



BEST DOCUMENT AVAILABLE
Product Labeling

KARMEX

DIRECTIONS FOR USE

WETTABLE POWDER

ACCEPTED

E. I. DU PONT DE NEMOURS & CO. (INC.)
 BIOCHEMICALS DEPT., WILMINGTON, DEL.

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, this pesticide is registered under EPA Reg. No. 3473

ACTIVE INGREDIENT:
 Diuron [3-(3,4-dichlorophenyl)-1,1-dimethylurea] 80%

INERT INGREDIENTS 20%
 EPA Reg. No. 352-247-AA

Keep out of reach of children.

CAUTION! MAY IRRITATE EYES, NOSE, THROAT, AND SKIN.
 Avoid breathing dust or spray mist.
 Avoid contact with skin, eyes, and clothing.

IMPORTANT—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 home plantings of trees, shrubs or herbaceous plants, nor on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds.

Thoroughly clean all traces of "Karmex" 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). Do not contaminate water by cleaning of equipment or disposal of wastes. Do not reuse container. When empty, bury bag; crush and bury drum.

GENERAL INFORMATION

Du Pont "Karmex" Weed Killer is a wettable powder to be mixed in water and applied as a spray for selective control of weeds in certain crops and for nonselective weed control on non-cropland areas. It is non-corrosive to equipment, nonflammable and nonvolatile.

"Karmex" may be applied to soil prior to emergence of weeds to control susceptible weed seedlings for an extended period of time; the degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soil low in clay or organic matter to obtain equivalent herbicide performance. Moisture is required to activate the chemical; best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks of application.

"Karmex" may also be used to control emerged weeds. Results vary with rate applied and environmental conditions; best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70 F or higher. Addition of a surfactant such as Du Pont Surfactant WK to the spray (where recommended) increases contact effects of "Karmex".

Since the effect of "Karmex" varies with soils, uniformity of application, and environmental conditions, it is suggested that growers limit their first use to small areas. Observe all cautions and limitations on labeling of all products used in mixtures.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with the directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

DIRECTIONS

"Karmex" Weed Killer should be used only in accordance with recommendations on this label, or in separate published Du Pont recommendations available through local dealers. Do not use on any crop in Kern County, California.

SELECTIVE USE IN CROPS

PREEMERGENCE USE (Germinating Weeds): "Karmex", at rates of 1/2 to 1 lb. per acre, controls annual weeds such as barnyardgrass (watergrass), crabgrass, lambsquarters, pigweed, purslane and ragweed, at rates of 1 1/2 to 2 lbs. per acre, it controls weeds such as annual bluegrass, annual groundcherry, annual morningglory, annual sweet vernalgrass, chickweed, corn spurry, dogfennel, fiddleneck (amsinckia), foxtail, groundsel, knawel, pennycress, rattail fescue, red sprangletop, shepherdspurse, tansymustard, velvetgrass, wild buckwheat, wild lettuce and wild mustard. Rates of 2 to 6 lbs. per acre control weeds such as ageratum, annual lovegrass, annu. ryegrass, annual smartweed, annual sowthistle, corn speedwell, dayflower, Flora's paintbrush, hawksbeard, horseweed, Kochia, kyllinga, marigold, Mexican clover, orchard grass, peppergrass, pineappleweed, pokeweed, rabbit tobacco, ricegrass, sandbur, seedling johnsongrass, spanishneedles, velvetleaf (buttonweed), and wild radish.

Partial control of the following weeds usually occurs at rates stated: 1 lb. per acre, annual morningglory, cocklebur, prickly sida (teaweed), sesbania and sicklepod; 4 lbs. per acre, quackgrass and horsenettle; 8 to 10 lbs. per acre, guineagrass, maidencane and pangolagrass.

POSTEMERGENCE USE (Emerged Seedling Weeds): "Karmex" at recommended rates, controls annual weeds such as annual morningglory, barnyardgrass (watergrass), crabgrass, crowfoot, goosegrass, pigweed and purslane. Addition of Surfactant WK to the spray (where recommended) increases contact effects of "Karmex". Best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70 F or higher.

EQUIPMENT—SPRAY VOLUMES AND PRESSURES: Use a tractor mounted fixed boom power sprayer properly calibrated to a constant speed and rate of delivery. Openings in screens should be equal to or larger than 50 mesh. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means; if by pass or return line is used, it should terminate at bottom of tank to minimize foaming. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

For preemergence application, use 25 to 40 gals. per acre and spray pressure of 30 to 40 psi. For post emergence application, use sufficient volume (min. 25 gals. per acre) for thorough coverage of weed foliage, use spray pressure of 20 to 25 psi to keep spray drift to a minimum.

Aerial: For alfalfa, asparagus, barley (winter), cotton (preplant or preemergence only), grass seed crops, pineapple, sugarcane and wheat (winter), application may be made by aircraft (5 to 10 gals. per acre), avoid overlapping of spray swath and avoid application under conditions where excessive drift may occur. Where land is bedded, make application parallel to rows.

SPRAY PREPARATION: Mix proper amount of "Karmex" into necessary volume of water, where use of Du Pont Surfactant WK is recommended, dilute with 10 parts of water and add as last ingredient to nearly full tank.

USE RATES: All dosages of "Karmex" are expressed as broadcast rates, for band treatment use proportionately less. For example, use 1/2 of the broadcast rate when treating a 14" band where row spacing is 42". Where a range of dosages is given, use the lower rate on coarse textured soils (low in clay or organic matter) and the higher rate on fine textured soils (high in clay or organic matter).

Weeds are present, apply 2 to 3 lbs. per acre in February or March. **Other Areas Where Alfalfa Becomes Winter Dormant:** Use 1 1/2 to 3 lbs. per acre (1 1/2 to 2 lbs. per acre East of Appalachian Mountains). Apply in March or early April, but before spring growth begins.

ARTICHOKE—California: Apply 2 to 4 lbs. per acre in late fall or early winter, after the last cultivation. Apply before weeds germinate or to emerging seedlings. Direct spray to cover the area between the rows and at the base of artichoke plants, keeping contact with crop plants at a minimum.

ASPARAGUS: Apply as a band or broadcast treatment. Do not apply to young plants during the first growing season (except as noted below) nor to newly seeded asparagus nor on plants with exposed roots as severe injury may result.

Established Plantings: On light sandy soils and other soils low in clay or organic matter, apply 1 to 2 lbs. per acre. On soils high in clay or organic matter, use 2 to 4 lbs. per acre. Two applications may be used; the first application should be made before weeds become established but no earlier than 4 weeks before spear emergence and no later than the early cutting period (if weeds are controlled into the cutting period by cultural practices, application may be delayed until immediately after the last cultivation). A second application may be made immediately following completion of harvest provided rainfall is expected. When two applications are used in one season, do not exceed 3 lbs. per acre per application. In Washington (irrigated crop), apply only a single treatment of 4 lbs. per acre in late November or December.

Newly Planted Crowns—California (San Joaquin Delta): Make a single application of 2 to 4 lbs. per acre on soils high in clay or organic matter, use the lower rate on clay loams and the higher rate on peat soils. Do not use on soils containing less than 2% organic matter. Soil must be settled by rainfall or irrigation prior to treatment. Do not treat crowns planted to a depth of less than 2".

BARLEY, WINTER (Drill-Planted)—Western Oregon and Western Washington: Make a single application of 1 1/2 to 2 lbs. per acre as soon as possible after planting but before emergence of barley. Do not replant treated areas to any crop within 1 year after last application as injury to subsequent crops may result.

BERMUDAGRASS PASTURES (Newly Sprigged): Apply 1 to 3 lbs. after planting and before emergence of bermudagrass or weeds. Alternatively, for control of emerged annual weeds up to 4" in height, apply 1/2 to 1 lb. per acre, add 1 pt. Surfactant WK per 25 gals. of spray. If bermudagrass has emerged at time of treatment, temporary burn of exposed plant parts may occur.

Plant sprigs (stolons) 2" deep in a well prepared seed bed, do not treat areas where sprigs are planted less than 2" deep as crop injury may result. Do not graze or feed foliage from treated areas to livestock within 90 days after application.

BIRDSFOOT TREFOIL (Lotus)—Western Oregon: Treat only stands established for at least 1 year, do not apply to seedling trefoil as injury may result. Make a single application of 2 lbs. per acre when trefoil is dormant (October 15 to December 15). Do not replant treated areas to any crop within 1 year after last application as injury to subsequent crops may result.

CORN (FIELD):

Postemergence—Make a single application of 1/2 lb. per acre in combination with non pressure nitrogen solution, if nitrogen solution is not used, apply 1 lb. per acre; add 1 pt. Surfactant WK per 25 gals. of spray. Apply as a directed spray when corn is at least 20" high and weeds are no taller than 3". **DO NOT APPLY OVER TOP OF CORN.** Do not replant to any crop within 1 year, except that cotton, corn and grain sorghum may be planted the spring following treatment.

Preemergence—Arkansas, Louisiana, Mississippi and Tennessee: Make a single application of 1/2 to 1 lb. per acre as a broadcast or band treatment after planting but before corn emerges. Plant corn at least 1 1/2" deep. Do not replant treated areas to crops other than corn or cotton within 4 months following band treatment and 6 months following broadcast treatment as crop injury may result.

COTTON: "Karmex", alone or as recommended combinations, may be applied as preplant, preemergence, early postemergence, and/or lay-by treatments. However, during a single crop season, do not exceed the following amounts of "Karmex" per acre as injury to subsequent crops may result: 1 lb. on loamy sand; 1 1/2 lbs. on sandy loam; 2 lbs. on clay loam; 2 1/2 lbs. on clay. Do not allow livestock to graze treated cotton.

Preplant—Arizona and California: Use "Karmex" alone, or apply as a separate operation following preplant broadcast treatment with "Treflan" (incorporated according to directions on "Treflan" label). Apply "Karmex" as a broadcast spray after beds are formed, preirrigated, and final seed beds prepared. Prior to planting, drag-off the tops of the beds and plant in moist soil not treated with "Karmex". Treated soil is returned to the bed after planting when irrigation furrows are reformed after cotton has emerged. If more than two furrowing operations are made prior to lay by, or deep furrows are made early, weed control may be reduced in furrow bottoms. Use at the following rates:

"Karmex" Alone: 1 to 2 1/2 lbs. per acre.
 "Karmex" Following "Treflan": 2 1/2 lbs. per acre.

Soil Texture	Product Per Acre—Preplant	
	"Treflan"	"Karmex"
Sandy loam, loam, silt loam, silt	1 pt.	2 1/2 to 1 lb.
Sandy clay loam, clay loam, silty clay, sandy clay, clay	1 1/2 pts.	1 to 1 1/4 lbs.

Note: Seedling disease may weaken plants and increase the possibility of injury from the use of "Treflan" followed by "Karmex". These treatments should be used only in conjunction with a standard fungicide seed treatment plus a good supplemental soil fungicide program such as Du Pont "Demosan" 65W Fungicide or captan PCNB mixture.

Preemergence—U.S. except for Arizona and California: Use "Karmex" alone or apply as a separate operation following preplant treatment with "Treflan". Apply "Karmex" after planting but before cotton emerges. Do not treat cotton in deep furrows as crop injury may result; use only where cotton is planted on flat or raised seedbeds. Shallow incorporation (no deeper than 1/4") with a rotary hoe or similar equipment following planting usually improves results especially during dry weather. A wide press wheel should be used on the planter to provide a level seed bed for subsequent early season postemergence treatments. If moisture is insufficient to activate "Karmex" or if soil becomes crusted before crop emerges, a shallow rotary hoeing (no deeper than 1/4") should be made before weeds become established.

"Karmex" Alone: Make a single application as a broadcast or band spray, using the following broadcast rates, for band treatment, use proportionately less.

Soil Texture**	Lbs. "Karmex" Per Acre
Loamy sand	1 1/2
Sandy loam, loam, silt loam, silt	2
Sandy clay loam, clay loam, silty clay loam, sandy clay	2 1/2
Silty clay, clay	3

"Karmex" Following "Treflan" Preplant: Apply "Treflan" prior to planting as a broadcast or band treatment incorporate according to directions on "Treflan" label. As a separate operation, apply "Karmex" as a band treatment (14" to 20" wide) after planting but before cotton emerges. Use at the following broadcast rates, for band treatment, use proportionately less. Note under Preplant above.

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Soil Texture**	Product Per Acre	
	Preplant "Treflan"	Preemergence "Karmex"
Loamy sand	1/2 pt.	1 1/2 lb.
Sandy loam, loam, silt loam, silt	1 pt.	2 lb.
Sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, clay	1 1/2 pts.	4 lb.

Postemergence—U.S.: Apply only as a directed spray to cover weed foliage, adjust nozzles to minimize contact of cotton leaves with spray or drift or crop injury may result. **DO NOT SPRAY OVER TOP OF COTTON**

Early Season—Apply when cotton is at least 6" tall (at least 12" tall for Western irrigated cotton), and when weeds are actively growing and do not exceed 2" in height. Apply as a band treatment at following rates: for each 25 gals. of spray, add 1 pt. Surfactant WK. Two applications may be made if needed.

Weed Problem (Up to 2" Tall)	Lbs. "Karmex" Per Acre (Broadcast Basis)
Annual grasses	1/2