

28543-20070117- P1-E Label  
bag label

**KARMEX® DF**  
**HERBICIDE**

<b>GROUP</b>	<b>7</b>	<b>HERBICIDE</b>
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DISPERSIBLE GRANULE

COMMERCIAL

REGISTRATION NO. 28543 PEST CONTROL PRODUCTS ACT

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

GUARANTEE: Diuron 80%

WARNING- EYE IRRITANT

NET CONTENTS: 10 KG

E. I. du Pont Canada Company  
Agricultural Products  
P.O. Box 2300 Streetsville  
Mississauga, Ontario  
L5M 2J4  
1-800-667-3925

**PRECAUTIONS:** KEEP OUT OF REACH OF CHILDREN.

CAUTION! CAUSES EYE IRRITATION.

MAY IRRITATE EYES, NOSE, THROAT AND SKIN.

Do not get in eyes. Avoid breathing dust or spray mist.

Avoid contact with skin and clothing.

Wash thoroughly with soap and water after handling.

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.

If this pest control product is to be used on a commodity that may be exported to the U.S., and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

#### **FIRST AID**

**SKIN CONTACT:** Wash with plenty of soap and water; get medical attention if irritation persists or contact a poison control centre immediately.

**EYE CONTACT:** Flush with plenty of water; get medical attention if irritation persists or contact a poison control centre immediately.

**INGESTION:** Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician or contact a poison control centre immediately.

Take container, label or product name and Pest Control Product registration Number with you when seeking medical attention.

For medical emergencies call 1-800-441-3637 (24 hours).

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food or feed.

#### **DISPOSAL:**

1. Completely empty bag into spray mixture tank.
2. Make the empty bag unsuitable for further use.
3. Dispose of the container in accordance with provincial requirements.
4. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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DFU Brochure

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### **GENERAL INFORMATION**

KARMEX® DF Herbicide is a dispersible granule, mixed with water and applied as a spray to the surface of the ground, pond or dugout for control of weeds and/or algae. Effects are slow to appear and will not become apparent until the chemical has been absorbed into the plant and trans-located into the leaves. KARMEX® DF is noncorrosive to equipment, nonvolatile and non-flammable.

**IMPORTANT:** 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. Prevent drift of dry powder or spray to desirable plants. Do not contaminate domestic waters. Keep from contact with fertilizers, insecticides, fungicides and seeds.

Thoroughly clean all traces of KARMEX® DF from application equipment immediately after use; otherwise, crop injury may result when equipment is used again. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

### **DIRECTIONS FOR USE**

KARMEX® DF should be used only in accordance with recommendations on this label. Before spraying, calibrate equipment to determine the quantity of water necessary to uniformly cover area to be treated. Accurately weigh amount of KARMEX® DF required and mix into necessary volume of water. Water serves only as a carrier. Except for small areas, use fixed-boom power sprayers properly calibrated to insure constant rate of application. Openings in screens should be equal to or larger than 50 mesh. Material must be kept in suspension at all times by agitation, preferably continuous mechanical or hydraulic means in the spray tank. If bypass or return line is used, it should terminate at bottom of tank to minimize foaming. Do not use air agitation. For general weed control in small areas, tank-type hand sprayer or sprinkling can may be used; shake or stir frequently.

**CAUTION:** Do not graze the treated crops or cut for hay; sufficient data are not available to support such use.

**DO NOT APPLY BY AIR.**

### **RESISTANCE MANAGEMENT CONDITIONS**

For resistance management, KARMEX® DF Herbicide is a Group 7 herbicide. Any weed population may contain or develop plants naturally resistant to KARMEX® DF herbicide and other Group 7 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of KARMEX® DF Herbicide or other Group 7 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.

- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact DuPont at 1-800-667-3925.

### **NON-CROP WEED CONTROL**

KARMEX® DF is an effective general herbicide for the control of many annual and perennial grasses and herbaceous weeds such as dandelion, goldenrod, thistle and milkweed, on non-cropland areas where bare ground is desired. After an extended period of time, regrowth of plantain, thistle or wild carrot will indicate that re-treatment is necessary. KARMEX® DF may be used at any time, except when ground is frozen, providing adequate moisture is received by rainfall or artificial means. Best results are obtained when applied shortly before weed growth begins. Dense growth should be removed. The degree of control and duration of effect will vary with the amount of chemical applied, soil type, rainfall, and other conditions.

**GENERAL WEED CONTROL**—The actual rates required to control most weeds for an extended period of time vary depending on soil type, weed species present and duration of control desired. On sands and sandy loams, apply 14-27 kg KARMEX® DF per ha. On clays or high organic soils, apply 40-55 kg/ha. The lower rate within the respective soil classifications should be used where annuals predominate and where one season's control is desired. Where perennials predominate and where more than one season's control is required, use the higher rates. To extend the control, a follow-up treatment of 1.1 kg may be used to control annuals and seedlings.

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**NATURE OF RESTRICTION:** This product is to be used only in the manner authorized; consult local pesticide regulatory authorities about use permits, which may be required.

**RESTRICTED USES-IRRIGATION AND DRAINAGE DITCHES:** Apply 0.25 to 0.75 kg per 100 square meters. (23-67 kg per hectare). For irrigation ditches apply during the non-crop season, and when ditch is not in use. To minimize movement of Karmex® DF with irrigation water and avoid crop injury, it is essential that it be fixed in the treated soil by moisture. Apply before expected seasonal rainfall, if possible when soil in the ditch is still moist. If rainfall has not totaled at least 10 cm following treatment and before intended use of irrigation ditch, fill with water and allow to stand for 72 hours; drain off waste and remaining water before using ditch. Do not treat any ditch area into which roots of trees or other desirable plants may extend or in locations where the herbicide may be washed or moved into contact with the roots.

### **FOR CONTROL OF ALGAE AND AQUATIC WEEDS IN PONDS AND DUGOUTS—**

KARMEX® DF is recommended for the control of algae, including filamentous types, and certain aquatic weeds in ponds and dugouts which have little or no water flow-through. For use in water

wholly confined to the property of the user, and where there is no outflow beyond the property limits. Treatment is not effective in flowing water. The lower recommended rates control algae for several weeks; higher use rates extend algae control and usually control aquatic weeds such as naiads (*Najas*), pondweed (*Potamogeton*), duckweed (*Lemna*), bladderwort (*Utricularia*), and Chara. Use at rates of 0.5 to 2 parts per million (ppm) diuron; use the lower rates for algae control and the higher rates for aquatic weeds and for extended algae control:

PPM DIURON In water	KARMEX® DF Per Hectare-Metre*
0.5	6.25 kg
1.0	12.50 kg
1.5	18.75 kg
2.0	25.00 kg

\*Hectare-Metre = volume of water in pond 1 hectare in area and 1 metre deep. To calculate hectare-metre, multiply the number of hectares by the average depth or multiply surface area in sq m by average depth and then divide by 10,000. Apply early in the season as a spray to the surface of the water, using a minimum of 450 L/ha of water. During application, agitate the spray mixture in the spray tank frequently to insure suspension of the herbicide. Application may be facilitated by marking small areas with floats before treating.

If pond contains heavy growth of aquatic plants, fish kill from oxygen depletion due to vegetation decomposition may be avoided or alleviated by treating only a portion of the pond and treating the remaining area 2 to 4 weeks later. Successive treatments may be made, if needed, provided the seasonal total does not exceed 2 ppm Diuron.

**NOTE:** Do not use in domestic water supplies. Do not use in ponds and dugouts producing fish for human consumption. Do not use water from treated ponds within one year for irrigation; do not apply to ponds having desirable trees or shrubs on the perimeter, or to areas where their roots may extend, or in locations where the herbicide may be washed or moved into contact with the roots; do not drain ponds into areas containing desirable plants as injury to the plants may result.

**SPOT TREATMENT**—To control deep-rooted perennial weeds such as couchgrass and toadflax, spot treat at a rate of 0.75-1.0 kg per 100 m<sup>2</sup>. Re-treat as necessary. This treatment will result in the loss of soil productivity for an extended period.

**FOR SMALL AREAS**—50 g of KARMEX® DF per 10 m<sup>2</sup> is approximately 55 kg per ha.

#### **WEED CONTROL IN CROPS**

KARMEX® DF controls weed seedlings such as pigweed, ragweed, lamb's-quarters, and grasses such as crabgrass and foxtail. Any well established weeds should first be eliminated by mechanical or other means. For best results, the soil should be well prepared and as free as possible from trash and clods. Unless otherwise directed, surface of the soil should not be cultivated or disturbed after application as efficiency may be reduced and/or crop injury may result. Sufficient moisture in the form of rainfall or irrigation is necessary after treatment to carry the chemical into the root zone of germinating weeds.

Application should be to the surface of the ground by fixed-boom power sprayers properly calibrated to a constant speed and rate of delivery.

Make certain spray equipment is clean (free of scale, rust, dirt, soil, and pesticide deposits). Use sufficient water (250 to 400 L per ha of area actually sprayed) to provide thorough and uniform

coverage. Spray booms must be shut off while starting, turning, slowing or stopping or injury to the crop may result.

**IMPORTANT:** Unless otherwise directed, do not replant treated areas to any crop within two years after last application as injury to subsequent crops may result.

**SOIL LIMITATIONS:** Crop injury may result from failure to observe the following: Unless otherwise directed, do not use on sand, loamy sand or gravelly soils with less than 1% organic matter.

**GRAPES**—Apply only to established vineyards (at least three years old) as a band application to grape rows. On soils low in clay or organic matter (1 to 2%), use 2.25 to 3.25 kg/ha (of area actually sprayed); on soil high in clay or organic matter, use 3.25-6.75 kg. Apply just prior to germination and growth of annual weeds, usually in the spring.

It may be desirable to make a fall treatment, or divide applications equally between fall and spring treatment. Do not exceed the above rates per year as injury may result.

**ASPARAGUS**—Do not apply to newly seeded asparagus nor to young plants during the first growing season after setting nor on plants with exposed roots as severe injury may result. Apply as a band or broadcast treatment. On light sandy soils and other soils low in clay or organic matter, apply 1.1 to 2.25 kg/ha. On soils high in clay or organic matter, use 2.25-4.5 kg/ha. 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 3.25 kg per ha per application. If irrigation is used, apply only a single treatment of 4.5 kg per ha in late September or October.

**STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food or feed.

**DISPOSAL:**

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