

87290-31

02-02-2012

1/16



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505P)  
Ariel Rios Building  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

EPA Registration  
Number:

87290-31

Date of Issuance:

FEB 2 2012

NOTICE OF PESTICIDE:

- Registration
- Reregistration

(under FIFRA, as amended)

Term of Issuance: Unconditional

Name of Pesticide Product:

Willowood Diuron / Bromacil 80DF

Name and Address of Registrant (include ZIP Code):

Willowood, LLC 1600 NW Garden Valley Blvd., Ste. 120 Roseburg, OR 97471	c/o Pyxis Regulatory Consulting, Inc. 4110 136 <sup>th</sup> Street, NW Gig Harbor, WA 98332
---	--

**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 registered in accordance with FIFRA provided that you:

1. Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.
2. Submit one-year Storage Stability (Guideline 830.6317) and Corrosion Characteristics (Guideline 830.6320) studies within eighteen (18) months from the date of this notice.

The Basic and Alternates #1-12 Confidential Statement of Formula (CSF) dated October 13, 2011 are acceptable.

A stamped copy of the label is enclosed for your records. Submit one (1) copy of the revised final printed label 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 §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

If you have any questions regarding this Notice, please contact Mindy Ondish at (703)605-0723 or at [ondish.mindy@epa.gov](mailto:ondish.mindy@epa.gov).

Signature of Approving Official:

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

Date:

FEB 2 2012



# Willowood Diuron / Bromacil 80DF

## Herbicide

<b>ACTIVE INGREDIENTS:</b>	<b>By Weight</b>
Bromacil: (5-bromo-3-sec-butyl-6-methyluracil).....	40.0%
Diuron: (3-(3,4-dichlorophenyl)-1,1-dimethylurea).....	40.0%
<b>OTHER INGREDIENTS:</b> .....	<u>20.0%</u>
<b>TOTAL:</b> .....	100.0%

### KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)

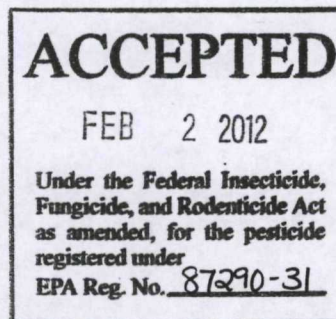
FIRST AID	
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.	

EPA Reg. No. 87290-31

EPA Est. No.

Manufactured for:  
Willowood, LLC  
1600 NW Garden Valley Blvd. #120  
Roseburg, OR 97471

Net Weight:





## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. This product may cause skin sensitization reactions in some people.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some of the materials that are chemical-resistant to this product are listed below. If you want more option, follow the instructions for category A on an EPA chemical-resistant selection chart.

**Pilots, flaggers and groundboom applicators must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks

In addition to the above PPE, groundboom applicators must also wear: chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

**Mixers, loaders, other applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- A NIOSH approved dust-mist filtering respirator with any N, R, P, or HE filter or with approval number prefix TC-21C.
- Chemical resistant apron when mixing, loading, or cleaning equipment or spills.

See "Engineering Control Statement" for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(6)].

Flaggers supporting aerial applications must use an enclosed cab that meets the definition in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(5)] for dermal protection.

### USER SAFETY RECOMMENDATIONS

**Users should:**

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. 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 or rinsate.

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.

### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Willowood Diuron / Bromacil 80DF must only be used in accordance with instructions 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.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition et al vs EPA, Col-132C (W.D. W.A.). For information, please refer to [www.epa.gov/espp/wtc/](http://www.epa.gov/espp/wtc/).

#### 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

#### 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 Part 170). 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.

#### PRODUCT INFORMATION

Willowood Diuron / Bromacil 80DF is a dispersible granule to be mixed in water. It is to be sprayed to citrus for selective weed control and on non-crop areas for non-selective control of weeds. This product controls many annual weeds at the lower label rates and certain perennial weeds at the highest label rates.

Moisture is necessary to move this product into the root zone of susceptible weeds and brush. Application to moist soil or to soil where moisture from rainfall or sprinkler irrigation occurs within 14 days of application will provide the best control. Symptoms of control will be slow to appear because the product must first move into the root zone of the susceptible plants. The level and length of weed and brush control will be dependent upon the amount of herbicide applied, soil texture, amount of moisture applied and other soil and water management practices.

#### USE PRECAUTIONS AND RESTRICTIONS

If you plan to use Willowood Diuron / Bromacil 80DF for selective weed control in citrus or for non-selective weed control in non-crop areas, observe the following:



- Do not use in any recreational areas or around homes.
- To prevent injury or loss to desirable plants and trees:
  - Do not apply except as instructed by this label.
  - Thoroughly clean all traces of this product from application equipment – tank, pump, hoses, etc. immediately after use by thoroughly washing/rinsing with several changes of water after removing nozzle tips and screens (clean these parts separately).
  - Do not drain or clean equipment near desirable trees or other plants, or onto areas where roots of desirable trees and plants may extend, or onto areas where this product may be washed or moved into contact with roots of desirable trees and plants.
  - Do not use on lawns, walks, driveways, tennis courts, or similar areas.
  - Prevent drift of dry powder or spray to desirable plants.
  - Do not store and handle this product around fertilizers, insecticides, fungicides, or seeds.
  - Do not use in home fruit planting, or in citrus orchards interplanted to other trees or desirable plants.
- Do not apply this product through any type of irrigation system.
- Do not graze cattle in treated areas.
- Only citrus may be planted into treated areas and only after one year of the last application.
- Other crops may not be planted until 2 years after the last application.
- Aerial application is allowed on right-of-ways only. Do not apply by air to citrus or to other non-crop areas.

**Requirements for reducing spray drift for ground and aerial applications**

Use best practices to avoid drift to all other crops and non-target areas. Do not apply when conditions favor drift from target areas. The interaction of many equipment- and weather-related factors determine the potential for spray drift. Avoiding spray drift at the application site is the responsibility of the applicator. The applicator must follow the most restrictive precautions to avoid drift, including those found in this labeling as well as applicable state and local regulations and ordinances. A drift control agent may reduce drift, however, it may also decrease weed control.

- Make aerial or ground applications only when the wind speed is less than or equal to 10 miles per hour.
- Do not make aerial or ground applications into temperature inversions.
- Apply with medium or coarser spray (according to ASABE standard S-572.1) for standard nozzles.

***Additional requirements for ground applications:***

When applying to crops, apply with nozzle height no more than 2 feet above the ground or crop canopy. When applying to non-crop areas, use lowest nozzle height consistent with safety and efficacy. Direct spray into target vegetation.

***Additional requirements for aerial applications:***

The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The boom length must not exceed 75% of the wingspan or 90% of rotor blade diameter.

Use upwind swath displacement.

When applying to crops, do not release spray at a height greater than 6 to 10 feet above the ground or crop canopy. When applying to non-crop areas, apply at a minimum safe altitude above the area being treated.

Do not apply by air if sensitive non-target crops are within 100 feet of the application site.

**MIXING**

Sprayers should be properly calibrated with clean water only and checked regularly during operation. It is important to accurately measure this product and to only mix enough spray mixture for the job at hand. The spray tank should not be over-filled. Excess spray mixture should be diluted and applied at labeled rates/uses. It should never be discharged at a single location in the field/grove or at the mixing/loading location. Do not store or mix near well sites.



## CROP ROTATION BIOASSAY

In sites where Willowood Diuron / Bromacil 80DF has been used, a field bioassay should be completed prior to planting any desired crop. In arid climates (10 inches of rainfall or less) or areas where drought conditions have prevailed for one or more years, a field bioassay must be completed prior to planting any desired crop.

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. The results from the bioassay may require the two-year crop rotation interval to be extended.

## SPRAY PREPARATION

**Mixing in water** – Fill tank 1/2 full with water. Start agitation system, add Willowood Diuron / Bromacil 80DF 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 of this product with 2 tablespoons 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 teaspoons of dry materials or 1 teaspoon of liquids with 2 tablespoons of water; add to Willowood Diuron / Bromacil 80DF-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 Willowood Diuron / Bromacil 80DF and thoroughly mix.

**Mixing with other herbicides** – Determine the tank mixture partner(s) compatibility with Willowood Diuron / Bromacil 80DF 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, Willowood Diuron / Bromacil 80DF may be used in this tank mixture.

## SPRAY TANK CLEAN OUT

Thoroughly clean all traces of Willowood Diuron / Bromacil 80DF 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.

## 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,



7  
16

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.

### **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. 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.

### **CONTROLLING DROPLET SIZE – AIRCRAFT**

- **Number of Nozzles** – Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** – Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

### **BOOM LENGTH AND HEIGHT**

- **Boom Length (aircraft)** – The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- **Boom Height (aircraft)** – Application more than 10 ft above the canopy increases the potential for spray drift.
- **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



8  
16

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 affect 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.

#### **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).

---

### **AGRICULTURAL USES**

---

#### **APPLICATION INFORMATION**

Apply Willowood Diuron / Bromacil 80DF as a band or broadcast treatment with a calibrated fixed-boom power sprayer with nozzles equipped with 50 mesh or larger screens. Shut off spray booms when starting, turning, slowing or stopping because higher than labeled use rates may be applied and injury to the crop or successive crops could occur. All use rates of Willowood Diuron / Bromacil 80DF 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 the bottom of the tank to minimize foaming. When using this product alone or in tank mixture, thoroughly re-agitate if allowed to settle.

Make applications at any time of the year provided rainfall or overhead irrigation is available to activate the herbicide, preferably just before or just after weeds have germinated. Best results are obtained when this product is applied to bare ground. If weeds are already present, a tank mixture of this product with a foliar active herbicide is recommended (See Tank Mixtures section of this label). Control dense populations of hard-to-kill weeds with other herbicides before making an application with this product.

#### **TANK MIXTURES**

To achieve a broader spectrum of weed control in citrus, tank mix this product with other herbicides registered for use in citrus. Be sure to follow the use information and restrictions on the labels of the tank mix herbicides. The label guidelines that are the most restrictive must be followed. Adjuvants used with herbicides may also be tank mixed with this product.



9  
16

**Note:** If the user has no experience with a particular tank mixture, a jar compatibility test should be performed to determine chemical compatibility of the products before they are mixed in the spray tank. See the SPRAY PREPARATION section of this label for additional details.

### WEEDS CONTROLLED

#### Annuals

Barnyardgrass	<i>Echinochloa crus-galli</i>
Brome, downy (cheatgrass)	<i>Bromus tectorum</i>
Chickweed, common	<i>Stellaria media</i>
Chickweed, mouseear	<i>Cerastium vulgatum</i>
Clovers (annual)	<i>Trifolium</i> spp.
Filaree	<i>Erodium</i> spp.
Fleabane, flaxleaved (hairy)	<i>Conyza bonariensis</i>
Foxtail	<i>Setaria</i> spp.
Goatweed	<i>Scoparia dulcis</i>
Groundsel	<i>Senecio</i> spp.
Horseweed (marestail)	<i>Conyza canadensis</i>
Johnsongrass	<i>Sorghum halepense</i>
Junglerice	<i>Echinochloa colona</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarter	<i>Chenopodium album</i>
Lettuce, wild	<i>Lactuca serriola</i>
Mustard, wild	<i>Brassica kaber</i>
Natalgrass (red top)	<i>Rhynchelytrum repens</i>
Nightshade (annual)	<i>Solanum</i> spp.
Pigweed	<i>Amaranthus</i> spp.
Pineappleweed	<i>Matricaria matricariodes</i>
Puncturevine, common	<i>Tribulus terrestris</i>
Purslane, common	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scraba</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>
Sandbur (sandspur)	<i>Cenchrus</i> spp.
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Sowthistle, annual	<i>Sonchus oleraceus</i>
Spanishneedles	<i>Bidens pilosa</i>
Thistle, Russian	<i>Salsola australis</i>

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

Balsamapple vine (seedling)	<i>Momordica charantia</i>
Bermudagrass	<i>Cynodon dactylon</i>
Drymary	<i>Drymaria</i> spp.
Guineagrass	<i>Panicum maximum</i>
Milkweed vine (strangler)	<i>Morrenia odorata</i>
Quackgrass	<i>Agropyron repens</i>
Vines (seedlings)	

**NOTE:** Use the highest rates allowed by this label for best control of perennial weeds listed on this label. Repeat applications are usually necessary to control perennials. To improve control of perennials, cultivate prior to treatment. After treatment with this product, avoid cultivations as long as weed control is holding. Working the soil after treatment could result in reduced weed control.

#### CITRUS

Apply Willowood Diuron / Bromacil 80DF to citrus for control of the annual and perennial weeds listed above. Make applications at any time of the year provided rainfall or overhead irrigation is available to activate the herbicide, preferably just before or just after weeds have germinated. The degree and duration of control will vary with the amount of herbicide applied, soil texture, rainfall and other conditions. It is non-corrosive to equipment, non-flammable and non-volatile.



10  
T6

Apply Willowood Diuron / Bromacil 80DF as a band or broadcast treatment beneath and/or between trees. Avoid contact of foliage and fruit with spray or mist. Avoid overlapping and shut off spray boom while starting, turning, or stopping as injury to trees may result. Temporary yellowing of citrus leaves may occur following treatment.

- 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 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 at less than 60-day intervals when making multiple applications to trees less than 4 years old or 80-day intervals to trees 4 years old and older. A maximum of 2 applications of product per year is permitted.

All traces of this product must be removed from the application equipment immediately after use. Remove nozzles and screens and clean separately. Several changes of water should be run through the application equipment.

**CALIFORNIA, ARIZONA**

**Trees Established for at least Three Years:** Apply this product in late fall or early winter, but before winter annuals become established. Wait to apply treatment until after the soil has been settled by fall or early winter rains. Apply as needed, 4-5 pounds Willowood Diuron / Bromacil 80DF per acre on coarse soils (1-2% organic matter) and 5-6 pounds of this product per acre on fine soils (2.5% or greater organic matter). 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 of this product per acre per year.

If problem weeds like groundsel or puncturevine are present at the location, use the highest rates allowed on this label according to soil type. These rates will also suppress low levels of bermudagrass and yellow nutsedge. Repeat annually for best treatment effect.

**FLORIDA**

Apply this product as a band treatment only in Florida citrus groves. Do not apply trunk to trunk. The use of Willowood Diuron / Bromacil 80DF is prohibited for weed control in non-bedded citrus groves located on any permeable, better drained soil indentified 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
Bahiahonda	Gainesville	Satellite
Broward	Lake	St. Augustine
Canaveral	Lakewood	St. Lucie
Candler	Neilhurst	Tavares
Cocoa	Orlando	

**APPLICATION INSTRUCTIONS**

Since all use rates for Willowood Diuron / Bromacil 80DF are expressed for broadcast treatments, use proportionately less per acre for band treatments in Florida. Multiple applications may be required for control of some problem weeds. **Note:** Do not apply more than 16 pounds per acre of this product per year. This corresponds to 6.4 pounds per treated acre of bromacil and 6.4 pounds per treated acre of diuron. These amounts represent the maximum allowable use rates for bromacil and diuron on citrus inclusive of all formulations of bromacil or diuron that might be used.



11  
16

**Trees Established Less Than One Year:** For control of annual weeds, apply 2-4 pounds of Willowood Diuron / Bromacil 80DF per treated acre 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 Willowood Diuron / Bromacil 80DF 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 to maintain weed control. Do not apply more than 16 pounds of Willowood Diuron / Bromacil 80DF per treated acre per year.

#### **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. In either case, do not apply more than 6 pounds of this product per acre per year.

#### **TEXAS**

**Trees Established Less than One Year:** Apply 2-4 pounds Willowood Diuron / Bromacil 80DF per acre to maintain weed control. Do not apply at less than 60-day intervals. Do not apply more than 6 pounds of this product per acre per year.

**Trees Established One or Two Years:** Apply 2-4 pounds Willowood Diuron / Bromacil 80DF per acre. A second application may be made when needed to maintain weed control, but do not exceed 6 pounds of this product per acre per year.

**Trees Established Three or More Years:** Make one to two applications per year 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 of this product per acre per year.



12  
—  
16

---

## NON-AGRICULTURAL USES

---

### USE RESTRICTIONS – STATE OF FLORIDA

In the state of Florida the use of Willowood Diuron / Bromacil 80DF 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 Willowood Diuron / Bromacil 80DF. This amount corresponds to 6.4 pounds of bromacil and 6.4 pounds of diuron, the active ingredients in Willowood Diuron / Bromacil 80DF.

The maximum allowable use rate for bromacil is 6.4 pounds active ingredient per acre per year inclusive of all bromacil formulations.

A maximum of 12 pounds active ingredient diuron is allowed per year in areas of high rainfall or dense vegetation inclusive of all diuron formulations and a maximum of 8 pounds active ingredient diuron is allowed in all other areas inclusive of all diuron formulations.

### APPLICATION INFORMATION

Apply Willowood Diuron / Bromacil 80DF for weed control to the following non-crop areas: uncultivated non-agricultural areas (including airports, highway, railroad and utility rights-of-way, sewage disposal areas); uncultivated non-crop producing areas (including farmyards, fuel storage areas, fence rows, barrier strips); and outdoor industrial sites (including lumberyards, pipeline and tank farms).

Apply Willowood Diuron / Bromacil 80DF 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. Sufficient spray volume should be used to allow for uniform coverage of the sprayed area. Continuous agitation in the spray tank with mechanical or hydraulic means (do not use air agitation) is necessary to keep this product in suspension. If by-pass or return line agitation is used, it should terminate at the bottom of the tank to decrease foaming. When using this product alone or in tank mixture, thoroughly re-agitate if allowed to settle.

All rates of Willowood Diuron / Bromacil 80DF are expressed for broadcast treatments. For band treatments, use proportionately less.

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

- Apply a maximum of two applications per year.
- The minimum retreatment interval is 90 days.
- A maximum of 12 pounds active ingredient bromacil (30 pounds of Willowood Diuron / Bromacil 80 DF) per year is allowed.
- A maximum of 12 pounds active ingredient diuron (30 pounds of Willowood Diuron / Bromacil 80 DF) is allowed per year in areas of high rainfall or dense vegetation. A maximum of 8 pounds active ingredient diuron (20 pounds of Willowood Diuron / Bromacil 80 DF) is allowed in all other areas.

### NON-CROP WEED CONTROL

#### APPLICATION RATES AND TIMING

Apply this product at the rates provided in the tables below according to weed type. Lower rates of this product provide short-term control of the weeds listed whereas higher rates provide more residual control. Always apply as a preemergence spray when weeds are actively germinating or growing. Since moisture is required to move the herbicide into the root zone of the weeds, best preemergence control is obtained when this product is applied prior to rainfall and weed germination. In areas of low and infrequent rainfall, such as the Western U.S., apply this product well before the Fall freeze or immediately after the Spring thaw to increase the chances of having adequate moisture to activate and disperse the herbicide in the soil. 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



13  
—  
16

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.

### **WEEDS CONTROLLED**

Willowood Diuron / Bromacil 80DF 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</i> spp.
Fiddleneck	<i>Amsinckia intermedia</i>
Filaree	<i>Erodium</i> spp.
Knapweed, diffuse	<i>Centaurea diffusa</i>
Lambsquarter, common	<i>Chenopodium album</i>
Lettuce, prickly	<i>Lactuca serriola</i>
Mustards	<i>Brassica</i> spp.
Pigweed	<i>Amaranthus</i> spp.
Ragweed	<i>Ambrosia</i> spp.
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</i> spp.
Puncturevine	<i>Tribulus terrestris</i>
Spurge	<i>Euphorbia</i> spp.
Thistle, milk	<i>Silybum marianum</i>
Yarrow, common	<i>Achillea millefolium</i>

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

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

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

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



14  
16

**Grasses – 8-12 pounds per acre**

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

**Grasses – 12-16 pounds per acre**

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

\*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. Use the higher Willowood Diuron / Bromacil 80DF 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 Willowood Diuron / Bromacil 80DF per 200 sq. ft. is approximately 15 pounds per acre.

**TANK MIXTURES**

To achieve a broader spectrum of weed control in non-crop areas, this product may be tank mixed with other herbicides registered for such use. Be sure to follow the use information and restrictions on the labels of the tank mix herbicides. The label guidelines that are the most restrictive must be followed. Adjuvants used with herbicides in non-crop areas may also be tank mixed with this product.

**Note:** If the user has no experience with a particular tank mixture, a jar compatibility test should be performed to determine chemical compatibility of the product before they are mixed in the spray tank. See the SPRAY PREPARATION section of this label above for additional details.

Be sure to thoroughly re-agitate the spray tank contents if allowed to settle.

**SPECIAL USES  
UNDER ASPHALT AND CONCRETE PAVEMENT**

**APPLICATION INFORMATION**

Willowood Diuron / Bromacil 80DF 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.

Willowood Diuron / Bromacil 80DF should only be used in an area that has been prepared according to good constructions practices. Use sufficient water to ensure uniform coverage, generally 100 gallons per acre. Agitate the tank continuously to keep Willowood Diuron / Bromacil 80DF in suspension.

**APPLICATION TIMING AND RATES**

Apply this product at 17 to 30 pounds per acre immediately before paving to avoid lateral movement of the herbicide as a result of soil movement due to rainfall or mechanical means. Use higher rates for control of problem weeds and for more residual control.



15  
16

### TANK MIXTURES

To control a broader spectrum of weeds, or for an extended period of weed control, a tank mixture of Willowood Diuron / Bromacil 80DF at 7 to 15 pounds per acre plus OUST® XP at 4 to 8 ounces per acre may be used.

### PRECAUTIONS AND RESTRICTIONS - UNDER ASPHALT ONLY

- Do not use Willowood Diuron / Bromacil 80DF under pavement in residential properties such as driveways, or in recreations 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.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or 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 must be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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.

### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Willowood, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Willowood, LLC and Seller harmless for any claims relating to such factors.

Willowood, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Willowood, LLC, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, WILLOWOOD, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, neither Willowood, LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF WILLOWOOD, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF WILLOWOOD, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**



16  
16

Willowood, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Willowood, LLC.

Oust is a registered trademark of E.I. DuPont de Nemours and Company.

[EPA approval date]