

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

February 21, 2019

Mr. Michael Kellogg Regulatory Consultant Alligare, LLC c/o Pyxis Regulatory Consulting Inc. 4110 136<sup>th</sup> St. Ct. NW Gig Harbor, WA 98332

Subject: Notification per PRN 98-10 – Adding optional referral statement Product Name: Bromacil/Diuron 40/40 EPA Registration Number: 81927-3 Application Date: 12/21/18 Decision Number: 548027

Dear Mr. Kellogg:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, please contact BeWanda Alexander at (703)347-0313 or by email at alexander.bewanda@epa.gov.

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Sincerely,

in the

Erik Kraft, Product Manager 24 Fungicide and Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

[Note to reviewer: [Text] in brackets indicates optional text].

# NOTIFICATION

#### 81927-3

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

# **Bromacil/Diuron 40/40**

[Alternate brand name: Krovar<sup>®</sup> IVM Herbicide]

ACTIVE INGREDIENTS:	By Weight
Bromacil: (5-bromo-3-sec-butyl-6-methyluracil)	
Diuron: (3-(3,4-dichlorphenyl)-1,1-dimethylurea)	
OTHER INGREDIENTS:	
TOTAL:	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	
If on skin or	• Take off contaminated clothing.
clothing:	• Rinse skin immediately with plenty of water for 15-20 minutes.
	• Call a poison control center or doctor for treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	• Remove contact lenses, if present, after the first 5 minutes, then continue
	rinsing eye.
	• Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air.
	• If person is not breathing, call 911 or an ambulance, then give artificial
	respiration, preferably by mouth-to-mouth, if possible.
	• Call a poison control center or doctor for further 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 the poison control center or	
doctor.	
• Do not give anything by mouth to an unconscious person.	
HOT LINE NUMBER	
Have the produ	ict container or label with you when calling a poison control center or doctor, or

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

[See] [inside] [label] [booklet] [for] [First Aid][,] [additional] [Precautionary Statements][,] [and] [Directions for Use] [including Storage and Disposal] [instructions][.]See inside label booklet for additional PRECAUTIONARY STATEMENTS

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS **CAUTION**

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

EPA Reg. No. 81927-3

EPA Est. No.

02/21/2019

Manufactured for: Alligare, LLC 13 North 8<sup>th</sup> Street, Opelika, AL 36801 Ph: 888-255-4427

Net Weight:

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are made out of any waterproof material. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

## All pilots, flaggers and groundboom applicators must wear:

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

# All mixers, loaders, other applicators, and other handlers must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves,
- A NIOSH-approved particulate filtering respirator equipped with N, R, or P class filter media (The respirator should have a NIOSH approval number prefix TC-84A and it is recommended that you require the respirator wearer be fit tested, and trained in the use, maintenance, and limitations of the respirator),
- Chemical-resistant apron when mixing, loading, or cleaning equipment or spills

See engineering controls for additional requirements.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

# ENGINEERING CONTROL STATEMENT

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 for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, flaggers must wear long-sleeved shirt, long pants, shoes, and socks.

# **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

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

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

Apply this product only as specified on this label.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# 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.

Non-crop 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.

# **GENERAL INFORMATION**

Bromacil/Diuron 40/40 is a selective herbicide for use in citrus and in non-crop areas. Bromacil/Diuron 40/40 controls many annual weeds at lower rates and perennial weeds at the highest rates allowed by this label.

As this product must be absorbed through the root system of weeds, best results are obtained if treatment is made just before or after weeds have germinated to moist soil and moisture is supplied by rainfall or sprinkler irrigation within two weeks of application. Weed control symptoms are slow to appear and may not become apparent until the chemical has been carried into the root zone of the weeds by moisture. The degree and duration of control will vary with the amount of herbicide applied, rainfall, soil texture, and other soil and water management practices.

# USE PRECAUTIONS AND RESTRICTIONS

To avoid injury to or loss of desirable trees or other plants, observe the following use guidelines:

- Do not apply this product using any type of irrigation system.
- Aerial application is prohibited for all uses except for rights of way.
- Except as instructed, do not apply 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 in any recreational areas or in or around homes, in home fruit plantings, on lawns, walks, tennis courts, driveways, or other similar areas.
- Do not use in citrus orchards interplanted to other trees or desirable plants.
- Do not allow dry powder or spray to drift to desirable plants.
- Keep from contact with seeds, insecticides, fungicides, and fertilizers.
- Do not store near well sites.
- Do not graze cattle in treated areas.
- Thoroughly clean all traces of Bromacil/Diuron 40/40 from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).
- Treated areas may be planted to citrus one year after last application. Do not replant to other crops within two years after last application as injury may result.

# When Preparing for Use:

- Calibrate sprayers only with clean water away from well sites.
- Regularly inspect spray equipment.
- Mix only enough Bromacil/Diuron 40/40 for the specific application.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Ensure accurate measurement of pesticides.
- Avoid over-filling of spray tank.
- Dilute and agitate excess solution and apply at labeled rates/uses.

# Tank Mixture Specific Guidelines:

- Bromacil/Diuron 40/40 may be tank mixed with other suitable herbicides registered for use on citrus or non-agricultural use. Use only those herbicides approved for use on citrus if applying to citrus and use only those herbicides approved for use in non-agricultural areas if applying to non-agricultural areas. Refer to the label(s) of the other products being added to the tank mix for any additional use information or restrictions. Before applying a tank mixture, read and observe all label directions for each product. *Follow the most restrictive label guidelines*.
- Bromacil/Diuron 40/40 may also be tank mixed with appropriate adjuvants used with herbicides in citrus or non-agricultural uses. Use only those adjuvants approved for use on citrus if applying to citrus and use only those adjuvants approved for use in non-agricultural areas if applying to non-agricultural areas.
- When tank mixing with Bromacil/Diuron 40/40, completely mix the product in the spray tank carrier before adding any other herbicide or spray adjuvant. A small compatibility test (see below) should be

performed prior to adding the products into the spray tank using a combination of products not previously used. Refer to the Spray Preparation section of this label for further information.

• The spray tank contents must be thoroughly re-agitated if they are allowed to settle for any period of time.

# **APPLICATION INFORMATION**

IMPORTANT NOTE: Bromacil/Diuron 40/40 use rates listed on this label are for broadcast treatments. For band treatments, use proportionately less.

Follow the application guidelines below:

- Apply using a properly calibrated fixed-boom power sprayer.
- Because over application of the herbicide may result in injury to the crop or successive crops, the spray booms must be shut off while starting, turning, slowing or stopping.
- Use sufficient spray volume, a minimum of 10 gallons per acre, to provide uniform coverage of the treated areas and to allow proper dispersion and suspension of the product in the spray tank.
- Prior to and during application, continuous agitation is necessary to keep the product in suspension. Agitate spray tank contents by mechanical or hydraulic means; *do not use air agitation*. Note: If a by-pass or return line is used, it should terminate at the bottom of the tank to minimize foaming.
- Nozzle screens should be 50 mesh or larger.
- Best results are obtained if Bromacil/Diuron 40/40 is applied to bare ground. If dense populations of hard-to-kill weed species are present, control of these weeds prior to application of Bromacil/Diuron 40/40 is recommended. If weeds are present at the time of application, tank mixtures with foliar active herbicides are recommended (refer to the Tank Mixture Specific Guidelines section of this label for guidelines on using Bromacil/Diuron 40/40 in a tank mixture).

# SPRAY PREPARATION

**Mixing in Water** – Fill tank half full with water. Start agitation system and while continuing to add water, add Bromacil/Diuron 40/40 and each additional component of any tank-mix separately. Be sure to agitate the entire time.

**Test for Mixing with Other Herbicides** – Determine the tank mixture partner(s) compatibility with Bromacil/Diuron 40/40 by following the directions below. If the testing procedure shows the mixture to be compatible, Bromacil/Diuron 40/40 may be used in the tank mixture.

- 1. Put 1 pint of water into a quart jar with a tightly sealing lid.
- 2. In a separate container, combine 2 teaspoons of Bromacil/Diuron 40/40 with 2 tablespoonfuls of water; mix thoroughly and add to the water.
- 3. Close the jar and shake well.
- 4. If additional herbicides are to be used in the mixture, follow steps two and three above for each additional herbicide.
- 5. Once all components of the tank mix are combined in the test jar, watch the mixture for several seconds and then check again in 30 minutes. If mixture does not separate, foam, gel or become lumpy, it may be used.

**Mixing in Liquid Fertilizer** – A fertilizer solution may be used in the spray mixture. Use the procedure above to test for compatibility before full-scale mixing, but in Step 1, in place of the water, use the liquid fertilizer.

If the above procedure indicates the desired mixture will be compatible, prepare the tank mixture as follows:

- 1. Add the fertilizer solution to the spray tank first.
- 2. In a separate container, mix the required amount of Bromacil/Diuron 40/40 with water to form a slurry that can be poured.
- 3. With the agitator running, slowly add the slurry to the tank and mix thoroughly.

# SPRAY TANK CLEAN OUT

Thoroughly clean all traces of Bromacil/Diuron 40/40 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.

# VERIFICATION OF SAFE ROTATIONAL USE IN ARID CLIMATES

In arid climates (areas that experience 10 inches of rainfall or less in a year) or areas that have experienced drought conditions for one or more years, a field bioassay should be conducted prior to planting any desired crop(s). The bioassay may consist of a test strip of the crop and should cross the entire field, including high and low lying portions. If a test strip of the crop(s) intended for production is not successfully grown to maturity, it may be necessary for the two-year crop rotation interval to be extended.

# WEED RESISTANCE TO HERBICIDES

Weeds may become resistant to any herbicide if an herbicide is used in the same field repeatedly over several years. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product with a different mode of action.

The following suggestions will assist in managing herbicide resistance:

- It may be necessary to change cropping practices within and between crop seasons. For example, using a combination of tillage, retreatment, tank-mixtures and/or sequential herbicide applications that have different modes of action.
- Preventing weeds from going to seed (by mowing, tilling, etc.) will prevent the spread of resistant plants.
- Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program such as 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

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 ASAE standard 572) for standard nozzles.

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 the lowest nozzle height consistent with safety and efficacy. Direct spray into target vegetation.

For aerial applications (rights-of-way only): 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 rights of way, 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.

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

# WEEDS CONTROLLED

# ANNUALS

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

#### PERENNIALS (Maximum rates and repeat treatments)

(Waxinium rates and repeat treatments)	
Balsamapple vine (seedling)	Momordica charantia
Bermudagrass	Cynodon dactylon
Drymary	Drymaria spp.
Guineagrass	Panicum maximum
Milkweed vine (strangler)	Morrenia odorata
Quackgrass	Agropyron repens
Vines (seedlings)	

**Note:** Partial control of perennials usually occurs with a single treatment; repeat applications are required to control perennials. Control of perennials may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues otherwise effectiveness of the treatment may be reduced. Multiple applications may improve control of hard-to-kill weeds.

# CITRUS

NOTE: Bromacil/Diuron 40/40 use rates listed on this label are for broadcast treatments. For band treatments, use proportionately less.

Bromacil/Diuron 40/40 may be applied as a broadcast or band treatment beneath and/or between trees. Be sure to review the specific use instructions for use in your State (below) before using this product.

Important considerations for use of Bromacil/Diuron 40/40 on Citrus:

- Following treatment, temporary yellowing of citrus leaves may occur.
- When spraying, avoid contact of spray with leaves or fruit.
- Do not use on soils with less than 1% organic matter as injury to citrus trees may result.
- Do not use on poorly drained soils, gravelly soils or thinly covered or exposed subsoils.
- Do not use on diseased or stressed trees.
- Do not use on trees planted in irrigation furrows.
- Do not use in citrus groves interplanted 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.
- When making multiple applications in a single growing season, 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 two applications of product per year is permitted. (Refer to State Specific Use Instructions for Florida for exceptions).
- Bromacil/Diuron 40/40 may be applied 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.

• Do not apply this product in a way that will contact worker or other persons, either directly or through drift.

# STATE SPECIFIC USE INSTRUCTIONS

# CALIFORNIA, ARIZONA

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

- For the initial treatment, apply 4-5 pounds Bromacil/Diuron 40/40 per acre on coarse soils containing 1-2% organic matter and 5-6 pounds per acre on fine soils or soils with organic matter of 2 ½% or more.
- Alternatively, apply 3-4 pounds per acre in the fall and repeat at 2-4 pounds per acre in the spring.
- When treating to control groundsel or puncturevine, use the highest rate allowed by this label. These rates will also suppress low density stands of bermudagrass and yellow nutsedge. Repeat annually for best results.
- Do not exceed 6 pounds per acre per year.

# FLORIDA

The use of Bromacil/Diuron 40/40 is prohibited for weed control in non-bedded citrus groves located on any permeable, better drained soil identified in the intended site of application. Permeable, better drained soils which occur in citrus producing areas of the state including unnamed soils and soils with characteristics 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
Сосоа	Orlando	

Treated areas may be planted to citrus trees one year after the last Bromacil/Diuron 40/40 application. Do not replant to other crops within two years after the last Bromacil/Diuron 40/40 application as plant injury may result.

# **Application Instructions**

*In Florida, apply Bromacil/Diuron 40/40 as a band treatment only* using a properly calibrated fixedboom power sprayer. Do not use Trunk to Trunk.

**NOTE:** All use rates of Bromacil/Diuron 40/40 are expressed for broadcast treatments. For band treatments as required in Florida, use proportionately less.

#### Flatwood, Florida Area Only:

The maximum single application rate is 16 lbs. Bromacil/Diuron 40/40 (6.4 lbs a.i. diuron/A per year and 6.4 lbs. a.i. bromacil/A per year).

The maximum annual application rate is 16 lbs. Bromacil/Diuron 40/40 (6.4 lbs a.i. diuron/A per year and 6.4 lbs. a.i. bromacil/A per year).

**Trees Established Less than Four Years:** For control of annual weeds, apply 2 to 4 pounds of Bromacil/Diuron 40/40 per treated acre as needed to maintain weed control. Do not apply more than 6 pounds per treated acre during any 6 month period nor more than 8 pounds per treated acre during the first year. The minimum retreatment interval is 60 days. Do not make more than 2 applications per year.

**Trees Established Four or More Years:** Apply 4 to 8 pounds per treated acre. Do not make more than 2 applications per year. The minimum retreatment interval is 80 days.

#### All Florida Areas (except Flatwood):

The maximum single application rate is 8 lbs. Bromacil/Diuron 40/40 (3.2 lbs a.i. diuron/A per year and 3.2 lbs. a.i. bromacil/A per year).

The maximum annual application rate is 16 lbs. Bromacil/Diuron 40/40 (6.4 lbs a.i. diuron/A per year and 6.4 lbs. a.i. bromacil/A per year).

**Trees Established Less than Four Years:** For control of annual weeds, apply 2 to 4 pounds of Bromacil/Diuron 40/40 per treated acre as needed to maintain weed control. Do not apply more than 6 pounds per treated acre during any 6 month period nor more than 8 pounds per treated acre during the first year. The minimum retreatment interval is 60 days. Do not make more than 2 applications per year.

**Trees Established Four or More Years:** Apply up to 4 lbs Bromacil/Diuron 40/40 per treated acre. Do not make more than 2 applications per year. The minimum retreatment interval is 80 days.

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

## **Annual Weeds Controlled**

#### **Perennial Weeds Controlled**

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

**Note:** Use the highest rates allowed by this label for best control of perennial weeds listed on this label. Partial control of perennial weeds can result with only a single treatment of Bromacil/Diuron 40/40. Repeat applications are required (in season and/or annually) for best control of the perennial weeds on

this label. Control of perennials may be improved by cultivation prior to treatment, otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

# LOUISIANA

# **Trees Established for at least Three Years:**

- Make a single application of 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 ½% or more).
- Alternatively, make two applications per year at rates of 2 pounds per acre on coarser soils and 3 pounds per acre on finer soils; make the second application when needed to maintain weed control.
- For maximum suppression of perennials, use the highest rate allowable by this label.
- Do not apply more than 6 pounds per acre per year.

# TEXAS

## Trees Established Less than One Year:

- Apply 2-4 pounds Bromacil/Diuron 40/40 per acre as needed to maintain weed control.
- A second application may be made when needed to maintain weed control, however do not apply at less than 60-day intervals.
- Do not apply more than 6 pounds per acre per year.

## **Trees Established One or Two Years:**

- Apply 2-4 pounds Bromacil/Diuron 40/40 per acre.
- A second application may be made when needed to maintain weed control, however do not apply more than 6 pounds per acre per year.

## **Trees Established Three or More Years:**

- Make one to two applications per year as needed to maintain weed control.
- Use 2-4 pounds per acre on coarser soils (sands, loamy sands, sandy loams) and 4-6 pounds per acre on finer soils (silt loams, clay loams, or soils with organic matter of 2 ½% or more).
- Use the higher rate for maximum suppression of perennials.
- Do not use more than 6 pounds per acre per year.

# NON-AGRICULTURAL USES

## **Use Restrictions – State of Florida**

*In Florida, the use of Bromacil/Diuron 40/40 (bromacil + diuron) is prohibited in Hardee, Highland, Polk, Orange and Lake Counties.* For Non-Agricultural Usage in all other areas of the state, do not apply more than 16 pounds of Bromacil/Diuron 40/40 per acre per year. This amount corresponds to 6.4 pounds of bromacil and 6.4 pounds of diuron, the active ingredients in Bromacil/Diuron 40/40. The maximum allowable use rate for bromacil is 6.4 pounds per acre per year inclusive of all bromacil formulations.

# Instructions for Non-Agricultural Uses of Bromacil/Diuron 40/40

For general weed control in uncultivated non-agricultural areas (for example: airports, highway, railroad and utility rights-of-way, sewage disposal areas), uncultivated non-crop producing areas (for example:

farmyards, fuel storage areas, fence rows, barrier strips) and outdoor industrial sites (for example: lumberyards, pipelines and tank farms).

Combination with other herbicides broadens the spectrum of weeds controlled. In addition, total vegetation control can be achieved with higher rates of Bromacil/Diuron 40/40 plus residual-type companion herbicides.

To improve the control of emerged weeds, add surfactant at 0.25% by volume.

Do NOT apply this product to:

- Open water (such as creeks, estuaries, lakes, reservoirs, rivers, streams or salt water bays);
- When water is present in fresh water wetlands (such as bogs, marshes, potholes or swamps);
- Saltwater marshes within tidal areas;
- Ditches, banks along waterways or impervious substrates; or,
- Areas near desirable plants where roots of these plants may extend.

# **Application Information**

Apply Bromacil/Diuron 40/40 using a properly calibrated fixed-boom power sprayer with sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. All use rates of Bromacil/Diuron 40/40 are expressed for broadcast treatments. For band treatments, use proportionately less.

- Apply a maximum of two applications per year.
- The minimum retreatment interval is 90 days.
- A maximum of 12 pounds active ingredient bromacil per year is allowed.
- A maximum of 12 pounds diuron active ingredient is allowed per year in areas of high rainfall or dense vegetation. A maximum of 8 pounds diuron active ingredient is allowed in all other areas.

## Notes for Non-Agricultural Uses:

- For small areas, a hand sprayer or sprinkling may be used. When preparing to a small area, <sup>1</sup>/<sub>4</sub> cupful of Bromacil/Diuron 40/40 per 200 sq. ft. is approximately 15 pounds per acre.
- Use a spray volume of at least 40 gallons per acre to ensure uniform coverage.
- Do not apply to sites which have roots of desirable plants growing into the treatment zone as plant injury or death may occur.
- Do not apply to hard or impervious soils, water saturated soils or to any surface that does not allow the herbicide to be moved into the soil horizon with moisture. Unusually heavy rainfall shortly after application may move the product off-target to the lowest surrounding point and cause plant injury or death.
- If herbicide treated soil is disturbed by any physical or mechanical means, the herbicide barrier is disrupted and the likelihood of non-performance may increase. For best performance results, make sure the treatment area is stable after the application for the desired weed control period.

## **Application Timing**

Apply Bromacil/Diuron 40/40 as a preemergence spray prior to or during the rainy season when weeds are actively germinating or growing. Moisture is required to activate and move Bromacil/Diuron 40/40

into the root zone of weeds for preemergence control. For best preemergence weed control, apply prior to rainfall and weed germination.

In arid regions of the Western U.S., to ensure adequate moisture for activation and even dispersion of the herbicide in the soil profile, Bromacil/Diuron 40/40 should be applied several weeks prior to the fall freeze or shortly after spring thaw to coincide with periods of higher seasonal moisture. *Do not treat frozen or saturated soils, or soils that are non-receptive to percolation.* 

Retreatments of Bromacil/Diuron 40/40 may be made when annual weeds and grasses reappear on sites where weed growth has been controlled. Apply 4-6 pounds of Bromacil/Diuron 40/40 per acre.

Apply a maximum of 2 applications per year. The minimum retreatment interval is 90 days.

#### **Application Rates**

Apply Bromacil/Diuron 40/40 at the rates indicated by weed type in the tables below. When applied at lower rates, Bromacil/Diuron 40/40 provides short-term control of the weeds listed; when applied at higher rates, weed control is extended.

**Note:** Use the higher levels of the dosage ranges listed when applying on adsorptive soils (for example, those high in organic matter or carbon).

For areas of high rainfall or dense vegetation the maximum single application rate is 30 pounds Bromacil/Diuron 40/40 per acre. This amount corresponds to 12 pounds of bromacil and 12 pounds of diuron, the active ingredients in Bromacil/Diuron 40/40. For all other areas, the maximum single application rate is 20 pounds Bromacil/Diuron 40/40 per acre. This amount corresponds to 8 pounds of bromacil and 8 pounds of diuron per acre.

## Weeds Controlled

Bromacil/Diuron 40/40 effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

#### Broadleaf Weeds – 6 to 8 pounds per acre

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

#### Broadleaf Weeds – 8 to 12 pounds per acre

Carrot, wild	Caudus carota
Dandelion, common	Taraxacum officinale
Dock, curly	Rumex crispus
Knapweed, spotted	Centaurea maculosa
Knotweed, prostrate	Polygonum aviculare
Kochia	Kochia scoparia
Marestail, common (horseweed)	Conyza canadensis
Parsnip, wild	Pastinaca sativa
Plantain	Plantago spp.

Puncturevine	Tribulus terrestris
Spurge	Euphorbia spp.
Thistle, milk	Silybum marianum
Yarrow, common	Achillea millefolium

#### Broadleaf Weeds – 12 to 16 pounds per acre

Cinquefoil, common	Potentilla Canadensis
Goldenrod	Solidago spp.
Milkweed, common	Asclepias syriaca

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

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

# Grasses – 8 to 12 pounds per acre

Bahiagrass	Paspalum notatum
Crabgrass	Digitaria spp.
Goosegrass	Eleusine indica
Rye	Secale cereale
Vaseygrass	Paspalum urvillei

# Grasses – 12 to 16 pounds per acreBluegrassPoa spp.Dropseed, sand\*Sporobolus cryptandrusFescueFestuca spp.Saltgrass\*Distichlis 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 in Florida*).

For extended control of annual weeds and partial control of perennials such as bermudagrass and nutsedge, apply 10-18 pounds per acre. In areas of high rainfall (40 inches or more per year) and/or dense vegetation (greater than 90% weed ground cover) apply 19 to 30 pounds of product (except in Florida). Use the higher Bromacil/Diuron 40/40 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.

# **SPECIAL USES**

# UNDER ASPHALT AND CONCRETE PAVEMENT

#### **Important Precautions when Applying Under Asphalt**

- Do not use Bromacil/Diuron 40/40 under pavement in residential properties such as driveways, or in recreational areas, including jogging or bike paths, tennis courts, or golf cart paths.
- Desirable plants may be injured if their roots extend into treated areas or if planted in treated areas.

## **Application Information**

Bromacil/Diuron 40/40 may 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.

Bromacil/Diuron 40/40 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 gallons per acre. Agitate the tank continuously to keep Bromacil/Diuron 40/40 in suspension.

## **Application Timing**

Bromacil/Diuron 40/40 should be applied immediately before paving to avoid lateral movement of the herbicide as a result of soil movement due to rainfall or mechanical means.

#### **Application Rates**

Apply Bromacil/Diuron 40/40 at 17 to 30 pounds per acre. Use a higher rate on hard to control weeds and/or for longer term weed control.

#### **Tank Mixtures**

To control a broader spectrum of weeds, or for an extended period of weed control, a tank mixture of Bromacil/Diuron 40/40 at 7 to 15 pounds per acre plus Oust<sup>®</sup> XP at 4 to 8 ounces per acre may be used.

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may 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.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in <u>Washington Toxics Coalition</u>, et. al. v. EP, C01-0132C, (W.D. WA). For further information, please refer to <u>http://www.epa.gov/espp/wtc</u>.

## TERMS AND CONDITIONS OF USE

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

## WARRANTY DISCLAIMER

Alligare, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent consistent with applicable law, Alligare, LLC

# MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

## **INHERENT RISKS OF USE**

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Alligare, LLC or the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

# **LIMITATION OF REMEDIES**

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Alligare, LLC's election, one of the following:

(1) Refund of purchase price paid by buyer or user for product bought, or

(2) Replacement of amount of product used

Alligare, LLC shall not be liable for losses or damages resulting from handling or use of this product unless Alligare, LLC is promptly notified of such loss or damage in writing. In no case shall Alligare, LLC be liable for consequential, incidental or special damages or losses.

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