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US ENVIRONMENTAL PROTECTION AGENCY	EPA REGISTRATION NO. DATE OF ISSUANCE MAR 1 5 1996
OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (TS-767)	TERM OF ISSUANCE
WASHINGTON, DC 20460	Unconditional
NOTICE OF PESTICIDE: REGISTRATION	NAME OF PESTICIDE PRODUCT
(Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)	Pennington Craburass Preventer 65 With Fertilizer Preemergence Rerbicide.
AME AND ADDRESS OF REGISTRANT (Include ZIP code)	
Gro Tec, Inc. c/o Kelly Products Produc	
L - Covington, GA 30209	
	from that accepted in connection with this registration must be ior to use of the label in commerce. In any correspondence on this umber.
On the basis of information furnished by the registrant, the the Federal Insecticide, Fungicide, and Rodenticide Act.	e above named pesticide is hereby Registered/Reregistered under
A copy of the labeling accepted in connection with this R	egistration/Reregistration is returned herewith.
	ion, may at any time suspend or cancel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the registration of a product under this to exclusive use of the name or to its use if it has been covered
Act is not to be construed as giving the registrant a right by others.	name in connection with the registration of a product under this
This product is registered in S(c)(b) provided that you:  1. Add to page 14 of the encl "Limitation of Warranty and statement: "Gro Tec, Inc." extent of the purchase print to label directions" which letter to Sandoz Agro, Inc.	name in connection with the registration of a product under this to exclusive use of the name or to its use if it has been covered in accordance with FIFRA Section losed stamped label the following and Limitation of Liability" guarantees this product to the ice, only when used according h you requested in a separate c. dated March 6, 1996.
This product is registered in s(c)(5) provided that you:  1. Add to page 14 of the encl "Limitation of Warranty an statement: "Gro Tec, Inc. extent of the purchase pri to label directions" which letter to Sandoz Agro, Inc. 2. Submit one (1) copy of the release the product for sh	name in connection with the registration of a product under this to exclusive use of the name or to its use if it has been covered in accordance with FIFRA Section  losed stamped label the following and Limitation of Liability.  Guarantees this product to the ice, only when used according the your requested in a separate condition and printed labeling before you nippent.  lied with, the registration will be with FIFRA section 6(e). Your release es acceptance of these conditions.
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# PENNINGTON CRABGRASS PREVENTER PLUS FERTILIZER W/BARRICADE 0.68%

**ACTIVE INGREDIENT:** 

INERT INGREDIENTS: 99.32%

TOTAL: ......100.0%

**Guaranteed Fertilizer Analysis:** 

Nitrogen

32 % (N)

Phosphorus

4 % (P<sub>2</sub>O<sub>5</sub>)

Potassium •

6 % (K<sub>2</sub>O)

Nitrogen from: Urea formaldehyde, Urea, Ammonia

ACCEPTEE
with COMMENTS
In EPA Letter Dated

MAR 1 5 1996

Under the Federal Inserticide, Fundicide, and Rodemickie Act as amended, for the positivide registered under EPA Van. No. 59/4/4-14

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals (including established perennials & wildflower plantings)

#### KEEP OUT OF REACH OF CHILDREN

## **CAUTION**

See the following section, <u>Precautionary Statements, Hazards To Humans and Domestic</u>

Animals, for additional information.

Net Weight:

EPA Reg. No. 59144-14 <sup>f</sup> EPA Est. No.

Gro Tec, Inc. P.O. Box 290 Madison, GA 30650

BARRICADE® is a Registered Trademark of Sandoz, Ltd.

#### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact while handling the material may cause allergic reactions in some individuals.

## Statements of Practical Treatment

If in eyes: Flush thoroughly with water for several minutes. Get medical attention if irritation persists.

If on skin: Wash with soap and water. Rinse thoroughly. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air.

#### **Environmental Hazards**

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwaters.

40/15

#### STORAGE AND DISPOSAL

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

#### **STORAGE**

Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides.

## 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**

<u>Paper containers:</u> Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or; if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

50/15

#### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

This product is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals
- established perennials & wildflower plantings

This product controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

Not for use on plants being grown (1) for sale or other commercial use, (2) for commercial seed production, or (3) for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

Do not graze or feed livestock forage cut from areas treated with this product.

Do not apply this product through any type of irrigation system.

Do not apply aerially.

Do not apply to golf course putting greens.

## **Application Directions**

Apply uniformly through suitable, calibrated commercial application equipment.

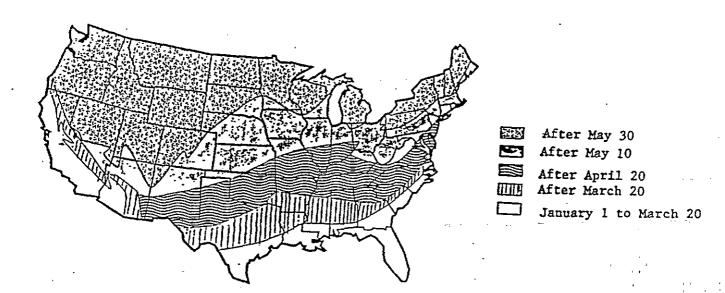
## **ESTABLISHED TURF**

This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grasses and lawns. The maximum amount of this product that may be applied per year is given for each turf grass species in the Maximum Annual Rates section of this label.

Most effective weed control in turf grasses will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATES

Approximate Date



#### Use Precautions

The following precautions apply to the use of this product in turf grasses and lawns:

Application of this product may thin emerged annual bluegrass and newly overseeded grasses.

Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if this product is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

Do not cut treated sod before 120 days after application. Do not apply to newly set sod until the following year.

Application of this product to turf stressed by drought, low fertility, or pest damage may result in turf injury.

Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.

Do not apply this product to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.

## Rates of Application

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. This product will not control established weeds.

Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by this product is related to the rate applied.

## **Maximum Annual Rates**

)

This product is recommended for use on the turf grass species listed in the following table. Do not exceed the maximum yearly rate as given in the following table:

MAXIMUM APPLICATION RATE/CALENDAR YEAR of PENNINGTON CRABGRASS PREVENTER 0.68% by Turf Grass Species 1				
Turf Species:	Ib PENNINGTON CRABGRASS PREVENTER 0.68%/A	lb ai/A		
Bermudagrass <sup>2</sup> Bahiagrass Centipedegrass Seashore Paspalum St. Augustinegrass <sup>3</sup> Tall Fescue (including turf-type) Zoysia	220 g	1.5		
Buffalograss Kentucky Bluegrass Perennial Ryegrass	147	1.0		
Creeping Red Fescue	110 3	0.75		
Creeping Bentgrass	95 🖟 🖰 🖰 🔭 🔭	0.65		

These are the maximum rates per calendar year by species limitations.

- May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 76 lb/A.\*

  Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

  Suppression only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations.
- <sup>3</sup> Use at an initial rate of 110 to 147 lb/A<sup>s</sup>per application followed by sequential applications at doses that would not exceed the maximum annual application rate of 220 lb/A/yr.
- Do not apply more than 220 lb of this product per calendar year.
- Use higher rates of this product to achieve higher levels of fertility and weed control for each turf type.

#### **Weeds Controlled**

When used in accordance with this label this product will provide control of the following weeds:

Barnyardgrass
Bluegrass, Annual (*Poa annua*)
Crabgrass (Large, Smooth)
Crowfootgrass
Cupgrass, Woolly
Foxtails, Annual
Goosegrass<sup>1</sup>
Itchgrass
Johnsongrass (from seed)
Junglerice
Lovegrass
Panicum (Texas, Fall, Browntop)
Rescuegrass<sup>3</sup>

Signalgrass, Broadleaf

Sprangletop Witchgrass Carpetweed
Chickweed, Common
Chickweed, Mouseear (from seed)
Henbit
Knotweed
Kochia
Lambsquarter, Common
Pigweed
Purslane, Common
Pusley, Florida
Shepherd's Purse<sup>2</sup>
Speedwell, Persian
Spurge, Prostrate
Woodsorrel, Yellow (from seed)

- In many areas a single application of 95 to 220 lb/A of this product will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 95 to 147 lb/A followed after 60 to 90 days by a second application at doses that would not exceed those given in the Maximum Annual Rate Table. Do not exceed the maximum rate for turf grass species listed in the Maximum Annual Rate Table above.
- Applications for this weed should be made in late summer, fall or winter prior to germination.
- <sup>3</sup>. Suppression only.

Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. All applications must be made prior to germination of the weed seeds.

## WHEN TO APPLY AFTER OVERSEEDING TURF

Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if BARRICADE is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

# WHEN TO OVERSEED AFTER APPLICATION

BARRICADE will inhibit the germination of turf species if overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

PENNINGTON O PREVENTER 0.68		Interv	al Before Overseed	ding
Product	ai	North	Transition	South
74 - ⊰	.50	4 mo	4 mo	4 mo
95 🤄	.66	5 mo	4 mo	4 mo
110	.74	, 6 mo	5 mo	5 mo.
118 9	.80		6 mo	6 mo
147	1.00		7 mo	7 mo
168 🖟	1.14			9 mo
191	1.30		· · · =	10 mo

# LANDSCAPE ORNAMENTALS (including Established Perennials and Wildflower Plantings)

This product may be applied for residual preemergence weed control in ornamentals.

#### **Use Rates**

Apply this product at 95 to 220 lb/A<sup>7</sup> in fall and/or spring. Use higher rates of application for longer control periods. Sequential or single applications are allowed so long as the total amount of product applied does not exceed the maximum annual application rate of 220 lb/A/yr.

## **Application Timing and Information**

This product may be applied to newly transplanted and established ornamentals as a broadcast, over the top or directed application. Irrigation or rainfall soon after application will wash residues off plant foliage and activate this product in the soil.

This product may be applied at any time to established plants. Delay application to allow soil to settle around new transplants and water thoroughly before applying this product. Apply this product after cuttings form roots and become established. Apply before budding/grafting or after buds/grafts have taken to avoid any inhibition of the tissue union.

This product is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1 to 2 inch) mechanical incorporation, prior to weed seed germination and within 14 days following application.

Best weed control is obtained when this product is applied to soil free of clods, weeds, and debris such as leaves. Prior to application of this product, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

# **Tolerant Ornamental Species**

This product will not harm most ornamental trees, shrubs and flowers. The species listed below are tolerant to this product. Best results will be obtained when this product is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the soil surface. This product may be applied over the top of these species without injury.

Scientific name	Common name
Abies spp.	Fir species**
••	(Balsam, Fraser, Noble, etc.)
Acer palmatum	Japanese Maple
A. platanoides	Norway Maple
Actinidia chinensis	Kiwi*
Agapanthus africanus	Lily-of-the-Nile (African Lily)
Arctostaphylos densiflora	Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Aucuba japonica	Japanese Aucuba
Barberis gladwynensis	Barberry
B. julianae	Wintergreen Barberry
B. mentorensis	Mentor Barberry
B. thunbergii	Japanese Barberry
B. verruculosa	Warty Barberry
Buxus microphylla	Japanese Boxwood
Callistemon viminalis	Weeping Bottlebrush
Calluna vulgaris	Scotch Heather
Carpobrotus edulis	Hottentot Fig (Ice Plant)
Cassia artemisoides	Feathery Cassia
Ceanothus rigidus	Wild Lilac
Chamaecyparis pisifera	False Cypress
Cleyera japonica	Cleyera
Citrus spp.	Citrus species*
Cornus florida	Flowering Dogwood
C. stolonifera	American Dogwood
Côrtaderia selloana	Pampas Grass
Cotoneaster apiculatus	Cranberry Cotoneaster
C. buxifolius	Cotoneaster
C. dammeri	Bearberry Cotoneaster
C. microphyllus	Rockspray Cotoneaster
Cretaegus spp.	Hawthorne
Cupressus sempervirens	Italian Cypress
Delasperma alba	White Trailing Ice Plant

<sup>\*</sup>Ornamental species only. Do not use on food producing trees or vines.

<sup>\*\*</sup>For use on landscape ornamental sites.

## Scientific name

Dodonea viscosa Elaeagnus pungens Euonymus fortunei

E. japonica E. kiautschovica Fatsia japonica Forsythia intermedia

F. viridissima

Gardenia jasminoides .

Gladiolus spp. Hedera helix Hibiscus

Hibiscus rosa-sinensis

llex cornuta.
I. crenata
I. opaca
I. pernyi
I. vomitoria
Iris spp.

Jasminium nudiflorum Juniperus chinensis

J. conferta
J. horizontalis
Juglans sp.

Justicia brandegeana Lagerstromia indica Ligustrum amurense

L. japonicum
L. lucidum
Liriope muscari
Lonicera japonica
L. tatarica
Magnolia spp.

Maleophora luteola

Malus sp. Nandina domestica Narcissus spp. Nerium spp. Common name

Hop Bush Silverberry Wintercreeper

Japanese Spindle Tree (Evergreen Euonymus)

Spreading Euonymus
Japanese Aralia
Border Forsythia
Greenstem Forsythia
Gardenia, Cape-Jasmine
Gladiolus species\*\*

English Ivy

Rose of Sharon\*\*
Chinese Hibiscus
Chinese Holly
Japanese Holly
American Holly

Holly Yaupon Iris species\*\*

Winter Jasmine Chinese Juniper Shore Juniper Creeping Juniper

Walnut\*
Shrimp Plant
Crepe Myrtle
Amur Privet
Japanese Privet

Glossy Privet (Waxleaf)

Big Blue Lily Turf
Japanese Honeysuckle
Tatarian Honeysuckle
Magnolia species\*\*

Ice Plant Crabapple\*

Heavenly Bamboo Narcissus species\*

Oleander

<sup>\*</sup>Ornamental species only. Do not use on food producing trees or vines.

<sup>\*\*</sup>For use on landscape ornamental sites.

#### Scientific name

Common name

Olea europa

Ophiopogon japonicus Osteospermum fruticosum Oxydendrum arboreum

Persea americana Photinia fraseri Picea spp.

Pieris japonica Pinus brutia P. canariensis

P. elliottii P. halepensis

P. nigra
P. palustrus

P. radiata
P. strobus
P. sylvestris
P. taeda

P. thunbergiana P. virginiana Pistachio sp.

Pittosporum rhombifolium

P. tobira

Podocarpus macrophyllus

Prunus laurocerasus

Prunus sp.

Pseudotsuga menziesii Pyracantha coccinea

P. fortuneana
P. koidzumii
Pyrus sp.
Quercus spp.
Raphiolepis indica

Olive\*

Mondo Grass

Trailing African Daisy

Sourwood Avocado\*

Frasier's Photinia (Redtip)

Spruce species\*\* (Colorado Blue, Norway, etc.)

Lily-of-the-Valley Shrub

Calabrian Pine
Canary Island Pine

Slash Pine Aleppo Pine

Austrian Black Pine

Longleaf Pine Monterey Pine Eastern White Pine

Scotch Pine

Loblolly Pine

Japanese Black Pine

Virginia Pine Pistachio\*

Queensland Pittosporum Japanese Pittosporum

Japanese Yew English Laurel

Almond, Apricot, Nectarine, Peach, Plum and Prune\*

Douglas Fir\*\*
Firethorn (Scarlet)

Firethorn Firethorn

Bradford Pear sp. Oak species Indian Hawthorne

<sup>\*</sup>Ornamental species only. Do not use on food producing trees or vines.

<sup>\*\*</sup>For use on landscape ornamental sites. -

Scientific name	Common name
Rhododendron	'Coral Bells'
(including Azalea)	'Formosa'
	'Hino-crimson'
•	'PJM'
	'Roseum Elegans'
Rosa banksiae	- Lady Bank's Rose
Rosmarinus officinalis	Rosemary
Santolina virens	
Sedum album	Stonecrop
Syzygium paniculatum	Japanese Boxcherry
Taxus cuspidata	Japanese Yew
T. media	Yew
Thuja occidentalis _	American Arborvitae
Trachelospermum asiatum	Star Jasmine
Tsuga canadensis	Canada Hemlock
Tulip spp.	Tulip species
Viburnum japonicum	Japanese Viburnum
V. odoratissimum	Sweet Viburnum
V. plicatum	Japanese Snowball
V. rigidum	Canary Island Viburnum
V. tinus	Laurustinus
V. trilobium	Cranberry Bush
V. wrightii	<ul> <li>Leatherleaf Viburnum</li> </ul>
Vinca major	Vinca
Vinca minor	Dwarf Periwinkle
Vitis sp.	Grape *
Weigela florida	Old Fashioned Weigela
Yucca aloifolia	Spanish Bayonet
Y. filamentosa	Yucca, Adam's Needle

<sup>\*</sup>Ornamental species only. Do not use on food producing trees or vines.