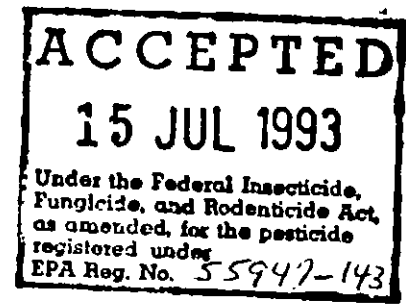


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**EPA DRAFT DIRECTIONS FOR USE BOOKLET (June 29, 1993)
BARRICADE 65WG IN WATER SOLUBLE PACKS**



BARRICADE® 65 WG Herbicide

ACTIVE INGREDIENT:

Prodiamine [N³,N³-Di-n-propyl-2, 4-dinitro-6-(trifluoromethyl) -m-phenylenediamine] . . 65.0%

INERT INGREDIENTS: 35.0%

Total 100.0%

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

EPA Reg. No. 55947-143
EPA Est. No.

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

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact, while mixing or handling the concentrated material, may cause allergic reactions in some individuals. During mixing and loading of concentrate material wear chemical resistant gloves. Wash non-disposable gloves thoroughly with soap and water before removing.

STATEMENT OF PRACTICAL TREATMENT

If on skin: Wash with soap and water. Rinse thoroughly.

If inhaled: Remove to clear air.

If in eyes: Flush thoroughly with water for several minutes.

Contact a physician if irritation persists.

ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limit 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.

DIRECTIONS FOR USE

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

Do not remove water soluble packs from container except for immediate use.

BARRICADE 65WG is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in turf grasses and landscapes. BARRICADE 65WG controls susceptible weeds by inhibiting weed seeds germination and root development. For most effective weed control BARRICADE 65WG 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.

All applicable directions, restrictions, and precautions on the labels of EPA registered tank mix partners are to be followed.

Do not blend BARRICADE 65WG in Water Soluble Packs onto dry fertilizer or any other granular material.

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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Mixing and Application

Apply Barricade 65WG in a minimum of 20 gallons of carrier (water and/or fluid fertilizer) per treated acre (1/2 gallon / 1000 ft²) using a calibrated, low pressure sprayer with 50 mesh or coarser screens. A broadcast boom or hand held wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

A spray colorant may be used to modify the color of BARRICADE 65WG to improve application accuracy by minimizing swath skips and overlaps.

Thorough mixing of BARRICADE 65WG in the spray tank is essential for uniform application. Fill the spray tank half full with clean water or fluid fertilizer, then add the desired number of water soluble bags of BARRICADE 65WG into the tank (do not remove the BARRICADE 65WG from the water soluble bag since the bag will dissolve in the tank). Maintain sufficient agitation to completely dissolve the bags and suspend the contents.

Add the rest of the carrier to obtain the final spray volume. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well mixed spray suspension.

Thoroughly clean the sprayer after use by flushing the system with water containing a detergent. Do not allow spray suspension to dry in the tank.

Mixing Order for Tank Mixtures

When mixing BARRICADE 65WG with other components (carrier and pesticide products) add the products to the spray tank in the following order:

- 1 - Water dispersible granules (WG formulations) and wettable powders (WP formulations). Wettable powders should be premixed with a small amount of water to form a slurry before addition; water dispersible granules can be added directly during filling. Allow the product to disperse completely before other products are added.
- 2 - Flowable liquids (FL or SC).
- 3 - Emulsifiable concentrates (EC).
- 4 - Surfactants approved for application to turf or landscapes. Check surfactant label before use.

Compatibility Test

Before mixing BARRICADE 65WG with other pesticides in the spray tank, test the compatibility by mixing all components (carrier and pesticide products) in a small container in proportionate quantities (see following table).

Amount of Component to Add to One Pint of Spray Carrier
(Assuming Volume is 25 Gallons per Acre)

<u>COMPONENT</u> <u>FORMULATIONS</u>	<u>ACRE</u>	<u>-----RATE PER-----</u> <u>1000 Ft²</u>	<u>LEVEL</u> <u>TEASPOONS</u>
Dry	1.0 lb	0.4 oz	1.5
Liquid	1.0 pt	0.4 oz	0.5

If components do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested spray mix is compatible. Incompatibility in any of the above forms will usually occur within 5 minutes after mixing.

If components are incompatible, the use of a compatibility agent is recommended. Rerun the above compatibility test with commercially available compatibility agents until a suitable compatibility agent is identified.

ESTABLISHED TURF

BARRICADE 65WG is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grasses and lawns. The species of turf grass determines the maximum amount of this product that may be applied during a year.

Most effective weed control in turf grasses will be obtained when BARRICADE 65WG is activated by at least 1/2 inch of rainfall or irrigation within 4 days after application and prior to weed seed germination. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATE

Approximate Date

7/07/19

USE PRECAUTIONS

The following use precautions apply to the use of BARRICADE 65WG in turf grasses and lawns:

Application of BARRICADE 65WG 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, whichever is longer. Injury to desirable seedlings is likely if BARRICADE 65WG 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 BARRICADE 65WG 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 65WG to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (Poa annua) are desirable species.

Rates and Timings

BARRICADE 65WG may be applied as a single application or as a sequential application to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. **BARRICADE 65WG 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 65WG is related to the rate applied.

Maximum Annual Rates

BARRICADE 65WG is recommended for use on the turf grass species listed in the following table. Do not apply more than 1.15 lbs./A or the maximum yearly rate, whichever is less, in any 60 day interval; and do not exceed the maximum yearly rate as given in the following table:

MAXIMUM ANNUAL RATE PER CALENDAR YEAR OF BARRICADE 65WG HERBICIDE IN WATER SOLUBLE PACKS FOR TURF GRASS SPECIES			
TURF SPECIES	Ft ² /PACK	LBS PRODUCT/ACRE	OZ PROD./1000 Ft ²
Bermudagrass* Centipedegrass Seashore Paspalum Tall Fescue (including turf-type) Zoysia	9638	2.30	0.83
Kentucky Bluegrass Perennial Ryegrass	14,545	1.50	0.55
Creeping Red Fescue St. Augustinegrass	20,000	1.15	0.40
Creeping Bentgrass	21,622	1.00	0.37

* May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 0.80 lbs. product per acre or 0.30 oz. product per 1000 ft². Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

Weeds Controlled

The following table lists use rates recommended for control of indicated weeds for approximately 2-6 months.

Use the higher rate within the listed range for longer control in areas with extended germination periods (see Crabgrass Seed Germination Data Map, page 7).

Crabgrass (large, smooth)	Carpetweed
Annual Bluegrass (Poa annua)	Common Chickweed
Goosegrass ¹	Common Lambsquarter
	Common Purslane
Annual Foxtails	Henbit
Barnyardgrass	Knotweed
Broadleaf Signalgrass	Pigweed
Johnsongrass (from seed)	Prostrate Spurge
Rescuegrass ²	Shepardspurse ²
	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. BARRICADE will not control established weeds. Weeds control situations requiring rates greater than 1.15 lbs./A will require a sequential application (see Rates and Timings).

1. In many areas a single application of 1.0 to 1.15 lbs/Acre of BARRICADE 65WG will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, make an initial application of 1.15 lbs/Acre followed after 60 days by a second application of 0.38 to 1.15 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.

10/19

Overseeding / Reseeding

BARRICADE 65WG will inhibit the germination of turf species if overseeded too soon after application. Wait 4-6 months per 0.75 pound of BARRICADE 65WG applied when grass seed is to be broadcasted over the turf surface. This overseeding interval can be shortened to 3-4 months per 0.75 pound when grass seed is drilled directly into the soil. The interval between application and overseeding / reseeding is dependent on the application rate, soil temperature, and soil moisture. A shorter period is required if growing conditions are warm and wet, while a longer interval is needed if conditions are cool and dry.

Turf Tank Mixes

BARRICADE 65WG may be tank mixed with other registered turf herbicides. Tank mixes are for use only in states where the tank mix product and application site are registered.

Consult the label(s) of the individual tank mix product(s) for use, rate recommendations, application timing, weeds controlled, turf grass safety and specific precautions and/or restrictions.

Before mixing tank mix partners in the spray tank it is advisable to test compatibility by mixing the products in a small container. See the **Compatibility Test** section under **Mixing and Application**.

LANDSCAPE ORNAMENTALS

BARRICADE 65WG is recommended for use on landscape ornamentals. Do not apply more than 1.15 lbs./A in any 60 day interval, and do not exceed the maximum rate per calendar year of 2.3 lbs./A.

BARRICADE 65WG Herbicide will not harm most established ornamental trees, shrubs and flowers. The following species have shown tolerance to BARRICADE 65WG:

Scientific name	Common name
-----	-----
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	7
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	7
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
E. japonica	Evergreen Euonymus

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

12 of 19

Scientific name	Common name
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
Pinus brutia	Calabrian Pine
P. canariensis	Canary Island Pine
P. halepensis	Aleppo Pine

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

Scientific name	Common name
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
Rumex adiantiformis	Leatherleaf Fern
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
V. plicatum	Japanese Snowball
V. rigidum	Canary Island Viburnum

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

11/18/93

June 29

**EPA DRAFT DIRECTIONS FOR USE BOOKLET (May 2, 1993)
BARRICADE 65WG IN WATER SOLUBLE PACKS**

Scientific name -----	Common name -----
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.

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 bags and boxes: Completely empty container into application equipment. Then dispose of empty bag or box 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.

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June 29

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.**

In no event shall Sandoz or seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SANDOZ OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SANDOZ OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sandoz and seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, that may not be modified by any oral or written agreement. Barricade® is a registered trademark of Sandoz Ltd. ©

11/20/93

EPA DRAFT CONTAINER LABEL (June 29, 1993)
BARRICADE 65WG in WATER SOLUBLE PACKS

1

BARRICADE® 65 WG Herbicide

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CAUTION

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EPA Reg. No. 55947-143
EPA Est. No.

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

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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STATEMENT OF PRACTICAL TREATMENT

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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 remove water soluble packs from container except for immediate use.

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

IMPORTANT: Read the Limited Warranty and Liability and all applicable *Directions for Use* on attached leaflet before using this product.

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 bags and boxes: Completely empty container into application equipment. Then dispose of empty bag or box 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.

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**EPA DRAFT CONTAINER LABEL (June 29, 1993)
BARRICADE 65WG in WATER SOLUBLE PACKS**

4

LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY

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