very cold weather (near freezing) is not advisable.

**APPROVED USES**

**Crop and Forestry Uses**

**Agricultural Use Requirements for Crops and Forestry**

For the following crop and forestry uses, follow PPE and Reentry Instructions in the "Agricultural Use Requirements" section of this label.

**WEED CONTROL IN SMALL GRAINS NOT UNDERSEEDED WITH A LEGUME (Spring and Winter Wheat, Barley and Rye):** Apply 1/2 to 1 pint per acre. Spray when grain is in full tiller stage (usually 4 to 8 inches tall) but before the boot stage and boot to dough stage. For improved control of difficult weeds including wild garlic and wild onion or under dry or cool conditions, apply up to 2 pints per acre. Wild garlic and wild onion may not be killed but dockage should be reduced. Do not use higher rates unless possible crop injury will be acceptable. Consult State Agricultural Experiment Station or Extension Service Weed Specialists for recommendations or suggestions to fit local conditions. Do not permit dairy animals or meat animals being finished for slaughter to forage or graze in treated grain fields within 2 weeks after treatment.

**SPRING SEEDED OATS:** Apply 1/2 pint per acre at the full tiller stage but before the early boot stage. Oats are less tolerant to 2,4-D than wheat or barley and are more likely to suffer some injury. Do not permit dairy animals or meat animals being finished for slaughter to forage or graze in treated grain fields within 2 weeks after treatment.

**FALL SEEDED OATS (SOUTHERN) GROWN FOR GRAIN:** Apply 3/4 to 1-1/4 pints per acre after full tillering but before the early boot stage. Some difficult weeds may require higher rates for maximum control but crop injury may result. Do not spray during or immediately following cold weather. Do not permit dairy animals or meat animals being finished for slaughter to forage or graze in treated grain fields within 2 weeks after treatment.

**Preharvest Treatment:** Apply 1 to 2 pints per acre when grains are in the hard dough stage to control large weeds that may interfere with harvest. Best results will be obtained when soil moisture is sufficient to cause succulent weed growth.

**NOTE:** Do not feed treated straw to livestock.

**CONTROL OF WILD GARLIC AND WILD ONION IN STUBBLE GRAIN FIELDS:** Following harvest of small grains, soybeans, corn or grain sorghum, wild garlic and wild onion often produce new fall growth. This new growth may be treated with 4# LOW VOLATILE ESTER at a rate of 2 to 3 quarts per acre. This treatment practice is useful as part of an overall control program. Do not forage for 7 days after application.

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**WEED CONTROL IN CORN** (Use one of the following programs)

**Pre-emergence:** Apply 1 to 2 quarts per acre to soil anytime after planting but before corn emerges. Only emerged broadleaf weeds are likely to be controlled. Do not apply more than 1 quart per acre unless the increased risk of crop injury can be tolerated. Do not use on light sandy soil.

**Emergence:** Apply 1 pint per acre just as corn plants are breaking ground.

**Post-emergence:** After emergence of corn use 1/2 pint per acre. Application of 3/4 to 1 pint per acre may be needed for maximum control of some weeds but such rates are more likely to injure the corn. If corn is over 8 inches tall, use drop nozzles to keep the spray off the corn foliage as much as possible. Do not apply from the tasseling to dough stage. Do not use with atrazine, oil or other adjuvants. Crop injury is more likely to occur if corn is growing rapidly under high temperature and high soil moisture conditions. To reduce breakage of stalks from temporary brittleness caused by 2,4-D, delay cultivation for 8 to 10 days after treatment. Do not forage or feed corn fodder for 7 days following application.

**NOTE:** Hybrids vary in response to 2,4-D and some are easily injured. Spray only varieties known to be tolerant to 2,4-D. Contact seed company or your Agricultural Experiment Station or Extension Service weed specialists for this information.

**PRE-HARVEST CORN TREATMENT:** After the hard dough or denting stage, apply 1 to 2 pints 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 for 7 days following application.

**WEED CONTROL IN SORGHUM (MILO):** Apply 1/2 pint per acre when sorghum is 5 to 15 inches tall. A higher rate of 3/4 to 1 pint per acre may be needed to control some weeds but the chance for crop injury is likewise increased. Do not use with oil. Do not treat before the sorghum is 5 inches tall nor during the boot, flowering or early dough stages. If sorghum is taller than 8 inches, use drop nozzles to keep the spray off the foliage as much as possible. Temporary crop injury may occur under conditions of high soil moisture and high air temperatures. Varieties vary in tolerance to 2,4-D and some hybrids are quite sensitive. Spray only varieties known to be tolerant to 2,4-D. Contact seed company or your Agricultural Experiment Station or Extension Service weed specialists for this information.

~~**WEED CONTROL IN SUGARCANE:** Pre-emergence: Apply 2 pints per acre before cane emerges to control actively growing broadleaf weeds.~~

~~Post-emergence: Apply 2 to 4 pints per acre after cane emerges through layby. Use the higher rate for perennial weeds and hard to control species.~~

**WEED CONTROL IN FALLOW LAND AND CROP STUBBLE:** Apply 1 to 2 pints per acre for control of annual and biennial broadleaf weeds. Use the higher rate on older drought stressed plants or hard to kill species. Apply 2 to 6 pints per acre for control of perennial broadleaf weeds. Spray weeds in the bud to bloom stage or in good vegetative growth. Do not plant treated fallow land for three months or until chemical has disappeared from soil.



**CONTROL OF WOODY WEEDS IN LOW-BRUSH BLUEBERRY FIELDS IN MAINE (How to Use)**

Mount a drum 8 to 10 feet long or some other suitable length and 1 1/2 to 2 feet in diameter on an axle such as an old hay rake frame. Cover the drum with water absorbent yet tough cloth which will resist rapid wear and tear. Draw the cloth covered drum across the blueberry field and at the same time spray evenly onto the full length of the top of the cloth covered drum a spray mixture made by diluting 1 quart of 4# LOW VOLATILE ESTER in 50 gallons of water per acre. Have the drum mounted so that as it revolves on its axis it is high enough to miss most of the low brush blueberry stems yet low enough to forcibly brush the spray saturated cloth covered drum against the higher woody weeds principally sweet fern wild cherry and poplar. Keep the cloth wet enough to provide top coverage of the weeds yet not so wet as to allow runoff of the liquid which could cause injury to the blueberry plants.

**When to Use** Apply during June and July when weed tops have emerged sufficiently above the blueberry stems to allow treatment of the weeds and not the blueberry plants. Apply only during the year before the first burn. To use this method of weed control two year burns should be extended to three years.

**CAUTION** Do not allow the spray being applied to the cloth covered drum to be directed onto the blueberries. Do not harvest rake field during the herbicide treatment or for a two year interval thereafter.

**FOREST SITE PREPARATION** For control of susceptible broadleaf weeds and brush on sites to be planted in forests use 1.5 to 4 quarts per acre of 4# LOW VOLATILE ESTER in sufficient spray volume for good plant coverage usually 6 to 25 gallons. Application can be made by air or ground (hand gun boom or powered knapsack sprayer). Two to eight quarts of diesel oil per acre or a suitable surfactant or penetrant may be added to improved brush control.

**FOREST CONIFER RELEASE** For applications in late winter or spring to control susceptible deciduous brush species such as alder willow poplars cascara cherry service cherry and vine maple during early growth and before conifer budbreak use 4# LOW VOLATILE ESTER at rates up to 3 quarts per acre in diesel or stove oil by air or ground in sufficient spray volume for good plant coverage usually 6 to 25 gallons. Do not use in plantations where pine or larch are among the desired species.

For treatment before conifer budbreak to control susceptible evergreen brush species such as tanoak mandrone chinquapin ceanothus spp and manzanita or deciduous brush after leafout or broadleaf weeds use 4# LOW VOLATILE ESTER at rates of suitable surfactants or penetrants. After conifer budbreak 4# LOW VOLATILE ESTER without oil surfactant or penetrant can be used at a rate of up to 2 quarts per acre but may cause injury or suppression of the conifer growth. Use sufficient volume of spray for good coverage of brush usually 6 to 25 gallons. Some species of pine may be seriously injured by treatment at these growth stages.

After conifer species such as white pine ponderosa pine jack pine red pine black spruce white spruce red spruce and balsam fir cease growth and harden off and brush is still actively growing in late summer 1.5 to 3.0 quarts of 4# LOW VOLATILE ESTER per acre in enough water to obtain good plant coverage may be applied by air or ground 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.

**DIRECTED SPRAYS IN CONIFER PLANTATIONS (including pine)** Apply 4# LOW VOLATILE ESTER at any time brush or broadleaf weeds are susceptible by directing spray around the conifers to avoid contact of needles with injurious amounts of spray. Rates of 4# LOW VOLATILE ESTER are not to exceed 4 quarts per acre in oil oil water or water carrier at 10 to 100 gallons per acre.

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**RANGELAND, PASTURE AND NON-CROP USES:** Use Requirements for Rangeland, Pasture and non-cropland Areas: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is applied to rangeland, pasture, or non-cropland areas.

**WEED AND BRUSH CONTROL IN RANGELAND, CONSERVATION RESERVE AND GRASS PASTURES:** For Conservation Reserve Land, follow all applicable state and federal regulations. Follow the most severe grazing restrictions imposed either by the pesticide label or by the USDA Acreage Conservation Reserve Program, whichever is longest.

**NOTE:** Do not use on bent grass, alfalfa, clover, or other legumes.  
Do not use on newly seeded areas until grass is well established.  
Do not use from early boot to milk stage where grass seed production is desired.

**Grazing Restrictions:** Do not graze lactating dairy animals on treated areas within 7 days after application. Do not harvest grass cut for hay from treated areas for 30 days. Withdraw meat animals from treated forage at least 3 days before slaughter.

**CONTROL OF BITTERWEED, BROOMWEED, CROTON, DOCKS, KOCHIA, MARSHLEDER, MUSKTHISTLE, AND OTHER BROADLEAF WEEDS:** Use 2 quarts of 4# LOW VOLATILE ESTER per acre in the amount of water need for uniform application. If the weeds are young and growing actively, 1 quart per acre will provide control of some species. Deep-rooted perennial weeds may require repeated treatments in the same year or in subsequent years.

**CONTROL OF WILD GARLIC AND WILD ONION:** Apply 2 to 3 quarts per acre, making three application (fall-spring-fall or spring-fall-spring) starting in late fall or early spring.

**CONTROL OF WEED CONTROL IN NEWLY SPRIGGED COASTAL BERMUDAGRASS:** Apply 1 to 2 quarts per acre pre-emergence and/or post-emergence.

**CONTROL OF SAND SHINNERY OAK AND SAND SAGEBRUSH:** On the oak, use 1 quart in 5 gallons of oil or in 4 gallons of water plus 1 gallon of oil per acre. Apply by aircraft between May 15 and June 15. On the sagebrush, use 1 quart in 3 gallons of oil per acre and apply by aircraft when foliage is fully expanded and the brush is actively growing.

**CONTROL OF BIG SAGEBRUSH AND RABBITBRUSH:** Use 2 to 3 quarts per acre in 2 to 3 gallons of oil or in 3 to 5 gallons of oil-water emulsion spray. For rabbitbush, the 3 quart rate is usually required. Brush should be leafed out and growing actively when treated. Retreatment may be needed.

**CONTROL OF CHAMISE, MANZANITA, BUCKBRUSH, COASTAL SAGE, COYOTEBRUSH AND CERTAIN OTHER CHAPPAREL SPECIES:** Use 2 quarts per acre in 5 to 10 gallons of water. One gallon of fuel oil may be included in the spray mixture for added effectiveness. Make application by aircraft or ground equipment to obtain uniform spray coverage. For effective control, the brush must be fully leafed out and growing actively when sprayed. Retreatment may be needed.

**WOODY PLANT CONTROL IN NON-CROP AREA:** To control species susceptible to 2,4-D in rights-of-way, fencerows, roadsides, and along drainage ditch banks, spray brush up to 5 to 8 feet tall after spring foliage is well developed, using 3 to 4 quarts of 4# LOW VOLATILE ESTER in 100 gallons of water and wetting all parts of the brush including foliage, stems and bark. This may require up to 400 gallons of spray per acre for adequate coverage of solid stand of brush. Make application in such a way as to prevent drift of the spray off the area being treated. Spraying can be effective at any time up to 3 weeks before frost as long as the soil moisture is sufficient for active growth of the brush. Control will be less effective in midsummer during hot dry weather when soil moisture is deficient and plants are not actively growing. Oil or wetting agent may be added to the spray, if needed for increased effectiveness.

**WEED CONTROL IN NON-CROP AREAS, AIRFIELDS, ROADSIDES, VACANT LOTS, DRAINAGE DITCH BANKS:** Apply 1 to 3 quarts of 4# LOW VOLATILE ESTER per acre in the amount of water needed for uniform application. Usually 2 quarts per acre provides good weed control under average conditions. Treat when weeds are young and growing well. Do not use on dichondra or other broadleaf herbaceous ground covers. Do not use on creeping grasses such as bent and St. Augustine except for spot treating, nor on newly seeded turf until grass is well established. Reseeding of treated areas should be delayed following treatment. With spring application, reseed in the fall; with fall application, reseed in the spring. Legumes are usually damaged or killed so do not treat areas where legumes are desired. Deep-rooted perennial weeds may require repeated treatments in the same season or in subsequent years.

**TULE (BULERUSH) AND OTHER RUSHES:** Mix 2 quarts of 4# LOW VOLATILE ESTER and 1 gallon of diesel oil or kerosene, than add this mixture to 100 gallons of water. Spray to wet all foliage (400-800 gallons per acre). Addition of a wetting agent may be advisable. Apply in the spring during flower head emergence. Respray if needed when regrowth is 3 to 5 feet tall.

**SPOT TREATMENT:** To control broadleaf weeds in small non-cropland areas with a hand sprayer, use 1/4 pint of 4# LOW VOLATILE ESTER in 3 gallons of water and spray to thoroughly wet all weed foliage. Keep spray mixture agitated to prevent separation.

**TURF USES:** Use Requirements for Turf Including Grass Seed Crops

**Restricted Entry Interval:** When used on grass seed crops, follow PPE and reentry instructions in the "Agricultural Use Requirements" section of this label. For use on other turf areas, do not allow people (other than the applicator) or pets on treatment area during application. Do not enter into treated areas until sprays have dried.

**Restrictions on Retreatment:** Do not apply more than 2 broadcast application per year per treatment site.

**WEED CONTROL IN GRASS SEED CROPS:** Use 1 to 1-1/2 pints per acre in the amount of water required for uniform application by air or ground equipment. Apply to established stands in the spring from the tiller to early boot stage. Do not spray in boot stage. New spring seedlings may be treated with the lower rate after the grasses have at least five leaves. Perennial weed regrowth may be treated in the fall.

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**WEED CONTROL IN TURF AREAS SUCH AS LAWN, GOLF COURSES, CEMETERIES, AND PARKS:** Apply 1 to 2 quarts of 4# LOW VOLATILE ESTER per acre in the amount of water needed for uniform application. Usually 2 quarts per acre provides good weed control under average conditions. Treat when weeds are young and growing well. Do not use on golf greens nor on dichondra or other broadleaf herbaceous ground covers. Do not use on creeping grasses such as bent and St. Augustine except for spot treating, nor on newly seeded turf until grass is well established. Reseeding of treated areas should be delayed following treatment. With spring application, reseed in the fall, with fall application, reseed in this spring. Legumes are usually damaged or killed so do not treat areas where legumes are desired. Deep-rooted perennial weeds may require repeated treatments in the same season or in subsequent years.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal. Protect from freezing. If stored below 32° F and crystals form, warm to 72° F for 24 hours, periodically rolling drum to reconstitute. Do not use, pour, spill, or store near heat or open flame.

**PESTICIDE DISPOSAL**

Pesticides 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**

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. 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, follow the steps referred to in the "Mixing and Loading" section of this label.

**WARRANTY - CONDITION OF SALE**

**OUR RECOMMENDATIONS FOR USE** of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage, and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.