US ENVIRONMENTAL PROTECTION	: - :	EPA REGISTRATION NO.	MAR 1 3 1996	
OFFICE OF PESTICIDES PROGF REGISTRATION DIVISION (75-7	767)	32802-70 TERM OF ISSUANCE	IIAK 1 0 1330	
WASHINGTON, DC 20460		Unconditional NAME OF PESTICIDE PRODUCT		
	EGISTRATION EREGISTRATION	NAME OF PESTICIDE PRODUC	'	
(Under the Federal Insecticide, and Rodenticide Act, as am	ended)	Crabgrass Preventer Plus with 0.29 Barricade Preemergence Herbicide		
NAME AND ADDRESS OF REGISTRANT (Inc	clude ZIP code)	•	7/n 23	
Γ		コ	32802-70	
noward Johnson's Ente P.O. Box 2990	erprises, Inc.		1415	
lilwaukee, WI 53201		1		
NOTE: Changes in labeling formula diff submitted to and accepted by the Regis product always refer to the above U.S. E On the basis of information furnished by the Federal Insecticide, Fungicide, and	tration Division prio	r to use of the label in commerc ber,	e. In any correspondence on this	
A copy of the labeling accepted in con		vistration/Reregistration is retu	uned herewith.	
health and the environment, the Administrate in accordance with the Act. The a Act is not to be construed as giving the by others. This preduct is	ecceptance of any na e registrant a right to	me in connection with the regis	tration of a product under this o its use if it has been covered	
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ATTACHMENT IS APPLICABLE	BEST AV	AILABLE COPY		
SIGNATURE OF APPROVING OFFICIAL		17. 7	MAR 1 3 1996	
PA Form 8570-6 (Rev. 5-76)	PREVIOUS EDITIO		11/40	

2415

CRABGRASS PREVENTER PLUS WITH .29 BARRICADE PREEMERGENCE HERBICIDE

ACCEPTED with COMMENTS In EPA Letter Dated

MAR 1 3 1990 Under the Federal Izsocticide, Fundicide, and Rodenticide Act as amended, for the posticide

registered under EPA Reg. No. 3 2 803-70

ACTIVE INGREDIENT: Prodiamine: [N³,N³-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-

INERT INGREDIENTS:.....99.71%

TOTAL:100.0%

Guaranteed Fertilizer Analysis:

Nitrogen

32 % (N)

Phosphorus

4 % (P_2O_5)

Potassium

6 % (K_2O)

Nitrogen from: Urea formaldehyde, Urea, Ammonia

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, Precautionary Statements, Hazards To Humans and Domestic Animals, for additional information.

Net Weight:

EPA Reg. No. 32802-70 EPA Est. No.

> Howard Johnson's Enterprise, Inc. P.O. Box 2990 Milwaukee, WI 53201

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.

4415

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.

5-415

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.

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Do not apply to golf course putting greens.

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Application Directions

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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 CRABGRASS PREVENTER PLUS WITH .29 BARRICADE PREEMERGENCE HERBICIDE by Turf Grass Species ¹				
Turf Species:	Ib CRABGRASS PREVENTER PLUS .29/A	lb ai/A		
Bermudagrass ² Bahiagrass Centipedegrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysia	518	1.5		
Buffalograss Kentucky Bluegrass Perennial Ryegrass	345	1.0		
Creeping Red Fescue	260	0.75		
Creeping Bentgrass	225	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 179 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.
- Use at an initial rate of 260 to 345 lb/A per application followed by sequential applications at coses that would not exceed the maximum annual application rate of 518 lb/A/yr.
- Do not apply more than 518 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 Goosegrass¹ Itchgrass

Johnsongrass (from seed)

Junglerice Lovegrass

Panicum (Texas, Fall, Browntop)

Rescuegrass³

Signalgrass, Broadleaf

Sprangletop Witchgrass Carpetweed

Chickweed, Common

Chickweed, Mouseear (from seed)

Henbit Knotweed Kochia

Lambsquarter, Common

Pigweed

Purslane, Common Pusley, Florida Shepherd's Purse² Speedwell, Persian

Spurge, Prostrate
Woodsorrel, Yellow (from seed)

- In many areas a single application of 225 to 518 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 .25 to 345 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.
- 3 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 secon is moving, 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.

CRABGRASS PREVENTER PLUS .29 Rate (lb/A)		Interval Before Overseeding		
Product	ai	North	Transition	South
172	.50	4 mo	4 mo	4 mo
225	.66	5 mo	4 mo	4 mo
260	.74	6 mo	5 mo	5 mo
275	.80		6 mo	6 mo
345	1.00		7 mo	7 mo
393	1.14	M • •		9 mo
448	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

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Apply this product at 225 to 518 lb/A 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 518 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 posternergence 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

Ahies spp.

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Acer palmatum
A. platanoides
Actinidia chinensis
Agapanthus africanus
Arctostaphylos densiflora
Arctotheca calendula
Aucuba japonica
Barberis gladwynensis

B. julianae

B. mentorensis

B. thunbergii

B. verruculosa

Buxus microphylla Callistemon viminalis

Calluna vulgaris
Carpobrotus edulis
Cassia artemisoides
Ceanothus rigidus

Chamaecyparis pisifera

Cleyera japonica

Citrus spp. Cornus florida C. stolonifera

Cortaderia selloana Cotoneaster apiculatus

C. buxifolius C. dammeri C. microphyllus Cretaegus spp.

Cupressus sempervirens

Delasperma alba

Common name

Fir species * *

(Balsam, Fraser, Noble, etc.)

Japanese Maple Norway Maple

Kiwi*

Lily-of-the-Nile (African Lily)

Vine Hill Manzanita

Cape Weed

Japanese Aucuba

Barberry

Wintergreen Barberry

Mentor Barberry
Japanese Barberry
Warty Barberry
Japanese Boxwood
Weeping Bottlebrush

Scotch Heather

Hottentot Fig (Ice Plant)

Feathery Cassia

Wild Lilac False Cypress

Clevera

Citrus species*
Flowering Dogwood
American Dogwood

Pampas Grass

Cranberry Cotoneaster

Cotoneaster

Bearberry Cotoneaster Rockspray Cotoneaster

Hawthorne Italian Cypress

White Trailing Ice Plant

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{**}For use on landscape ornamental sites.

Scientific name

Dodonea viscosa Elaeagnus pungens Euonymus fortunei

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E. japonica E. kiautschovica Fatsia japonica Forsythia intermedia

F. viridissima

Gardenia jasminoides

Gladiolus spp. Hedera helix Hibiscus

Hibiscus rosa-sinensis

Ilex 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

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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

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{* *}For use on landscape ornamental sites.

Scientific 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. koidzumi:

Pyrus sp.

Quercus spp.

Raphiolepis indica

Common name

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

Lobiolly 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

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{* *}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	Leatherleaf Viburnum
Vinca major	Vinca
Vinca minor	Dwarf Periwinkle
Vitis sp.	Grape *
Weigela florida	Old Fashioned Weigela
Yucca aloifolia	Spanish Bayonet

^{*}Ornamental species only. Do not use on food producing trees or vines.

Y. filamentosa

Yucca, Adam's Needle