



# DuPont™ Krovar® I DF

herbicide

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*“..... A Growing Partnership With Nature”*

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# DuPont™ Krovar® I DF

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## herbicide

### Dispersible Granules

	By Weight
<b>Active Ingredients</b>	80%
Bromacil [5-bromo-3-sec-butyl-6-methyluracil]	40%
Diuron [3-(3,4-dichlorophenyl)-1,1-dimethylurea]	40%
<b>Inert Ingredients</b>	20%
<b>TOTAL</b>	100%

EPA Reg. No. 352-505

### KEEP OUT OF REACH OF CHILDREN CAUTION FIRST AID

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for medical emergencies involving this product.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.

#### 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 A on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- Shoes plus socks.

Discard clothing or 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.

#### ENGINEERING CONTROL STATEMENT

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

#### USER SAFETY RECOMMENDATIONS

**Users should:** Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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.

#### ENVIRONMENTAL HAZARDS

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

Bromacil is known to leach through soil and has been found in ground water as a result of normal field use. Users are advised not to apply in areas where soils are permeable, particularly where ground water is used for drinking water. Consult with the pesticide state lead agency for information regarding soil permeability and aquifer vulnerability in your area.

## GENERAL INFORMATION

DuPont™ KROVAR® I DF is a dispersible granule to be mixed in water and applied as a spray for selective control of weeds in citrus and for non-crop weed control.

KROVAR® I DF controls many annual weeds and, at the highest rates allowed by this label, it controls certain perennial weeds.

Moisture is necessary to move the herbicide into the root zone of weeds. Best results are obtained if treatment is made to moist soil, and moisture is supplied by rainfall or sprinkler irrigation within two weeks after application. Weed control symptoms are slow to appear and may not become apparent until the herbicide has been carried into the root zone of the weeds by moisture. The degree and duration of control will vary with the amount of herbicide applied, soil texture, rainfall, and other soil and water management practices. .

## USE PRECAUTIONS AND RESTRICTIONS

KROVAR® I DF is not to be used in any recreational areas or around homes.

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

Do not apply (except as recommended for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts or similar areas. Do not use in home fruit plantings nor in citrus orchards interplanted to other trees or desirable plants. Prevent drift of dry powder or spray to desirable plants. Keep from contact with fertilizers, insecticides, fungicides and seeds.

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

Do not graze cattle in treated areas.

Treated areas may be planted to citrus trees one year after last application. Do not replant to other crops within two years after last application as injury may result.

NOTE: Additional Precautions

Avoid storage of pesticides near well sites.

Calibrate sprayers only with clean water away from the well site.

Measure out only enough KROVAR® I DF for the job at hand.

Avoid over-filling the spray tank.

Do not discharge excess material as a point source.

Dilute and agitate excess spray solution and apply at labeled rates.

## CROP ROTATION BIOASSAY

In arid climates (10 inches of rainfall or less) or areas where drought conditions have prevailed for one or more years, a field bioassay should be completed prior to planting any desired crop(s). The results from this bioassay may require the two-year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. KROVAR® I DF herbicide should only be used in accordance with recommendations on this label. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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.

## AGRICULTURAL USES

### 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 made of any Waterproof material.

Shoes plus socks.

## APPLICATION INFORMATION

Apply DuPont™ KROVAR® I DF with a properly calibrated fixed-boom power sprayer as a band or broadcast treatment. Apply any time of year provided overhead moisture (rainfall or sprinkler irrigation) is available to activate the herbicide, preferably just before or just after weeds have germinated.

All use rates of KROVAR® I DF are expressed for broadcast treatments. For band treatments, use proportionately less.

Use sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. Continuous agitation in the spray tank is required to keep the product in suspension. Agitate spray tank contents by mechanical or hydraulic means. If a by-pass or return line is used, it should terminate at a bottom of tank to minimize foaming. Do not use air agitation.

Best results are obtained if KROVAR® I DF is applied to bare ground. If weeds are present at application, tank mixtures with foliar active herbicides are recommended (see Tank Mixtures section of label). If dense populations of hard-to-kill weed species are present, control of these weeds prior to application of KROVAR® I DF is recommended.

### TANK MIXTURES

KROVAR® I DF may be tank mixed with other suitable herbicides registered for use in citrus. Refer to the tank mixture partner label(s) for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

KROVAR® I DF may also be tank mixed with appropriate adjuvants used with herbicides in citrus.

NOTE: If there is no prior use experience with the tank mixture combination, a compatibility test should be performed prior to adding the products into the spray tank. See SPRAY PREPARATION section of the label for further information.

When using KROVAR® I DF alone or in combination, thoroughly re-agitate the spray tank contents if allowed to settle.

## WEEDS CONTROLLED

### Annuals

Barnyardgrass  
Brome, downy (cheatgrass)  
Chickweed, common  
Chickweed, mouseear  
Clovers (annual)  
Filaree  
Fleabane, flaxleaved (hairy)  
Foxtail  
Goatweed  
Groundsel  
Horseweed (marestail)  
Johnsongrass  
Junglerice  
Kochia  
Lambsquarter  
Lettuce, wild  
Mustard, wild  
Natalgrass (red top)  
Nightshade (annual)  
Pigweed  
Pineappleweed  
Puncturevine, common  
Purslane, common  
Pusley, Florida  
Ragweed, common  
Sandbur (sandspur)  
Shepherdspurse  
Sowthistle, annual  
Spanishneedles  
Thistle, Russian

*Echinochloa crus-galli*  
*Bromus tectorum*  
*Stellaria media*  
*Cerastium vulgatum*  
*Trifolium spp.*  
*Erodium spp.*  
*Conyza bonariensis*  
*Setaria spp.*  
*Scoparia dulcis*  
*Senecio spp.*  
*Conyza canadensis*  
*Sorghum halepense*  
*Echinochloa colona*  
*Kochia scoparia*  
*Chenopodium album*  
*Lactuca serriola*  
*Brassica kaber*  
*Rhynchelytrum repens*  
*Solanum spp.*  
*Amaranthus spp.*  
*Matricaria matricariodes*  
*Tribulus terrestris*  
*Portulaca oleracea*  
*Richardia scabra*  
*Ambrosia artemisifolia*  
*Cenchrus spp.*  
*Capsella bursa-pastoris*  
*Sonchus oleraceus*  
*Bidens pilosa*  
*Salsola australis*

### Perennials (At maximum rates and repeat treatments)

Balsamapple vine (seedling)  
Bermudagrass  
Drymary  
Guineagrass  
Milkweed vine (strangler)  
Quackgrass  
Vines (seedlings)

*Momordica charantia*  
*Cynodon dactylon*  
*Drymaria spp.*  
*Panicum maximum*  
*Morrenia odorata*  
*Agropyron repens*

## CITRUS

Apply KROVAR® I DF as a band or broadcast treatment beneath and/or between trees.

Avoid contact of citrus foliage and fruit with spray or mist. Avoid overlapping and shut off spray boom while starting, turning, slowing or stopping as injury to trees may result.

Temporary yellowing of citrus leaves may occur following treatment. As injury to citrus trees may result, do not use on soils with less than 1% organic matter. Do not use on poorly drained soils, gravelly soils or thinly covered or exposed subsoils.

Do not treat trees planted in irrigation furrows. Do not treat diseased or stressed citrus trees.

Do not use in citrus groves inter-planted with other trees or desirable plants or in areas where roots of desirable plants or trees may extend, as injury may result. Do not use in home citrus plantings.

Do not graze cattle in treated areas.



When making multiple applications, do not apply at less than 60 day intervals.

## CALIFORNIA, ARIZONA

**Trees established for at least Three Years:** Best results occur when applied in late fall or early winter, but before winter annuals become well established. Application should be made after the first fall or early winter rains have settled the soil.

For the initial treatment, apply 4-5 pounds DuPont™ KROVAR® I DF per acre on coarse soils containing 1-2% organic matter and 5-6 pounds per acre on fine soils, or soils with organic matter of 2 1/2% or more and repeat as needed. Alternatively, apply 3-4 pounds per acre in the fall and repeat at 2-4 pounds per acre in the spring. Do not exceed 6 pounds per acre per year.

Use the highest rate allowed by this label where groundsel or puncturevine are known to be a problem. These rates will also suppress low density stands of bermudagrass and yellow nutsedge. Repeat annually for best treatment effect.

## FLORIDA

For applications in the state of Florida refer to the additional instructions at the end of this label.

## LOUISIANA

**Trees Established for at least Three Years:** Make a single application of 2 to 4 pounds per acre on coarser soils (sands, loamy sands, sandy loams) and 4 to 6 pounds per acre on finer soils (silt loams, clay loams, or soils with organic matter of 2 1/2% or more); use the highest rate allowed by this label for maximum suppression of perennials. Alternatively, make two applications per year at rates of 2 pounds per acre on coarser soils and 3 pounds per acre on finer soils; make the second application when needed to maintain weed control. Do not apply more than 6 pounds per acre per year.

## TEXAS

**Trees Established Less than One Year:** Apply 2-4 pounds KROVAR® I DF per acre as needed to maintain weed control. Do not apply at less than 60-day intervals. Do not apply more than 6 pounds per acre per year.

**Trees Established One or Two Years:** Apply 2-4 pounds KROVAR® I DF per acre. A second application may be made when needed to maintain weed control, but do not exceed 6 pounds per acre per year.

**Trees Established Three or More Years:** Make one to two applications per year as needed to maintain weed control. Use 2-4 pounds per acre on coarser soils (sands, loamy sands, sandy loams) and 4-6 pounds per acre on finer soils (silt loams, clay loams, or soils with organic matter of 2 1/2 % or more). Use the higher rate for maximum suppression of perennials. Do not use more than 6 pounds per acre per year.

## SPRAY PREPARATION

**Mixing in water** - Fill tank 1/2 full with water. Start agitation system, add KROVAR® I DF and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

**Mixing in liquid fertilizer** - A fertilizer solution may be used in the spray mixture. Small quantities should be tested

for compatibility by the following procedures before full scale mixing.

1. Put 1 pint fertilizer solution in a quart jar.
2. Mix 2 teaspoonfuls KROVAR® I DF with 2 tablespoonfuls of water; mix thoroughly and add to fertilizer solution.
3. Close jar and shake well.
4. If other herbicides are used in the mixture, premix 2 teaspoonfuls of dry materials or 1 teaspoonful of liquids with 2 tablespoons of water; add to KROVAR® I DF-fertilizer solution mixture.
5. Close jar and shake well.
6. Watch mixture for several seconds; check again in 30 minutes.
7. If mixture does not separate, foam, gel or become lumpy, it may be used.

Provided the above procedure shows the mixture to be compatible, prepare the tank mixture as follows: Add the fertilizer solution to the spray tank first; with agitator running, add the required amount of KROVAR® I DF and thoroughly mix.

**Mixing with other herbicides** - Determine the tank mixture partner(s) compatibility with KROVAR® I DF by following the directions above. For Step 1 above, use 1 pint of water instead of the liquid fertilizer. Provided the above procedure shows the mixture to be compatible, KROVAR® I DF may be used in this tank mixture.

## NON-AGRICULTURAL USES

### 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 Part170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Noncrop weed control is not within the scope of the Worker Protection Standard.

Do not enter or allow others to enter the treated area until sprays have dried.

## USE RESTRICTIONS - STATE OF FLORIDA

In the state of Florida the use of KROVAR® I DF (bromacil + diuron) is prohibited in the counties of Hardee, Highland, Polk, Orange and Lake. For Non-Agricultural Usage in all other areas of the state, do not apply more than 16 pounds per acre per year of KROVAR® I DF. This amount corresponds to 6.4 pounds of bromacil and 6.4 pounds of diuron, the active ingredients in KROVAR® I DF. The maximum allowable use rate for bromacil is 6.4 pounds per acre per year inclusive of all bromacil formulations.

## APPLICATION INFORMATION

KROVAR® I DF is recommended for control of undesirable vegetation in non-crop areas such as railroads, highways, pipeline and utility rights-of-ways, petroleum tank farms, lumberyards, storage areas and industrial plant sites.

Apply DuPont™ KROVAR® I DF using a properly calibrated fixed-boom power sprayer. Use sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. All rates of KROVAR® I DF are expressed for broadcast treatments. For band treatments, use proportionately less.

Combination with other herbicides broadens the spectrum of weeds controlled. In addition, total vegetation control can be achieved with higher rates of KROVAR® I DF plus residual-type companion herbicides. To improve the control of emerged weeds, add surfactant at 0.25% by volume.

**Note:** Applications may also be made using a handgun sprayer. Use a spray volume of at least 40 gallons per acre to insure uniform coverage. For small areas, a hand sprayer or sprinkling may be used.

## NON-CROP WEED CONTROL

### APPLICATION TIMING

Apply KROVAR® I DF as a preemergence spray prior to or during the rainy season when weeds are actively germinating or growing. Moisture is required to activate and move KROVAR® I DF into the root zone of weeds for preemergence control. For best preemergence control, apply prior to rainfall and weed germination.

In arid regions of the Western U.S., to insure adequate moisture for activation and even dispersion of the herbicide in the soil profile, KROVAR® I DF should be applied several weeks prior to the Fall freeze or shortly after Spring thaw to coincide with periods of higher seasonal moisture probability. Do not treat frozen or saturated soils, or soils that are non-receptive to percolation.

Do not apply to sites which have roots of desirable plants growing into the treatment zone as plant injury or death may occur. Do not apply to hard or impervious soils, water saturated soils or to any surface that does not allow the herbicide to be moved into the soil horizon with moisture. Unusually heavy rainfall shortly after application may move the product off-target to the lowest surrounding point and cause plant injury or death.

If herbicide treated soil is disturbed by any physical or mechanical means, the herbicide barrier is disrupted and the likelihood of non-performance may increase. For best performance results, make sure the treatment area is stable after the application for the desired weed control period.

### APPLICATION RATES

Apply KROVAR® I DF at the rates indicated by weed type. When applied at lower rates, KROVAR® I DF provides short-term control of weeds listed; when applied at higher rates, weed control is extended.

## WEEDS CONTROLLED

KROVAR® I DF effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

### Broadleaf Weeds--6-8 pounds per acre

Clovers (annual)	<i>Trifolium spp.</i>
Fiddleneck	<i>Amsinckia intermedia</i>
Filaree	<i>Erodium spp.</i>
Knapweed, diffuse	<i>Centaurea diffusa</i>
Lambsquarter, common	<i>Chenopodium album</i>
Lettuce, prickly	<i>Lactuca serriola</i>
Mustards	<i>Brassica spp.</i>
Pigweed	<i>Amaranthus spp.</i>
Ragweed	<i>Ambrosia spp.</i>
Sunflower, common	<i>Helianthus annuus</i>
Thistle, Russian	<i>Salsola iberica</i>

### Broadleaf Weeds--8-12 pounds per acre

Carrot, wild	<i>Daucus carota</i>
Dandelion, common	<i>Taraxacum officinale</i>
Dock, curly	<i>Rumex crispus</i>
Knapweed, spotted	<i>Centaurea maculosa</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Marestail, common (horseweed)	<i>Conyza canadensis</i>
Parsnip, wild	<i>Pastinaca sativa</i>
Plantain	<i>Plantago spp.</i>
Puncturevine	<i>Tribulus terrestris</i>
Spurge	<i>Euphorbia spp.</i>
Thistle, milk	<i>Silybum marianum</i>
Yarrow, common	<i>Achillea millefolium</i>

### Broadleaf Weeds--12-16 pounds per acre

Cinquefoil, common	<i>Potentilla canadensis</i>
Goldenrod	<i>Solidago spp.</i>
Milkweed, common	<i>Asclepias syriaca</i>

### Grasses--6-8 pounds per acre

Barley, foxtail	<i>Hordeum jubatum</i>
Brome	<i>Bromus spp.</i>
Cheat	<i>Bromus secalinus</i>
Cupgrass, Prairie	<i>Eriochloa contracta</i>
Foxtail	<i>Setaria spp.</i>
Oat, wild	<i>Avena fatua</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Quackgrass	<i>Agropyron repens</i>
Wheatgrass, intermediate	<i>Agropyron intermedium</i>

### Grasses--8-12 pounds per acre

Bahiagrass	<i>Paspalum notatum</i>
Crabgrass	<i>Digitaria spp.</i>
Goosegrass	<i>Eleusine indica</i>
Rye	<i>Secale cereale</i>
Vaseygrass	<i>Paspalum urvillei</i>

### Grasses--12-16 pounds per acre

Bluegrass	<i>Poa spp.</i>
Dropseed, sand *	<i>Sporobolus cryptandrus</i>
Fescue	<i>Festuca spp.</i>
Saltgrass*	<i>Distichlis spp.</i>

\*Note: Best control of Saltgrass and Sand Dropseed is achieved from a Spring application prior to plant green-up.

For control of hard-to-kill perennials such as bermudagrass (*Cynodon dactylon*), bouncingbet (*Saporaria officinalis*), dogbane (*Apocynum spp.*), Johnsongrass (*Sorghum halepense*), and nutsedge (*Cyperus spp.*) apply 19 - 30 pounds per acre (except Florida).

For extended control of annual weeds and partial control of perennials such as bermudagrass and nutsedge, apply 10-18 pounds\* per acre. For control of hard-to-kill perennials such as bermudagrass, bouncingbet, dogbane, johnsongrass, nutsedge, apply 19 to 30 pounds (except Florida) per acre. Use the higher KROVAR® I DF rates on adsorptive soils (high in organic matter or carbon). Best results occur when application is made

just before weed emergence or in the early stages of weed growth.

**Retreating:** Apply 4 to 6 pounds per acre when annual weeds and grasses reappear on sites where weed growth has been controlled.

**Small Areas:** 1/4 cupful of DuPont™ KROVAR® I DF per 200 sq. ft. is approximately 15 pounds per acre.

## TANK MIXTURES

KROVAR® I DF may be tank mixed with other suitable herbicides registered for non-agricultural use. Refer to the tank mixture partner label(s) for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

KROVAR® I DF may also be tank mixed with appropriate adjuvants used with herbicides for non-agricultural use.

NOTE: If there is no prior use experience with the tank mixture combination, a compatibility test should be performed prior to adding the products into the spray tank. See SPRAY PREPARATION section of the label for further information.

When using KROVAR® I DF alone or in combination, thoroughly re-agitate the spray tank contents if allowed to settle.

## SPECIAL USES

### UNDER ASPHALT AND CONCRETE PAVEMENT

#### APPLICATION INFORMATION

KROVAR® I DF can be used to control weeds under asphalt and concrete pavement, such as that used in parking lots, highway shoulders, median strips, roadways, and other industrial sites.

KROVAR® I DF should only be used in an area that has been prepared according to good construction practices. Use sufficient water to insure uniform coverage, generally 100 gal per acre. Agitate the tank continuously to keep KROVAR® I DF in suspension.

#### APPLICATION TIMING

KROVAR® I DF should be applied immediately before paving to avoid lateral movement of the herbicide as a result of soil movement due to rainfall or mechanical means.

#### APPLICATION RATES

Apply KROVAR® I DF at 17 to 30 pounds per acre. Use a higher rate for hard to control weeds and/or for longer term weed control.

## TANK MIXTURES

To control a broader spectrum of weeds, or for an extended period of weed control, a tank mixture of KROVAR® I DF at 7 to 15 pounds per acre plus DuPont™ OUST® XP at 4 to 8 ounces per acre may be used.

### Important Precautions-Under Asphalt Only

- Do not use KROVAR® I DF under pavement in residential properties such as driveways, or in recreational areas, including jogging or bike paths, tennis courts, or golf cart paths.
- Desirable plants may be injured if their roots extend into treated areas or if planted in treated areas.

## SPRAY PREPARATION

**Mixing in water** - Fill tank 1/2 full with water. Start agitation system, add KROVAR® I DF and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

**Mixing with other herbicides** - Determine the tank mixture partner(s) compatibility with KROVAR® I DF by following the directions below. Provided the procedure below shows the mixture to be compatible, KROVAR® I DF may be used in this tank mixture.

1. Put 1 pint of water in a quart jar.
2. Add 2 teaspoons of KROVAR® I DF and mix thoroughly.
3. For other herbicides used in the mixture, premix 2 teaspoons of dry materials or 1 teaspoon of liquids with 2 tablespoons of water; add to KROVAR® I DF mixture.
4. Close jar and shake well.
5. Watch mixture for several seconds; check again in 30 minutes.
6. If the mixture does not separate, foam excessively, gel or become lumpy, it may be used.

## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory Information](#).

## AERIAL DRIFT REDUCTION ADVISORY

### Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions section of this label).

### Controlling Droplet Size

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are



needed, use higher flow rate nozzles instead of increasing pressure.

- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application** - Applications should not be made at the height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

#### Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

#### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplets evaporation is most severe when conditions are both hot and dry.

#### Temperature Inversions

Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun set and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and

rapidly dissipates indicates good vertical air mixing.

#### Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

#### SPRAY TANK CLEAN OUT

Thoroughly clean all traces of DuPont™ KROVAR® I DF from application equipment immediately after use. Flush the tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Dispose of the equipment wash water by applying it to a use-site listed on this label.

#### FOR USE IN CONTROLLING WEEDS IN CITRUS IN THE STATE OF FLORIDA ONLY

KROVAR® I DF controls many annual weeds, and at the highest rates allowed by this label, it controls certain perennial weeds.

Best results are obtained if KROVAR® I DF is applied to bare ground. If dense populations of hard-to-kill weed species are present, control of these weeds prior to application of KROVAR® I DF is recommended. If weeds are present at application, tank mixtures with foliar active herbicides is recommended to control existing weeds. (See Tank Mixtures section of Label).

Apply any time of year provided overhead moisture (rainfall or sprinkler irrigation) is available to activate the herbicide, preferably just before or just after weeds have germinated. Weed control symptoms are slow to appear and may not become apparent until the chemical has been carried into the root zone of the weeds by moisture. Best results are obtained if moisture is supplied by rainfall or sprinkler irrigation within two weeks after application. The degree and duration of control will vary with the amount of herbicide applied, soil texture, rainfall, and other soil and water management practices.

#### GENERAL PRECAUTIONS AND USE RESTRICTIONS

The use of KROVAR® I DF (bromacil + diuron) is prohibited for weed control in non-bedded citrus groves located on any permeable, better drained soil identified in the intended site of application. Permeable, better drained soils which occur in citrus producing areas of the state include soils unnamed and characteristic of quartzipsamments, and the following soil series classifications:

Adamsville	Dade	Orsino
Archbold	Florahome	Palm Beach
Astatula	Fort Meade	Paola
Bahia Honda	Gainesville	Satellite
Broward	Lake	St. Augustine
Canaveral	Lakewood	St. Lucie
Candler	Neilhurst	Tavares
Cocoa	Orlando	

Do not use DuPont™ KROVAR® I DF in recreational areas or around homes. Prevent drift of dry powder or spray to desirable plants.

Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not apply directly to water, or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water. Keep from contact with fertilizer, insecticides, fungicides, and seeds. Thoroughly clean all traces of KROVAR® I DF from application equipment immediately after use. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately.)

Temporary yellowing of citrus leaves may occur following treatment. Because injury to citrus trees may result, do not use on soils with less than 1.0% organic matter, or on poorly drained soils.

Avoid contact of foliage or fruit with spray or mist. Avoid overlapping treated areas and shut off spray boom while starting, turning, slowing or stopping, or injury to trees may result.

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

Do not apply (except as recommended for crop use), drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

Do not treat trees planted in irrigation furrows.

Do not treat diseased or stressed trees.

Do not use in citrus groves inter-planted with other desirable trees or plants, or in areas where roots of desirable trees or plants may extend, as injury to desirable trees or plants may result.

Do not use in home citrus plantings.

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.

Citrus trees may be planted one year after the last application of KROVAR® I DF.

Do not replant areas to any crop within two years after the last application of KROVAR® I DF as injury to subsequent crop(s) may result.

Allow an interval of 60 days between applications of KROVAR® I DF.

Do not graze cattle in treated areas.

In areas where drought conditions have prevailed for one or more years, a field bioassay should be completed prior to planting any desired crop(s). The results from this bioassay may require the two year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

## APPLICATION INSTRUCTIONS

Apply KROVAR® I DF as a band treatment only using a properly calibrated fixed-boom power sprayer. **Do not use Trunk to Trunk.** All use rates of KROVAR® I DF are

expressed for broadcast treatments. For band treatments, use proportionately less.

Use sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. Continuous agitation in the spray tank is required to keep the product in suspension.

Do not apply more than 16 pounds of KROVAR® I DF per treated acre per year. This amount corresponds to 6.4 pounds of bromacil and 6.4 pounds of diuron, the active ingredients in KROVAR® I DF.

The maximum allowable use rate for bromacil is 6.4 pounds per treated acre per year inclusive of all bromacil formulations. The maximum allowable used rate for diuron is 9.6 pounds per treated acre per year inclusive of all diuron formulations.

Multiple applications may improve control of “hard-to-kill” weed species.

**Trees Established Less Than One Year:** For control of annual weeds, apply 2-4 pounds of KROVAR® I DF per treated acre as needed to maintain weed control. Do not apply more than 6 pounds per treated acre during any 6 month period nor more than 8 pounds per treated acre during the first year.

**Trees Established One to Three Years:** For control of annual weeds, apply 2-4 pounds of KROVAR® I DF per treated acre. A second application may be made when needed to maintain weed control, but do not exceed 8 pounds per treated acre per year.

**Trees Established Three or More Years:** Apply 4-8 pounds per treated acre as needed to maintain weed control. Do not apply more than 16 pounds of KROVAR® I DF per treated acre per year.

**Tank Mixtures:** KROVAR® I DF may be tank mixed with other suitable herbicides registered for use in citrus. Refer to the tank mixture partner label(s) for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

NOTE: If there is no prior use experience with the tank mixture combination, a compatibility test should be performed prior to adding the products into the spray tank. See SPRAY PREPARATION section of the label for further information.

When using KROVAR® I DF alone or in combination, thoroughly re-agitate the spray tank contents if allowed to settle.

## WEEDS CONTROLLED (Annuals)

Annual clovers	Lambsquarter
Barnyardgrass	Natalgrass (red top)
Chickweed	Nightshade (annual)
Cheatgrass	Pigweed
Crabgrass	Pineappleweed
Filaree	Puncturevine
Fleabane	Purslane
Florida pusley	Ragweed
Foxtail	Russian thistle
Goatweed	Sandbur (sandspur)
Groundsel	Shepherdspurse
Horseweed	Sowthistle (annual)
Johnsongrass (seedling)	Spanish needles
Junglerice	Wild lettuce
Kochia	Wild mustard

## Perennial Weeds

Balsamapple vine (seedling)  
Bermudagrass  
Heartleaf  
Drymary  
Guineagrass  
Milkweed (strangler)  
Quackgrass  
Vine (seedling)

**NOTE:** Use the highest rates allowed by this label for best control of perennial weeds listed on this label. Partial control of perennial weeds can result with only a single treatment of DuPont™ KROVAR® I DF. Repeat applications are required (in season and/or annually) for best control of the perennial weeds on this label. Control of perennials may be improved by cultivation prior to treatment, otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

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It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product; crop injury, or; injury to non-target crops or plants.

DuPont does not agree to be an insurer of these risks. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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