

30 SEP 1993

Ms. Cheryl Mulherin  
Vigoro Industries, Inc.  
P.O. Box 4139  
Fairview Hts, IL 62208

Dear Mr. Mulherin:

Subject: Par Ex Slow release Fertilizer with Barricade<sup>®</sup>  
Herbicide  
EPA Registration No. 557-1990  
Application Dated August 8, 1993 To Amend Product Labeling,  
To Reflect Barricade F Labeling Accepted July 15, 1993;  
and Resubmission Received September 22, 1993

The proposed labeling submitted under the subject resubmission has been reviewed and is acceptable under the Federal Insecticide, Fungicide and Rodenticide Act as amended, provided that:

o You submit 5 copies of the final printed labeling.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA, Section 6(e).

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

Sincerely yours,

Joanne I. Miller  
Product Manager (23)  
Fungicide-Herbicide Branch  
Registration Division (H-7505C)

Enclosure

Ewilson:Diskette#Prodiamine:09-24-93

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**PAR EX SLOW RELEASE FERTILIZER  
WITH .345 BARRICADE®**

**ACTIVE INGREDIENT:**

Prodiamine: [N<sup>3</sup>,N<sup>3</sup>-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine . . . . . 0.345%

INERT INGREDIENTS: . . . . . 99.655%

TOTAL: . . . . . 100.00%

**Guaranteed Fertilizer Analysis:**

Nitrogen 32 % (N)  
Phosphorus 4 % (P<sub>2</sub>O<sub>5</sub>)  
Potassium 6 % (K<sub>2</sub>O)

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

30 SEP 1993

Nitrogen from: Urea formaldehyde, Urea, Ammonia

557-1990

For selective preemergence control of grass and broadleaf weeds in established turf grasses (excluding golf course putting greens), lawns and landscape ornamentals.

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. 557-1990  
EPA Est. No. 557-FL-1

Vigoro Industries, Inc.  
P.O. Box 4139  
Fairview Heights, IL 62208

BARRICADE® is a Registered Trademark of Sandoz, Ltd.

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**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 allelgic 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. For terrestrial use, 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.

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**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**

**Plastic Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or; puncture and dispose of 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.

**Paper and plastic containers:** 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.

**Fiber Drums:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residues into application equipment. Dispose of empty liner in a sanitary landfill or at an incineration facility if allowed by state and local authorities. If the drum cannot be reused, dispose of in a sanitary landfill or by incineration if allowed by state and local authorities.

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### 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 turf grasses and landscapes. This product controls susceptible weeds by inhibiting weed seeds germination and root development. For most effective weed control this product must be incorporated by 1/2 inch of rainfall, irrigation or shallow mechanical incorporation. Incorporation should take place as soon as possible after application and should not be delayed past 14 days from the date of 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.

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

Do not apply aerially.

Do not apply to golf course putting greens.

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### Application Directions

Apply uniformly through suitable, calibrated commercial application equipment.

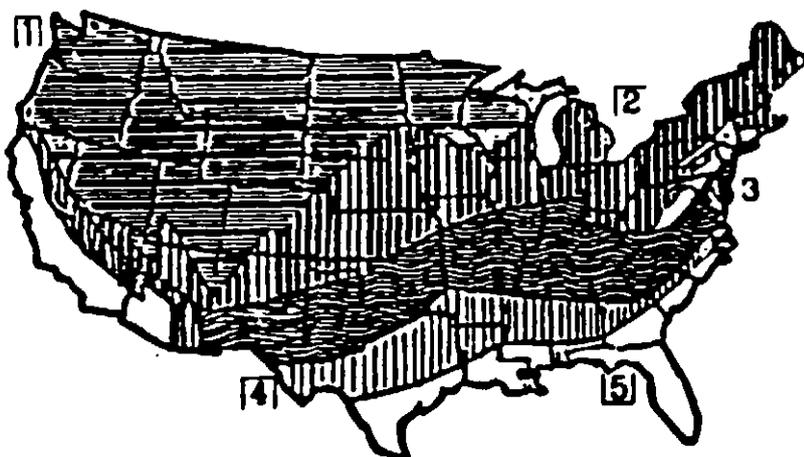
### ESTABLISHED TURF

This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grass and lawns. The species of turf grass determines the maximum amount of material that may be applied during a year.

Most effective weed control in turf grasses will be obtained when this product is activated by at least 1/2 inch of rainfall or irrigation within 14 days after application and prior to weed germination. See the map below for approximate crabgrass germination dates.

### CRABGRASS SEED GERMINATION DATES

Approximate Date



- 1 After May 30
- ▨ 2 After May 10
- ▩ 3 After April 20
- ▧ 4 After March 20
- 5 Jan 1 to Mar 20

**Use Precautions**

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

Application of this product may thin emerged annual bluegrass and newly over-seeded grasses.

Do not apply to OVERSEEDED TURF for 60 days after seeding or until after the second mowing, which ever 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 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.

**Maximum Annual Rates**

This product should not be applied above a maximum annual rate of 435 lbs./A or 9.8 lbs./1000 ft<sup>2</sup>.

**Turf Species and Rates**

For season long control this product may be applied as a single application, or if needed followed by a second application for increased length of control. The length of time of residual weed control provided by this product is related to the rate applied. Use the higher rate within the listed range for longer control. Longer control is desirable in areas where crabgrass germinates between January 1 and April 20 (See Crabgrass Seed Germination Data Map).

Select maximum use rate based on turf grass species. All applications must be made prior to germination of the target weed seeds. This product will not control established weeds.

The rates listed in the table below are for weed control of approximately 2-6 months.

**Turf Species and Rates Table:**

Turf Species:	Maximum Rate of this product Per Calendar Year Lbs./A (Lbs./1000 ft <sup>2</sup> )
Bermudagrass* Centipedegrass Seashore Paspalum Tall Fescue (including turf-type) Zoysia	435 (9.8)
Kentucky Bluegrass Perennial Ryegrass	290 (6.5)
Creeping Red Fescue St. Augustinegrass	214 (5.1)
Creeping Bentgrass	191 (4.3)

\* May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 151 lbs. product per acre or 3.3 lbs. product per 1000 ft<sup>2</sup>. On newly sprigged or plugged Bermudagrass temporary slowing of stolon rooting may occur. Suppression only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations.

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- Do not apply more than 217 lbs. of this product per application.
- Do not apply more than 435 lbs. of this product per calendar year.
- If making more than one application, do not apply more than 217 lbs. of this product within any 60 day period.
- Use higher rates of this product to achieve higher levels of fertility and weed control for each turf type.

**Weeds Controlled**

When used at the recommended rates (see Turf Species and Rates Table) this product will control:

- |                              |                               |
|------------------------------|-------------------------------|
| Crabgrass (large, smooth)    | Carpetweed                    |
| Annual Bluegrass (Poa annua) | Common Chickweed              |
| Goosegrass <sup>1</sup>      | Common Lambsquarter           |
|                              | Common Purslane               |
| Annual Foxtails              | Henbit                        |
| Barnyardgrass                | Knotweed                      |
| Broadleaf Signalgrass        | Pigweed                       |
| Johnsongrass (from seed)     | Prostrate Spurge              |
| Rescuegrass <sup>3</sup>     | Shepardspurse <sup>2</sup>    |
|                              | Yellow woodsorrel (from seed) |

Do not exceed the maximum annual application rates recommended for the turf species. All applications must be made prior to germination of weed seeds. This product will not control established weeds.

1. In many areas a single application of 191 to 214 lbs/Acre of this product will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, apply an initial treatment of 214 lbs/Acre followed after 60 days with a second treatment of 70 to 214 lbs/Acre for season long goosegrass control.
2. Winter weeds are best controlled by applications made prior to germination: late summer, fall or winter timings.
3. Suppression only.

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### Overseeding/Reseeding

This product will inhibit the germination of turf species if overseeded/reseeded too soon after application. The interval between application and overseeding/reseeding is dependent on the application rate, soil temperature, and soil moisture. A shorter interval is possible if growing conditions are warm and wet, while a longer interval is needed if conditions are cool and dry. Use the Overseeding/Reseeding Intervals Table below as a guide when choosing the appropriate overseeding/reseeding interval for each situation.

Overseeding/Reseeding Intervals Table:

This Product Rate (lbs./A)	Overseeding/Reseeding Interval (months) Based Upon Seeding Method and Predominant Soil Conditions for the Season			
	Broadcast Seeding		Drill Seeding	
	Wet and Warm	Cool and Dry	Wet and Warm	Cool and Dry
151	4	6	3	4
290	8	12	6	8
435	12	18	9	12

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LANDSCAPE ORNAMENTALS

This product is recommended for use on landscape ornamentals. Do not apply more than 214 lbs./A in any 60 day interval, and do not exceed the maximum rate per calendar year of 435 lbs./A.

This product will not harm most established ornamental trees, shrubs and flowers. The following species have shown tolerance to this product:

Scientific name	Common name
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Acer palmatum	Japanese Maple
A. platanoides	Norway Maple
Actinidia chinensis	Kiwi*
Agapanthus africanus	Lily-of-the-Nile
Arctostaphylos densiflora	Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Aucuba japonica	Japanese Aucuba
Barberis gladwynensis	
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
Cornus florida	Flowering Dogwood
C. stolonifera	American Dogwood
Cortaderia selloana	Pampas Grass
Cotoneaster apiculatus	Cranberry Cotoneaster
C. buxifolius	
C. dammeri	Bearberry Cotoneaster
C. microphyllus	Rockspray Cotoneaster
Cupressus sempervirens	Italian Cypress
Delasperma alba	White Trailing Ice Plant
Dodonea viscosa	Hop Bush
Elaeagnus pungens	Silverberry
Euonymus fortunei	Wintercreeper

\*Ornamental species only. Do not use on food producing trees or vines.

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Scientific name

Common name

-----	-----
E. japonica	Evergreen Euonymus
E. kiautschovica	Spreading Euonymus
Fatsia japonica	Japanese Aralia
Forsythia intermedia	Border Forsythia
F. viridissima	Greenstem Forsythia-
Gardenia jasminoides	Gardenia, Cape-Jasmine
Hedera helix	English Ivy
Hibiscus rosa-sinensis	Chinese Hibiscus
Ilex cornuta	Chinese Holly
I. crenata	Japanese Holly
I. opaca	American Holly
I. pernyi	
Jasminium nudiflorum	Winter Jasmine
Juniperus chinensis	Chinese Juniper
J. conferta	Shore Juniper
J. horizontalis	Creeping Juniper-
Juglans sp.	Walnut*
Justicia brandegeana	Shrimp Plant
Lagerstromia indica	Crepe Myrtle
Ligustrum amurense	Amur Privet
L. japonicum	Japanese Privet
L. lucidum	Glossy Privet
Liriope muscari	Big Blue Lily Turf
Lonicera japonica	Japanese Honeysuckle
L. tatarica	Tatarian Honeysuckle
Maleophora luteola	Ice Plant
Malus sp.	Crabapple*
Nandina domestica	Heavenly Bamboo
Olea europa	Olive*
Ophiopogon japonicus	Mondo Grass
Osteospermum fruticosum	Trailing African Daisy
Oxydendrum arboreum	Sourwood
Persea americana	Avocado*
Photinia fraseri	Frasier's Photinia
Picea abies	Norway Spruce
Pieris japonica	Lily-of-the-Valley Shrub

\*Ornamental species only. Do not use on food producing trees or vines.

Scientific name

Common name

Scientific name	Common name
Pinus brutia	Calabrian Pine
P. canariensis	Canary Island Pine
P. halepensis	Aleppo Pine
P. nigra	Austrian Black Pine
P. radiata	Monterey Pine
P. thunbergiana	Japanese Black Pine
P. strobus	Eastern White Pine
P. sylvestris	Scotch Pine
Pistachio sp.	Pistachio*
Pittosporum rhombifolium	Queensland Pittosporum
P. tobira	Mock Orange
Podocarpus macrophyllus	Japanese Yew
Prunus laurocerasus	English Laurel
Prunus sp.	Almond, Apricot, Nectarine, Peach, Plum, and Prune*
Pyracantha coccinea	Firethorn
P. fortuneana	Firethorn
P. koidzumii	Firethorn
Pyrus sp.	Bradford Pear sp.
Quercus rubra	Red Oak
Raphiolepis indica	Indian Hawthorne
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 asiaticum	Star Jasmine
Tsuga canadensis	Canada Hemlock
Viburnum japonicum	Japanese Viburnum
V. odoratissimum	Sweet Viburnum

\*Ornamental species only. Do not use on food producing trees or vines.

Scientific name

Common name

V. plicatum	Japanese Snowball
V. rigidum	Canary Island Viburnum
V. tinus	Laurustinus
V. trilobium	Cranberry Bush
V. wrightii	
Vinca minor	Dwarf Periwinkle
Vitis sp.	Grape*
Weigela florida	Old Fashioned Weigela
Yucca aloifolia	Spanish Bayonet
Y. filamentosa	Yucca, Adam's Needle

\*Ornamental species only. Do not use on food producing trees or vines.

**LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY**

**NOTICE:** Read this Limitation of Warranty and Limitation of 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.

It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use of application, all of which are beyond the control of manufacturer or seller. All such risks shall be assumed by buyer or user.

Manufacturer 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, under normal conditions, subject to the risks described above. Manufacturer makes no other express or implied warranty of fitness or of merchantability or any other express or implied warranty. In no event shall manufacturer or seller be liable for any incidental, consequential or special damages resulting from the use of handling of this product.

Manufacturer and seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, which may not be modified by any oral or written agreement.