



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
352-620

Date of Issuance:  
DEC 9 2002

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration

Term of Issuance:  
Conditional

Name of Pesticide Product:  
DuPont Landmark 11 MP

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

E.I. DuPont de Nemours & Company  
DuPont Crop Protection  
Stine-Haskell Research Center  
P.O. Box 30  
Newark, DE 19714-0030

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
2. Add the phrase "EPA Registration No.352-620" before you release the product for shipment.
3. Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of this product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Signature of Approving Official:

Date:

12-9-02



DuPont™

**Landmark™ II MP**

herbicide

*Dispersible Granules*

<i>Active Ingredient</i>	<i>By Weight</i>
Sulfometuron methyl {Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino]-carbonyl]amino]sulfonyl]benzoate}	56.25%
Chlorsulfuron 2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)aminocarbonyl]benzenesulfonamide	18.75%
<b><i>Inert Ingredients</i></b>	<b>25%</b>
<b>TOTAL</b>	<b>100%</b>

EPA Reg. No. 352-XXX

**ACCEPTED**

DEC 9 2002

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 352-620

**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 five 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 poison control center or doctor for treatment advice.

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

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

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

**USER SAFETY RECOMMENDATIONS**

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

**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 by cleaning of equipment or disposal of equipment washwaters.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. DuPont™ LANDMARK™ II MP should be used only in accordance with recommendations on this label or in separately published DuPont recommendations.

DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by DuPont. User assumes all risks associated with such nonrecommended use.

## GENERAL INFORMATION

LANDMARK™ II MP herbicide is a convenient unit pack that is mixed in water and applied as a spray. Open package and empty contents of both compartments into spray tank. LANDMARK™ II MP controls many annual and perennial grasses and broadleaf weeds in non-crop sites.

LANDMARK™ II MP may be used for general weed control on terrestrial non-crop sites and for selective weed control in certain types of unimproved turf grasses on these same sites. LANDMARK™ II MP can be tank mixed with other herbicides registered for use in non-crop sites; when tank mixing, use the most restrictive limitations from the labeling of both products.

Do not apply more than 6.0 oz active ingredient Sulfometuron methyl per acre per year when using this product or any other product containing Sulfometuron methyl.

Do not apply more than 2.25 oz active ingredient Chlorsulfuron per acre per year when using this product or any other product containing Chlorsulfuron.

LANDMARK™ II MP controls weeds by both preemergence and postemergence activity. The best results are obtained when the application is made at or before the early stages of weed growth; before weeds develop an established root system. Moisture is required to move LANDMARK™ II MP into the root zone of weeds for preemergence control.

This product may be applied on non-crop sites that contain areas of temporary surface water caused by collection of water in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittent drainage, intermittently flooded low lying sites, seasonal dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded, as well as seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.

A drift control agent may be used at the manufacturer's recommended rate in the application of LANDMARK™ II MP.

LANDMARK™ II MP is noncorrosive, nonflammable, nonvolatile and does not freeze.

For best postemergence results, apply LANDMARK™ II MP to young, actively growing weeds. The degree and

duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment
- soil pH, soil moisture, and soil organic matter

### Note:

Do not exceed a rate of 1 package per 2 acres per year.

Do not use on food or feed crops.

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

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

When applied as a spray, LANDMARK™ II MP is absorbed by both the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. When applied on dry fertilizer, LANDMARK™ II MP is absorbed primarily by the roots. Two to three weeks after application to weeds, plant growth slows, and the growing points turn reddish-purple. Within 4 to 6 weeks of application, leaf veins and leaves become discolored, and the growing points subsequently die.

Warm, moist conditions following application accelerate the herbicidal activity of LANDMARK™ II MP; cold, dry conditions delay the herbicidal activity. In addition, weeds hardened-off by drought stress are less susceptible to LANDMARK™ II MP. Moisture is needed to move LANDMARK™ II MP into the soil for preemergence weed control.

## 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. Do not let weed escapes go to seed. If applicable, see Weeds Controlled section of label for additional information on managing herbicide resistant weed 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

DuPont recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including 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.

## NON-AGRICULTURAL USES

### NON-CROP SITES

#### Application Information

DuPont™ LANDMARK™ II MP is recommended for general weed control on private, public and military lands as follows: non-agricultural areas (such as airports, highway, railroad and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas--non-crop producing (such as farmyards, fuel storage areas, fence rows, soil bank land, barrier strips, etc.); industrial sites--outdoor (such as lumberyards, pipeline and tank farms, etc.)

LANDMARK™ II MP is not recommended for use on recreation areas or for direct application to paved areas (surfaces).

Apply by ground or as otherwise directed by Supplemental or Special Local Need Labeling.

#### Application Timing

Apply LANDMARK™ II MP as a preemergence or early postemergence spray before or during the rainy season when weeds are actively germinating or growing.

#### Application Rates

Apply LANDMARK™ II MP at the 1 package per 5 acres to 1 package per 2 acres. When applied at lower rates, LANDMARK™ II MP provides short-term control of weeds listed; when applied at higher rates, weed control is extended.

#### Weeds Controlled

LANDMARK™ II MP effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

When applied at 1 package per 5 acres, LANDMARK™ II MP controls the following weeds:

### Broadleaf Weeds

- |                         |                           |
|-------------------------|---------------------------|
| Annual sowthistle       | Hemp                      |
| Black medick            | Hemp sesbania             |
| Black mustard           | Henbit                    |
| Blue mustard            | Hill mustard              |
| Bouncingbet             | Hoary cress (whiteweed)   |
| Buckhorn plantain       | London rocket             |
| Burclover               | Marestail/horseweed*      |
| Buttercup               | Musk thistle              |
| Carolina geranium       | Ox-eye daisy              |
| Clover                  | Pepperweed                |
| Cocklebur               | Perennial pepperweed      |
| Common chickweed        | Prairie groundsel         |
| Common groundsel        | Prickly coontail          |
| Common lambsquarter     | Prickly sida              |
| Common mallow           | Prostrate knotweed        |
| Common purslane         | Redroot pigweed           |
| Common ragweed          | Redstem filaree           |
| Common speedwell        | Seaside heliotrope        |
| Common spikeweed        | Shepherd's purse          |
| Common sunflower        | Sicklepod                 |
| Common tarweed          | Smallseed falseflax       |
| Common vetch            | Spanish needles           |
| Common yarrow           | Spiny pigweed             |
| Cow cockle              | Spreading orach           |
| Crimson clover          | Sweet clover              |
| Curly dock              | Tansymustard              |
| Cutleaf eveningprimrose | Tansy ragwort             |
| Dandelion               | Tumble mustard (Jim Hill) |
| Dogfennel               | Tumble pigweed            |
| Dyer's woad             | Velvetleaf                |
| False chamomile         | Whitestem filaree         |
| Fiddleneck              | Whiteweed                 |
| Field pennycress        | Wild buckwheat            |
| Fireweed                | Wild carrot               |
| Fleabane                | Wild garlic               |
| Flixweed                | Wild mustard              |
| Goldenrod               | Wild teasel               |
| Hairy vetch             |                           |

\* Certain biotypes of marestail are less sensitive to LANDMARK™ II MP and may be controlled with a tank mixture of diuron, DuPont™ HYVAR® X or KROVAR® I DF.

### Grasses (up to 6-12" tall)

- |                         |                      |
|-------------------------|----------------------|
| Alta fescue             | Jointed goatgrass    |
| Annual bluegrass        | Little barley        |
| Annual ryegrass         | Medusahead           |
| Bahiagrass              | Red brome            |
| Barnyardgrass           | Red fescue           |
| Bulbous bluegrass       | Ripgut brome         |
| Cheat                   | Rye                  |
| Crabgrass               | Seashore saltgrass   |
| Downy brome             | Signalgrass          |
| Foxtails (except green) | Sprangletop (annual) |
| Foxtail barley          | Wheat (volunteer)    |
| Foxtail fescue          | Wild oats            |
| Italian ryegrass        | Witchgrass           |
| Itchgrass               |                      |

When applied at 1 package per 2 acres, DuPont™ LANDMARK™ II MP also controls the following weeds:

**Broadleaf Weeds**

Aster	Puncturevine
Bedstraw	Russian knapweed
Canada thistle	Salsify
Catsear	Scotch thistle
Common cinquefoil	St. John's wort
Common knapweed	Turkey mullein
Common mullein	White snakeroot
Houndstongue	Yellow rocket
Morningglory	Yellow starthistle

**Grasses**

Broadleaf panicum	Johnsongrass
Green foxtail	Junglerice

**Note:** Use the higher level of recommended dosage ranges under the following conditions:

- heavy weed growth
- soils containing more than 2-1/2% organic matter
- high soil moisture areas, such as along road edges or railroad shoulders

For planting areas treated with LANDMARK™ II MP refer to the GRASS REPLANT INTERVALS section of this label.

**Specific Weed Problems  
—Non-crop Sites**

**Kochia, Russian Thistle, and Prickly Lettuce**

Since biotypes of kochia, Russian thistle, and prickly lettuce are known to be resistant to LANDMARK™ II MP, tank mixture combinations with herbicides having different modes of action, such as "Karmex" DF, DuPont™ HYVAR® X or KROVAR® I DF, must be used. In areas where resistance is known to exist, these weeds should be treated postemergence with other herbicides registered for their control, such as 2,4-D or dicamba. Do not allow kochia, Russian thistle, or prickly lettuce to form mature seed.

Do not tank mix LANDMARK™ II MP with HYVAR® X-L herbicide.

**UNDER ASPHALT AND CONCRETE PAVEMENT**

**Application Information**

LANDMARK™ II MP 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. LANDMARK™ II MP will not control tubers, rhizomes, woody vegetation such as small trees, brush or woody vines.

LANDMARK™ II MP should only be used in an area that has been prepared according to good construction practices. Use sufficient water to ensure uniform coverage, generally 100 gal per acre. Agitate the tank continuously to keep LANDMARK™ II MP in suspension.

**Application Timing**

LANDMARK™ II MP 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 Rate**

Apply LANDMARK™ II MP at 1 package per 2 acres.

**IMPORTANT PRECAUTIONS—UNDER ASPHALT ONLY**

- Do not use LANDMARK™ II MP under pavement in residential properties such as driveways, or in recreational areas, including jogging or bike paths, tennis courts, or golf cart paths.

**TURF (UNIMPROVED ONLY)**

**Bermudagrass and Centipedegrass Release**

**Application Information**

LANDMARK™ II MP is recommended to control weeds in unimproved turf, roadsides, or other non-crop sites where the turf is well established as a ground cover. Applications may temporarily suppress grass growth and inhibit seedhead formation (chemical mowing).

**Application Timing and Rate**

Apply LANDMARK™ II MP at 1 package per 20 acres after grasses have broken dormancy and are well established, usually 30 days after initial spring flush.

If an additional application is necessary, apply LANDMARK™ II MP again during late spring to early summer. On established weeds, apply LANDMARK™ II MP one to two weeks after mowing for the best results. LANDMARK™ II MP may also be applied in late fall or early winter.

**Weeds Controlled**

When applied at 1 package per 20 acres, LANDMARK™ II MP controls the following weeds:

Annual bluegrass	Japanese brome
Blue mustard	Jointed goatgrass
Bulbous bluegrass	London rocket
Cheat	Marestail/horseweed*
Cocklebur	Redroot pigweed
Common chickweed	Rye
Common lambsquarter	Shepherd's purse
Common purslane	Signalgrass
Common sunflower	Smallseed falseflax
Common tarweed	Tansy mustard
Common yarrow	Tumble mustard (Jim Hill)
Dandelion	Velvetleaf
False chamomile	Wheat (volunteer)
Field pennycress	Wild carrot
Fleabane	Wild mustard
Flixweed	Wild oats
Foxtail barley	Witchgrass
Foxtails (except green)	
Hill mustard	

**IMPORTANT PRECAUTIONS—UNIMPROVED TURF**

- Excessive injury to turf may result if a surfactant is used with DuPont™ LANDMARK™ II MP applications made to actively growing turf. The user assumes all responsibility for turf injury if a surfactant is used with LANDMARK™ II MP treatments applied to actively growing turf.
- LANDMARK™ II MP may temporarily discolor or cause top kill of turf grasses. Applications made while turf is dormant may delay green-up in the spring.
- Annual retreatments may reduce vigor, particularly at the higher recommended rates, where bahiagrass, crested wheatgrass and smooth brome are grown.
- LANDMARK™ II MP application on turf that is under stress from drought, insects, disease, cold temperatures or late spring frost, may result in injury.
- Application of LANDMARK™ II MP to turf less than 1 year old may cause unacceptable turf injury.
- For broadcast applications, do not exceed 1 package per 10 acres LANDMARK™ II MP within a 12-month period.
- \* Annual retreatments may reduce turf vigor.

**NON-CROPLAND RESTORATION**

**Application Information**

LANDMARK™ II MP is recommended for the control of downy brome, cheat, jointed goatgrass, medusahead and certain broadleaf weeds in unimproved industrial turf, on roadsides, airports, industrial sites or on other similar non-cropland sites. In order to release desirable, perennial grass species for site stabilization, LANDMARK™ II MP may be used to control the following winter annual grasses and broadleaf weeds.

**Application Timing and Rate**

Apply LANDMARK™ II MP at the rates listed below in the fall, within 6 weeks before the expected date when the soil freezes, or in the spring within 6 weeks after after the soil thaws. Best results are obtained on winter annuals when applied in the fall. Spring applications require a higher rate.

Do not apply when the soil is frozen.

Do not apply to unstable soil conditions.

When applied at 1 package per 15 acres, LANDMARK™ II MP controls cheat, downy brome, jointed goatgrass and the following additional weeds:

**Broadleaf Weeds**

- Annual sowthistle
- Blue mustard
- Buckhorn plantain
- Carolina geranium
- Clover
- Cocklebur
- Common chickweed
- Common groundsel
- Common lambsquarter
- Common purslane
- Common speedwell
- Common sunflower
- Common tarweed
- Common yarrow
- Cow cockle
- Dandelion
- Dyer's woad
- False chamomile
- Field pennycress
- Fleabane
- Flixweed
- Goldenrod
- Hairy vetch
- Hemp sesbania
- Henbit
- Hill mustard
- London rocket
- Marestail/horseweed\*
- Morningglory
- Prickly coontail
- Prickly sida
- Redroot pigweed
- Shepherd's purse
- Sicklepod
- Smallseed falseflax
- Spiny pigweed
- Tansy mustard
- Tumble mustard
- Velvetleaf
- Whitestem filaree
- Wild carrot
- Wild mustard
- Wild teasel

**Grasses**

- Annual bluegrass
- Annual ryegrass
- Barnyardgrass
- Bulbous bluegrass
- Foxtails (except green)
- Foxtail barley
- Japanese brome
- Little barley
- Medusahead
- Rye
- Signalgrass
- Wheat (volunteer)
- Wild oats
- Witchgrass

When applied at 1 package per 10 acres, LANDMARK™ II MP controls medusahead and the following additional weeds:

**Broadleaf Weeds**

- Bedstraw
- Buttercup
- Common spikewell
- Common vetch
- Cutleaf eveningprimrose
- Erect knotweed
- Musk thistle
- Prairie groundsel
- Spanish needles
- Sweet clover
- Tansy ragwort
- Wild buckwheat

**Grasses**

- Crabgrass
- Foxtail fescue
- Green foxtail
- Red brome
- Ripgut brome

**GRASS REPLANT INTERVALS**

Following a treatment with LANDMARK™ II MP at use rates up to 1 package per 10 acres, the following grasses may be replanted at least 3 months after a spring application: Green needlegrass, meadow brome, Russian wild rye and switchgrass.

The following grasses may be replanted at least 6 months after a spring application: Alta fescue, meadow foxtail, orchard grass, smooth brome, sheep fescue and western wheatgrass.

The intervals recommended are for soils with a pH of less 7.5. Soils having a pH greater than 7.5 will require longer

intervals. The recommended intervals are for applications made in the spring. Because DuPont™ LANDMARK™ II MP degradation is slowed by cold or frozen soils, applications made in the fall should consider the intervals as beginning in the spring following treatment.

Testing has indicated that there is considerable variation in response among species and types of grasses when seeded into areas treated with LANDMARK™ II MP. If species other than those listed above are to be planted into areas treated with LANDMARK™ II MP a field bioassay should be performed, or previous experience may be used to determine the feasibility of replanting treated areas.

**ADDITIONAL USE INSTRUCTIONS FOR ALL NON-AGRICULTURAL USES**

**TANK MIX COMBINATIONS**

Combination with other herbicides broadens the spectrum of weeds controlled. In addition, total vegetation control can be achieved with higher rates of LANDMARK™ II MP plus residual type companion herbicides. To improve the control of weeds, add surfactant at 0.25% by volume or at the manufacturer's recommended rate based on spray area.

LANDMARK™ II MP may be applied with the recommended rates of other herbicides registered for this use. For application method and other use specifications, use the most restrictive directions for the intended combination.

Do not tank mix LANDMARK™ II MP and DuPont™ HYVAR® X-L herbicide.

**SPRAY EQUIPMENT**

Following an LANDMARK™ II MP application, do not use this spray equipment for application to agricultural or ornamental crops. The mixing and application equipment must be used for forestry and non-crop applications only, unless directed otherwise by supplemental labeling. This is extremely important as low rates of LANDMARK™ II MP can kill or severely injure most crops.

**APPLICATION**

**Ground**

Use a sufficient volume of water to ensure thorough coverage when applying LANDMARK™ II MP as a broadcast or directed spray. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping to avoid injury to desired species.

**MIXING INSTRUCTIONS**

1. Fill spray tank 1/2 full of water.
2. With the agitator running, add the proper amount of LANDMARK™ II MP.
3. If using a companion product, add the recommended amount.
4. For postemergent applications, add the proper amount of spray adjuvants.

5. Add the remaining water.
6. Agitate the spray tank thoroughly.

LANDMARK™ II MP spray preparations are stable if they are pH neutral or alkaline and stored at or below 100° F.

**SPRAYER CLEANUP**

Thoroughly clean all mixing and spray equipment following applications of LANDMARK™ II MP as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water.
2. Fill the tank with clean water and 1 gal of household ammonia (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank. Equivalent amounts of an alternate-strength ammonia solution or a commercial cleaner can be used in the cleanout procedure. If a commercial cleaner is used, carefully read and follow the individual cleaner instructions.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. Dispose of the rinsate on a labeled site or at an approved waste disposal facility. If a commercial cleaner is used follow the directions for rinsate disposal on the label.

**Notes:**

1. **Caution:** Do not use chlorine bleach with ammonia as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended before performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When LANDMARK™ II MP is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.

**IMPORTANT PRECAUTIONS ALL NON-AGRICULTURAL USES**

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

- If equipment is drained or flushed 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.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed,

blown, or moved onto land used to produce crops. Exposure to DuPont™ LANDMARK™ II MP may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply LANDMARK™ II MP when these conditions are identified and powdery, dry soil or light or sandy soil are known to be prevalent in the area to be treated.

- Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials such as asphalt or concrete, or soils through which rainfall will not readily penetrate may result in runoff and movement of LANDMARK™ II MP. Do not treat frozen soil. Treated soil should be left undisturbed to reduce the potential for LANDMARK™ II MP movement by soil erosion due to wind or water.

Do not use on lawns, walks, driveways, tennis courts, or similar areas.

Keep from contact with fertilizers, insecticides, fungicides, and seeds.

Do not apply in or on irrigation ditches or canals including their outer banks.

Do not apply through any type of irrigation system.

Do not use the equipment used to mix or apply LANDMARK™ II MP on crops unless specifically directed by supplemental labeling. When applied on fertilizer, do not use the impregnation, transport or application equipment to make subsequent applications to crops. The mixing and application equipment may be used for forestry and non-crop applications only.

If non-crop sites treated with LANDMARK™ II MP are to be converted to a food, feed, or fiber agricultural crop, or to a horticultural crop, do not plant the treated sites for at least one year after the LANDMARK™ II MP application. A field bioassay must then be completed before planting to crops. To conduct a field bioassay, grow to maturity test strips of the crop(s) you plan to grow the following year. The test strips should cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the crops(s) grown in the test strips. In the case of suspected off-site movement of LANDMARK™ II MP to cropland, soil samples should be quantitatively analyzed for LANDMARK™ II MP or any other herbicide which could be having an adverse effect on the crop, in addition to conducting the above-described bioassay.

Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.

### **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

### **IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **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 Surface Temperature Inversions** sections of this label.

#### **Controlling Droplet Size - General Techniques**

- **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 A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **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.
- **Boom Height (ground)** Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

#### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.**

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### **SURFACE TEMPERATURE INVERSIONS**

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets 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 concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**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.

**STORAGE AND DISPOSAL**

**STORAGE:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

**PRODUCT DISPOSAL:** Do not contaminate water, food or feed by disposal. Wastes 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.

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