

PM 23

88947-167

10/25

NOV 22 1996

Mr. Michael R. Johnston
Sandoz Agro, Inc.
1300 East Touhy Avenue
Des Plaines, IL 60018

Dear Mr. Johnston:

Subject: BARRICADE® G Herbicide
EPA Registration No. 55947-167
Applications Dated October 25, 1996, Request
To Amend Registration By Revising Certain Use
Directions and To Add Tolerant Ornamental Plants
To Existing List, All Non-Food Use-Sites

The proposed labeling revisions and the addition of new non-food use-sites of application have been reviewed and found acceptable under the Federal Insecticide, Fungicide and Rodenticide Act as amended, provided that you:

1. On page 2 under the heading "If material is spilled" revise the first statement to address "use" not "reuse", as stated.
2. On pages 5, spell-out the word "inches" where the abbreviation "in" is used.
3. On page 10, "Barricade G Rate" must be corrected, the quantity of product to equal 1.50 is not 230 pounds as stated, it is 75 pounds per acre, for 12 months months control. The heading "Interval Before Overseeding" must be revised to read: Months Before Overseeding" and the "mo" should be deleted wherever it occurs in the table.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely yours,

BEST AVAILABLE COPY

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

CONCURRENCES

| | | | | | | | |
|---------|------------------|--------------|--|--|--|--|--|
| SYMBOL | Enclosure | | | | | | |
| SURNAME | Wilson:Diskettel | 00P:11-15-96 | | | | | |
| DATE | | | | | | | |

20435
ACCEPTED
with COMMENTS
In EPA Letter Dated
NOV 22 1996

BARRICADE® G Herbicide

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
55947-167

ACTIVE INGREDIENT:

Prodiamine, [N³,N³-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine] ... 2.0%

INERT INGREDIENTS: 98.0%

TOTAL: 100.0%

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries
- container, field grown and landscape ornamentals
- conifer and hardwood seedling nurseries
- established perennials & wildflower plantings
- plants grown for cut foliage production
- non-crop areas on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways & equipment yards)
- facilities including substations, tankfarms, pumping stations, parking & storage areas, and ungrazed fencerows
- Christmas tree farms

KEEP OUT OF REACH OF CHILDREN
CAUTION

See next page for additional precautionary statements and
statement of practical treatment.

EPA Reg. No. 55947-167
EPA Est. No.

Sandoz Agro, Inc.
1300 E. Touhy Avenue
Des Plaines, IL 60018

RECD LIT
96 DEC 29 P 4:09
Net Contents:

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.

Personal Protective Equipment (PPE):

WPS USES:

Applicators and other handlers:

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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

NON-WPS USES:

Mixers and loaders who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural-plant uses are covered by the WPS -- must wear:

- § Chemical-resistant gloves

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements:

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- After handling this product, immediately wash the outside of gloves before removing them, then remove gloves and all other PPE. Immediately wash thoroughly and change into clean clothing.

STATEMENT 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 limit of solubility, this product is not toxic to fish. However, at concentrations substantially 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.

If material is spilled: Contain and sweep up material of spill for disposal or reuse per label instructions. Wash cleanup equipment to prevent contamination elsewhere. Excess quantities above normal application rates could result in damage to plants subject to spill. Water-in remainder, disc under or cover with layer of soil, or leave exposed to sunlight, as deemed appropriate to the situation.

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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.

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.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Waterproof gloves
- Shoes plus socks

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BARRICADE® G Herbicide (BARRICADE G) is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens), lawns and sod nurseries
- container, field grown and landscape ornamentals
- conifer and hardwood seedling nurseries
- established perennials & wildflower plantings
- plants grown for cut foliage production
- non-crop areas on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, & equipment yards)
- facilities including substations, tankfarms, pumping stations, parking & storage areas, and ungrazed fencerows
- Christmas tree farms

BARRICADE G controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when BARRICADE G is activated by at least 0.5 in of rainfall or irrigation, or with shallow (1 to 2 in) incorporation, prior to weed seed germination and within 14 days following application.

Do not graze or feed livestock forage cut from areas treated with BARRICADE G.

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 with suitable, calibrated application equipment.

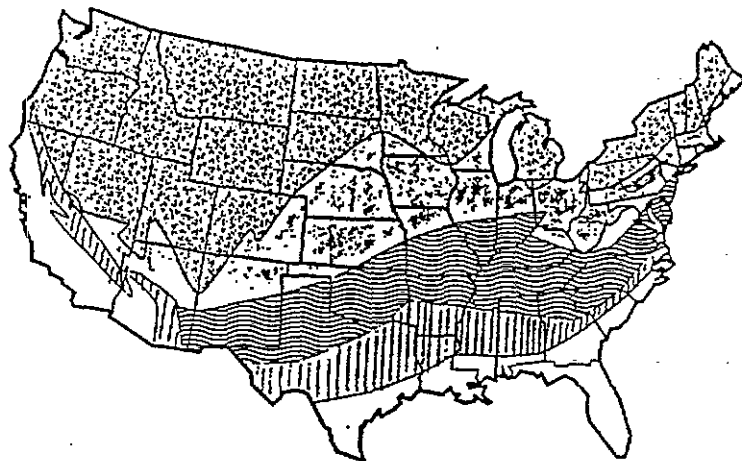
ESTABLISHED TURF






BARRICADE G 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 BARRICADE G 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 BARRICADE G 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



-  After May 30
-  After May 10
-  After April 20
-  After March 20
-  January 1 to March 20

USE PRECAUTIONS

The following precautions apply to the use of BARRICADE G in turf grasses and lawns:

Application of BARRICADE G 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 BARRICADE G is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

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

Application of BARRICADE G 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 BARRICADE G to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.

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Rates of Application

BARRICADE G 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. BARRICADE G 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 BARRICADE G is related to the rate applied.

Maximum Annual Rates

BARRICADE G 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 BARRICADE G by Turf Grass Species ¹ | | |
|--|---------------|----------|
| Turf Species | lbs product/A | lbs ai/A |
| Bermudagrass ² Bahia grass Centipedegrass Seashore Paspalum St. Augustinegrass Tall Fescue (including turf-type) Zoysia | 75 | 1.5 |
| Buffalograss Kentucky Bluegrass Perennial Ryegrass | 50 | 1.0 |
| Creeping Red Fescue | 37 | 0.75 |
| Creeping Bentgrass | 33 | 0.65 |

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

² May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 26 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 higher rates of BARRICADE G to achieve higher levels of weed control for each turf type, but do not exceed the maximum application rates specified in the **Maximum Annual Rates Table**.

Weeds Controlled

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

| | |
|--|---------------------------------|
| Barnyardgrass | Carpetweed |
| Bluegrass, Annual (<i>Poa annua</i>) | Chickweed, Common |
| Crabgrass (Large, Smooth) | Chickweed, Mouseear (from seed) |
| Crowfootgrass | Henbit |
| Cupgrass, Woolly | Knotweed |
| Foxtails, Annual | Kochia |
| Goosegrass ¹ | Lambsquarter, Common |
| Itchgrass | Pigweed |
| Johnsongrass (from seed) | Purslane, Common |
| Junglerice | Pusley, Florida |
| Lovegrass | Shepherd's Purse ² |
| Panicum, (Texas, Fall, Browntop) | Speedwell, Persian |
| Rescuegrass ³ | Spurge, Prostrate |
| Signalgrass, Broadleaf | Woodsorrel, Yellow (from seed) |
| Sprangletop | |
| Witchgrass | |

¹ In many areas a single application of 33 to 75 lbs/A of BARRICADE G 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 33 to 50 lbs/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.

² 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 second mowing, whichever is longer. Injury to desirable seedlings is likely if BARRICADE G is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

WHEN TO OVERSEED AFTER APPLICATION

BARRICADE G 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.

| BARRICADE G Rate (lbs/A) | | Interval Before Overseeding | | |
|--------------------------|------|-----------------------------|------------|-------|
| Product | ai | North | Transition | South |
| 25 | .50 | 4 mo | 4 mo | 4 mo |
| 33 | .66 | 5 mo | 4 mo | 4 mo |
| 37 | .74 | 6 mo | 5 mo | 5 mo |
| 40 | .80 | --- | 6 mo | 6 mo |
| 50 | 1.00 | --- | 7 mo | 7 mo |
| 57 | 1.14 | --- | --- | 9 mo |
| 65 | 1.30 | --- | --- | 10 mo |
| 2.30 | 1.50 | --- | --- | 12 mo |

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CONTAINER, FIELD GROWN, & LANDSCAPE ORNAMENTALS

BARRICADE G may be applied for residual preemergence weed control in the culture of ornamentals (including Christmas Tree Farms, Established Perennial and Wildflower Plantings).

Use Rates

Apply BARRICADE G at 33 to 75 lbs/A in fall and/or spring. Use higher rates of application for longer control periods. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 75 lbs/A.

Application Timing and Information

All Applications

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

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

Apply BARRICADE G to dry foliage only. Overhead irrigation or rainfall soon after application will wash granules off plant foliage and activate BARRICADE G in the soil.

Established Container or Field Nursery Stock

BARRICADE G may be applied at any time to established container or field nursery stock as a broadcast, over the top application.

Newly Transplanted Container or Field Nursery Stock

BARRICADE G may be applied to newly transplanted and established container or field nursery stock as a broadcast, over the top or directed application. Delay application to allow soil to settle around new transplants and water thoroughly before applying BARRICADE G.

Newly Transplanted Seedlings and Cuttings

Delay application to allow soil to settle around new transplants and water thoroughly before applying BARRICADE G. Apply BARRICADE G 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.

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Shadehouses and Uncovered Polyhouses

In addition to outdoor locations, BARRICADE G may be applied in shadehouses and uncovered polyhouses. Uncovered polyhouses must remain open for a minimum of 7 days and 2 irrigations totaling at least 1/2 inch of water after application and incorporation.

Bare Ground Applications For Container Placement

BARRICADE G may be applied to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. Only shallow cultivation or hand weeding, if necessary, after application, should be performed so as to minimize exposure of untreated soil.

Tolerant Ornamental Species

BARRICADE G will not harm most trees, shrubs, vines, and flowers. The species listed below are tolerant to BARRICADE G. Best results will be obtained when BARRICADE G is uniformly applied to the soil surface. BARRICADE G may be applied over the top of these species.

When plants are under stress (such as heat, drought, or frost damage) some cultivars of listed plants may be sensitive to BARRICADE.

Scientific name

Abies spp.

Abelia grandiflora

Acer palmatum

A. platanoides

Achillea sp.

Actinidia chinensis

Agapanthus africanus

Agapanthus orientalis

Akebia quinata

Allium cernuum

Anemone hybrida

Aquilegia sp.

Arctostaphylos densiflora

Arctotheca calendula

Artemesia sp.

Aucuba japonica

Aster sp.

Aster X Frikartii

Athyrium Filix-femina

Begonia sp.

Berberis gladwynensis

B. Julianae

B. mentorensis

B. Thunbergii

B. verruculosa

Common name

Fir species**

(Balsam, Fraser, Noble, etc.)

Abelia: Sherwood

Japanese Maple

Norway Maple

Yarrow: King Edward

Kiwi*

Lily-of-the-Nile (African Lily)

Five-Leaf or Chocolate Vine

Lady's Leek, Nodding Onion

Japanese Anemone

Aquilegia: Red and Gold

Vine Hill Manzanita

Cape Weed

Wormwood; Silver Mound, Castle

Japanese Aucuba

Aster: Bonny Blue, Purple Dome

Lady Fern; Fern Lady

Fibrous Begonia: Hardy Grandis

Barberry

Wintergreen Barberry

Mentor Barberry

Japanese Barberry

Warty Barberry

* Do not use on food producing trees, vines, or plants.

** Not for use on container grown plants.

Scientific name

Bergenia cordifolia
Boltonia asteroides
Bougainvillea spp.
Buddleia davidii
Buxus microphylla
Callistemon citrinus
Callistemon viminalis
Calluna vulgaris
Campanula carpatica
Campis X Tagliabuana
Carpobrotus edulis
Cassia artemisoides
Ceanothus rigidus
Ceratostigma plumbagonoides
Chamaecyparis pisifera
Chrysanthemum nipponicum
Cleyera japonica
Citrus spp.
Coreopsis sp.

Cornus florida
C. stolonifera
Cortaderia Selloana
Cotoneaster apiculatus
C. buxifolius
C. Dammeri
C. microphyllus
Crataegus spp.
Crocasmia sp.
Cupressus sempervirens
Delosperma alba
Delosperma sp.
Delphinium sp.
Dianthus deltoides
D. gratianopolitanus
Dodonea viscosa
Echinacea pupurea
Elaeagnus pungens

Common name

Snowbank
Bougainvillea
Butterfly-Bush (Dwarf Blue); Royal Red
Japanese Boxwood
Crimson Bottlebrush
Weeping Bottlebrush
Scotch Heather
Tussock Bellflower; (White Clips)
Trumpet Creeper, Trumpet Flower; Madame Galen
Hottentot Fig (Ice Plant)
Feathery Cassia
Wild Lilac

False Cypress

Cleyera
Citrus species*
Coreopsis (Calliopsis): Early Sunrise,
Moonbeam
Flowering Dogwood
American Dogwood
Pampas Grass
Cranberry Cotoneaster
Cotoneaster
Bearberry Cotoneaster
Rockspray Cotoneaster
Hawthorn
Lucifer
Italian Cypress
White Trailing Ice Plant
Cooperi Pink
Larkspur; Blue Elf
Dianthus, Maiden Pinks 'Zing'
Cheddar Pink
Hop Bush
Coneflower, Purple; Magnus
Silverberry

* Do not use on food producing trees, vines, or plants.

** Not for use on container grown plants.

Scientific name

Euonymus Fortunei
E. japonica
E. kiautschovica
Fatsia japonica
Forsythia intermedia
Forsythia suspensa
F. viridissima
Gaillardia sp.
Gardenia jasminoides
Gaura sp.
Gentiana dahurica
Geranium cinereum
Gladiolus spp.
Gypsophila repens
Hedera helix
Hellanthemum sp.
Hemerocallis sp.
Heucherella sp.
Hibiscus
H. Rosa-sinensis
Hibiscus sp.
Hosta plantaginea
H. Sieboldiana
Houttuynia cordata var. *variegata*
Hydrangea macrophylla
Ilex Bernyi
I. cornuta
I. crenata
I. opaca
I. vomitoria
Inula ensifolia
Iris ensata
Iris siberica
Iris spp.
Jasminium nudiflorum
Juniperus chinensis
J. conferta
Juniperus davurica

Common name

Wintercreeper
Japanese Spindle Tree (Evergreen *Euonymus*)
Spreading *Euonymus*
Japanese *Aralia*
Border *Forsythia*
Weeping *Forsythia*
Greenstem *Forsythia*
Gaillardia, Blanket Flower; 'Goblin'
Gardenia, Cape-Jasmine; *Radicans*

Gentian
Cranesbill
Gladiolus species**
Baby's Breath
English Ivy
Sunrose
Daylily; Aztec Gold, Stella De Oro, Tender Love
Coral Bell; Bridget Bloom
Rose of Sharon**
Chinese Hibiscus
Mallow; Disco Belle White
Hosta, Plantain Lily (Fragrant)
Hosta, 'Searsucker'

Bigleaf *Hydrangea*
Holly
Chinese Holly
Japanese Holly; Helleri
American Holly
Yaupon Holly; Schillings

Sword-Leaved *Iris*; Jodlesong
Siberian *Iris*; Cabernet
Iris species**
Winter Jasmine
Chinese Juniper; Nick's Compact, Parsonii
Shore Juniper; Blue Pacific
Parsoni

*. Do not use on food producing trees, vines, or plants.

**. Not for use on container grown plants.

Scientific name

J. horizontalis
Juglans spp.
Justicia brandegeana
Lagerstromia indica
Lagerstromia indica x Fauriei
Lantana montevidensis
Lavender sp
Leontopodium alpinum
Ligustrum sinense
Ligustrum amurense
L. japonicum
L. lucidum
Lilium sp.
Liriope Muscari
Liriope Muscari var. *variegata*
Liriope spicata
Lobelia Cardinalis
Lonicera japonica
L. tatarica
Loropetalum chinense
Lythrum sp
Magnolia spp.
Maleophora luteola
Malus spp.
Miscanthus sinensis
Nandina domestica
Narcissus spp.
Nerium oleander
Oenothera missourensis
Olea europaea
Ophiopogon japonicus
Osmanthus heterophyllus
Osteospermum fruticosum
Oxydendrum arboreum
Paeonia suffruticosa
Pennisetum setaceum
Perovskia atriplicifolia

Common name

Creeping Juniper
Walnut*
Shrimp Plant
Crape Myrtle
Crape Myrtle; Tuscarora
Weeping Lantana
Lavender; Munstead
Edelweiss
Chinese Privet; Variegata
Amur Privet
Japanese Privet
Glossy Privet (Wax-Leaf)
Lily: Jazz
Big Blue Lily; Turf, Silver Mound, Evergreen Giant
Liriope, Variegated
Liriope, Creeping
Cardinal Flower, Indian Pink
Japanese Honeysuckle
Tatarian Honeysuckle
Burgundy
Loosestrife; Modern Pink
Magnolia species**
Ice Plant
Crabapple*
Yaku Jima, Silberfeder
Heavenly Bamboo
Narcissus species**
Oleander
Evening Primrose
Olive*
Mondo Grass
Osmanthus (False Holly): Gulf Tide
Trailing African Daisy
Sourwood
Tree Peony
Fountain Grass (Dwarf)

* Do not use on food producing trees, vines, or plants.

** . Not for use on container grown plants.

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Scientific name

Persea americana
Photinia Fraseri
Physostegia Virginiana
Picea spp.
Pieris japonica
Pinus brutia
P. canariensis
P. Elliottii
P. halepensis
P. nigra
P. palustris
P. radiata
P. Thunbergiana
P. Strobilus
P. sylvestris
P. Taeda
P. virginiana
Pistaccia sp.
Pittosporum rhombifolium
P. Tobira
Podocarpus macrophyllus
Prunus Laurocerasus
Prunus sp.

Pseudotsuga Menziesii
Pyracantha coccinea
P. Fortuneana
P. Koidzumii
Pyrus sp.
Quercus Shumardii
Quercus spp.
Raphiolepis indica
Raphiolepis umbellata

Common name

Avocado*
Fraser's Photinia (Redtip)
Dragonhead, False; Vivid
Spruce species** (Colorado Blue, Norway, etc.)
Lily-of-the-Valley Bush
Calabrian Pine
Canary Island Pine
Slash Pine
Aleppo Pine
Austrian Pine
Longleaf Pine
Monterey Pine
Japanese Black Pine
Eastern White Pine
Scotch Pine
Loblolly 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, Shumard's Red
Oak species
Indian Hawthorn
Yedda Hawthorn

* Do not use on food producing trees, vines, or plants.

** Not for use on container grown plants.

Scientific name

Rhododendron
(including Azalea)

Common name

'Coral Bells'
'Delaware Valley White'
'Flame Creeper'
'Formosa'
'Girard Crimson'
'George L. Tabor'
'Hino-crimson'
'PJM'

Rosa Banksiae
Rosmarinus officinalis
Rudbeckia sp.
Rumohra adiantiformis
Santolina virens
Saxifraga sp.
Scabiosa sp.
Sedum album
Sedum cauticola
Sedum dasyphyllum
Sedum spurium
Spiraea Bumalda
Syzygium paniculatum
Taxus cuspidata
T. media
Teucrium sp.
Thalictrum dipterocarpum
Thuja occidentalis
Trachelospermum asiaticum
Tsuga canadensis
Tulipa spp.
Veronica sp.
Viburnum japonicum
V. odoratissimum
V. plicatum
V. rigidum
Viburnum suspensum

'Roseum Elegans'
Wakeiebisu
White Gumbo
Lady Bank's Rose
Rosemary*
Black-Eyed Susan: Goldstrum
Leatherleaf Fern
Santolina
Saxifrage; Purple Dome
Pincushion Flower
Stonecrop
Stonecrop; Lidakense
Stonecrop
Stonecrop; Dragon's Blood
Spirea: Anthony Waterer
Australian Brushcherry
Japanese Yew
Yew
Germander
Meadow Rue
American Arborvitae
Star Jasmine
Canada Hemlock
Tulip species
Veronica, Speedwell; Sunny Border
Japanese Viburnum
Sweet Viburnum
Japanese Snowball
Canary Island Viburnum
Arrowood Viburnum

* Do not use on food producing trees, vines, or plants.

** Not for use on container grown plants.

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Scientific name

V. Tinus
V. trilobum
V. Wrightii
Vinca major
Vinca minor
Vitis sp.
Weigela florida
Yucca aloifolia
Y. filamentosa

Common name

Laurustinus
Cranberry Bush
Leatherleaf Viburnum
Greater Periwinkle, Vinca
Common Periwinkle, Vinca
Grape*
Old Fashioned Weigela
Spanish Bayonet, Yucca
Adam's Needle, Yucca

* Do not use on food producing trees, vines, or plants.

2/10/95

CONIFER AND HARDWOOD SEEDLING NURSERIES

BARRICADE G may be applied for residual preemergence weed control in conifer and hardwood seedling nurseries.

BARRICADE G may be applied to conifer and hardwood seedling nurseries any time after the soil has settled around newly transplanted seedlings, liners or bare root plants.

Apply BARRICADE G at 33 to 75 lbs/A in fall and/or spring. Use higher rates of application for longer control periods. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 75 lbs/A.

Most effective weed control will be obtained when BARRICADE G is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

SOUTHERN PINE SEEDBEDS: To assist in the establishment of southern pine seedbeds, a preemergence application should be made just after seeding. Applications made after emergence of the pine seedlings should not be made until a minimum of three weeks after the time when most seedlings have shed their seedcoat. Pines are tolerant to preemergence and postemergence applications of BARRICADE G.

Dosage: Apply 25 pounds (0.50 lb active) of BARRICADE G herbicide per broadcast acre. Broadcast to beds and irrigate with approximately 1/2 inch of sprinkler irrigation.

HARDWOOD SEEDBEDS: Apply BARRICADE G at a rate of 25 to 50 pounds (0.5 to 1.0 lb active) to the following seedlings that are at least 6 weeks old (from time of 50% germination):

- Oak (Quercus spp.)
- Sweetgum
- Green Ash

Use higher rate (50 lbs) when a longer control period (3 to 4 months) is desired or under conditions of higher anticipated weed pressure. The lower rate (25 lbs) will provide 2 to 3 months of weed control. Broadcast to beds and irrigate with approximately 1/2 inch of sprinkler irrigation.

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CUT FOLIAGE PRODUCTION

BARRICADE G may be applied for residual preemergence weed control in the culture of leatherleaf fern, (*Rumohra adiantiformis*), asparagus fern (aka treefern, *Asparagus virgatus*), *Pittosporum* species, *Euonymus* species, aspidistra (*Aspidistra elatior*), and *Ruscus hypopyllum*.

Apply BARRICADE G to dry foliage only.

Apply BARRICADE G as a broadcast treatment to established foliage production beds at a rate of 100 to 132 lbs/ A in the fall followed by 66 to 100 lbs/A in the spring. The choice of rate should depend upon anticipated weed pressure and spectrum. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 198 lbs/A.

One half inch irrigation should be applied immediately following application to activate BARRICADE G in the soil and to remove the granules off the foliage.

Application Precautions

Application of BARRICADE G directly to rapidly growing tissues or buds may cause deformation or injury. To reduce injury potential under these circumstances, immediately wash BARRICADE G from plant surfaces onto soil.

Do not apply to newly transplanted ferns until after the plants have become established and begin to grow.

Weeds Controlled

Florida Betony
Buttercup Oxalis
Crabgrass species
Common Vetch

Stachys flordana
Oxalis pes-caprae
Digitaria spp.
Vicia sativa

Weeds Suppressed

Wandering-Jew

Zebrina pendual

230/25

VEGETATION MANAGEMENT

BARRICADE G may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds in non-cropland areas on or surrounding:

- **non-crop areas on or surrounding managed rights-of-way for transportation systems and utilities (including roadways, roadsides, railways, & equipment yards)**
- **facilities including substations, tankfarms, pumping stations, parking & storage areas, and ungrazed fencerows**

BARRICADE G provides preemergence control of germinating weed seeds. Most effective weed control will be obtained when BARRICADE G is activated by at least 0.5 in rainfall or irrigation, or shallow incorporation prior to weed seed germination and within 14 days following application.

Apply BARRICADE G at 33 to 75 lbs/A in fall and/or spring. Use higher rates of application for longer periods of control. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 75 lbs/A.

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NEW PLANTINGS, REPLANTING AND CROP ROTATION

If areas are to be seeded, do not apply BARRICADE G until seeded plants are up and well established.

Nursery, landscape or non-cropland areas treated with BARRICADE G should be rotated only to ornamental species listed on this label for 1 year following application unless the following test has shown species safety:

Before planting a species not listed on this label it is recommended that several test strips of an indicator plant such as wheat, sorghum or corn be sown into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain maximal weed control.

STORAGE AND DISPOSAL

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

STORAGE

Store in original container away from 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

Paper 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.

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 or application, all of which are beyond the control of Sandoz or seller. All such risks shall be assumed by buyer or user.

Sandoz 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 use conditions, subject to the risks described above. SANDOZ MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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