Yr	123 5574	17-143
US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767)	EPA REGISTRATION NO. 55547-1-3 TERM OF ISSUANCE	DAT OFFELD 9992
WASHINGTON, DC 20460	CONDITIONAL, L	Mures: January 1, 1999
NOTICE OF PESTICIDE: REGISTRATION (Under the Federal Insecticide, Fungicide,		a herbicide in
and Rodenticide Act, as amended)	Water JoluJ	10 rdCha
ME AND ADDRESS OF REGISTRANT (Include ZIP code)		
Г	Г	
Janous Crop Protection Compa 1300 East Touly Avenue Des Plaines, 11 00016	ully.	
L	L	
<b>CTE:</b> Changes in labeling formula differing in substance for abmitted to and accepted by the Registration Division price oduct always refer to the above U.S. EPA registration numerical structures and accepted by the second structure of the sec	or to use of the label in con	
n the basis of information furnished by the registrant, the ne Federal Insecticide, Fungicide, and Rodenticide Act.	above named pesticide is l	hereby Registered/Reregistered under
copy of the labeling accepted in connection with this Re	gistration/Reregistration is	s returned herewith,
with the second the conditionally $(1) = \frac{1}{2} \frac{1}$	ange titte fegtetfo	LIGT. LL
an anconditional rings sect acta with actailings 10% sec	· · · · · · · · · · · · · · · · · · ·	-
المحد فلالالها المان فتريمج الملكات بالمناسب		
2. And the filles "Life Negléti Servic for leterse the plot		
s and in actial prominition s	statement under "	
s، تصعفات (c) copies of t مر release the product for	-	latering perore
It these conditions are not consulation in accordant to concellation in accordant of the product constituent of the label is end.	nce with rlfikk sect tutes acceptance of	tion o(e). Your release f these conditions.
	<b>BEST AVA</b>	LABLE COPY
	uanne 1. miller	
P)	roduct manager (23 ungicide-merbicide	Branch
	istration pivisi	
ATTACHMENT IS APPLICABLE		
		DATE J-2-7.2

(

PH23 55947-143

20420

ACCEPTED with COMMENTS in EPA Letter Dated:

# CONTAINER LABEL

# BARRICADE<sup>\*</sup> 65WG Herbicide in Water Soluble Packs

7 FEB 1992

Under the Pederal Insecticide, Fungleale, and Redanticide Act, an amended, for the pesticide reglatered under EPA Reg. No. 55742-143

For selective preemergence control of grass and broadleaf weeds in established turf grasses and landscape ornamentals.

## **KEEP OUT OF REACH OF CHILDREN**

## CAUTION

See the following section, <u>Precautionary Statements</u>, <u>Hazards To Humans and Domestic</u> <u>Animals</u>, for additional information.

Net Weight: 5 lbs. (Contains 10, 1/2 pound, water soluble packs.)

EPA Reg. No. 55947-RUG EPA Est. No.

# SANDOZ CROP PROTECTION CORPORATION 1300 E. Touhy Avenue Des Plaines, IL 60018

December, 1991

Page 1 of 19

e. -

# 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.

## First Aid

ς.

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. 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.

Refer to the DIRECTIONS FOR USE booklet attached to this container for use directions and additional precautionary statements. Apply this product only as directed in the attached label booklet. For additional copies of the DIRECTIONS FOR USE booklet, write the manufacturer.

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

Page 2 of 19

۰. .

# 400

### 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**

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.

Page 3 of 19

e. -

# LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY

 $\tau_{\rm cl}$ 

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. Turf grass 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.

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.

Page 4 of 19

# WATER SOLUBLE PACK JABEL

# BARRICADE<sup>®</sup> 65WG Herbicide in Water Soluble Packs

Contains 65% prodiamine.

# **KEEP OUT OF REACH OF CHILDREN**

## CAUTION

EPA Reg. No. 55947-

Refer to outer package for directions and precautions.

Net Weight: 1/2 pound

Page 5 of 19

Ţ

۰.

## DIRECTIONS FOR USE BOOKLET COVER PAGE

104-0

## BARRICADE<sup>®</sup> 65WG Herbicide in Water Soluble Packs

## DIRECTIONS FOR USE: IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

EPA Reg. No. 55947-143

BARRICADE<sup>®</sup> 65 WG is registered trademark of Sandoz. Ltd.

PROSPER WITH PESTICIDES BY USING THEM PROPERLY! READ AND FOLLOW LABEL DIRECTIONS.

NOTICE: READ \*LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY\* ON THE CONTAINER BEFORE BUYING OR USING. IF TERMS ARE NOT ACCEPTABLE, RETURN AT ONCE UNOPENED.

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF THE PESTICIDE APPLICATION.

Page 6 of 19

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

8. 2 .:

## 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 nondisposable gloves thoroughly with soap and water before removing.

## First Aid

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. 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**

نبر: 19

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 bake 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 apply this product through any type of irrigation system.

Page 8 of 19

## **Mixing and Application**

Apply Barricade 65WG in a minimum of 20 gallons of carrier per treated acre (1/2 gallon / 1000 ft<sup>2</sup>)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.

BARRICADE 65WG can be applied using water or sprayable fluid fertilizer as the cartier. If a fluid fertilizer is used, a compatibility test should be made prior to mixing (see Compatibility Test in this section for instructions).

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 65 WG into the tank (do not remove the BARRICADE 65 WG 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.

If water is used as the carrier, water soluble bags of BARRICADE 65WG herbicide can be added directly into the tank.

If fluid fertilizer is used as the carrier, first form a slurry by mixing water soluble bags of BARRICADE 65WG with at least 2 parts clean water in a separate container. Pour the slurry into the spray tank while maintaining agitation.

Add the rest of the water or fluid fertilizer 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.

Page 9 of 19

## **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)

COMPONENT	RATE PER		LEVEL
FORMULATIONS	ACRE	1000 Ft <sup>2</sup>	TEASPOONS
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.

Page 10 of 19

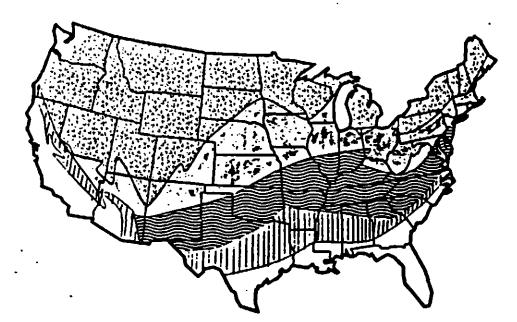
## ESTABLISHED TURF

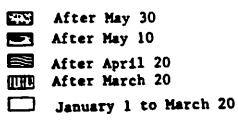
BARRICADE 65WG is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established grass turf. The species of turf grass determines the maximum amount of this product that may be applied during a year.

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 14 days after application and prior to weed seed germination. See the map below for approximate crabgrass seed germination dates.

# **CRABGRASS SEED GERMINATION DATES**

Approximate Date





Page 11 of 19

## **USE PRECAUTIONS**

2 2 20

The following use precautions apply to the use of BARRICADE 55WG in turf grasses:

Application of BARRICADE 65WG may thin emerged annual bluegrass and newly over-seeded grasses.

Do not apply to FALL SEEDED TURF treated the following spring antil after the second mowing.

Do not apply to SPRING SEEDED TURF or 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 aerifying or disking may result in reduced weed control.

Do not apply BARRICADE 65WG to tees or greens, or to areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (Poa annua) are desirable species.

Page 12 of 19

# **Rates and Timing**

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.

1-1-2-20

Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by BARRICADE 65 WG is related to the rate applied.

Maximum Annual Rates

BARRICADE 65WG is recommended for use on the following turf grass species. The total amount of BARRICADE 65WG applied during one year must not exceed the amounts listed.

NAXIMUN ANNUAL RATE PER CALENDAR YEAR OF BARRICADE 65WG HERBICIDE IN WATER SOLUBLE PACKS				
TURF SPECIES	FT <sup>2</sup> / PACK	LBS PRODUCT/ACRE	OZ PROD./1000 Ft <sup>2</sup>	
Bermudagrass Centipedegrass Seashore Paspalum Tall Fescue Zoysia	9638	2.30	0.83	
Perennial Bluegrass Perennial Ryegrass	14,545	1.50	· 0.55	
Creeping Red Fescue St. Augustine	20,000	1.15	0.40	
Creeping Bentgrass (min. 1/2" in height)	21,622	1.00	0.37	
Bermudagrass (newly sprigged or plugged)	26,667	0.80	0.30	

• Do not apply more than 1.5 lbs./A of BARRICADE 65 WG or the maximum yearly rate listed above per application, whichever is less.

- Do not make more than 2 applications per calendar year.
- If making a second application, wait at least 60 days before making a second application.

# 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 11).

WEEDS CONTROLLED AND APPLICATION RATES" (for 2 -6 months of control)			
WEEDS CONTROLLED	FT <sup>2</sup> / PACKS	LBS PRODUCT/ACRE	OZ PROD./1000 Ft <sup>2</sup>
Crabgrass (large, smooth)	20,000 - 44,444	0.50 - 1.15	0.18 - 0.40
Annual Bluegrass Common Chickweed Prostrate Spurge	20,000 - 28,571	0.75 - 1.15	0.28 - 0.40
Yellow Foxtail Shepardspurse <sup>1</sup> Henbit Knotweed	14,545 - 20,000	1.15 - 1.50	0.40 - 0.55
Goosegrass <sup>3</sup> Rescuegrass <sup>4</sup>	9,638 - 14,545	$1.50 - 2.30^2$	0.55 - 0.83

- Do not exceed the maximum annual application rates recommended for the turf species. All applications must be made prior to germination of target weeds.
- 1. Fall Application.
- 2. Weeds requiring rates greater than 1.15 lbs./A will require a sequential application (see Rates and Timings).
- 3. For the best control of goosegrass make a sequential application of 1.15 lbs./A followed after 60 days with 0.38 to 1.15 lbs./A of product.

4. Suppression only.

Page 14 of 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

Refer to <u>Mixing and Application</u> if mixing BARRICADE 65WG with fluid fertilizer is planned.

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 /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 <u>Compatibility Test</u> section under <u>Mixing</u> and <u>Application</u>.

Page 15 of 19

# LANDSCAPE ORNAMENTALS

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

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	-	
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	
Elacagnus pungens	Silverberry	
Euonymous fortunei	Wintercreeper Euonymous	
E. japonica	Evergreen Euonymous	
E. kiautschovica	Spreading Euonymous	

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

Page 16 of 19

180420

Scientific name

## Common name

Fatsia japonica Forsythia intermedia F. viridissima Gardenia jasminoides Hedera helix Hibiscus rosa-sinensis Ilex cornuta I. crenata I. opaca I. pernyi Jasminium nudiflorum Juniperus chinensis J. conferta J. horizontalis Juglans sp. Justicia brandegeana Lagerstromia indica Ligustrum amurense L. japonicum L. lucidum Liriope muscari Lonicera japonica L. tatarica Maleophora luteola Malus sp. Nandina domestica Olea europa Ophiopogon japonicus Osteospermum fruticosum Oxydendrum arboreum Persea americana Photinia fraseri Picea abies Pieris japonica Pinus brutia P. canariensis P. halepensis P. nigra

Japanese Aralia Border Forsythia Greenstern Forsythia Gardenia, Cape-Jasmine English Ivy Chinese Hibiscus Chinese Holly Japanese Holly American Holly Winter Jasmine Chinese Juniper Shore Juniper Creeping Juniper Walnut\* Shrimp Plant Crepe Myrtle Amur Privet Japanese Privet **Glossy Privet** Big Blue Lily Turf Japanese Honeysuckle Tatarian Honeysuckle Ice Plant Crabapple Heavenly Bamboo Olive\* Mondo Grass Trailing African Daisy Sourwood Avocado\* Frasier's Photinia Norway Spruce Lily-of-the-Valley Shrub Calabrian Pine Canary Island Pine Aleppo Pine Austrian Black Pine

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

Page 17 of 19

t

٨.

### Scientific name

P. radiata P. thunbegiana P. strobus P. sylvestris Pistachio sp. Pittosporum rhombifolium P. tobira Podocarpus macrophyllus Prunus laurocerasus Prunus sp.

Pyracantha coccinea P. fortuneana P. koidzumii Pyrus sp. Quercus rubra Raphiolepis indica Rhododendron (including Azalea)

Rosa banksiae Rosmarinus officinalis Rumohra adiantiformis Santolina virens Sedum album Syzygium paniculatum Taxus cuspidata T. media Thuja occidentalis Trachelospermum asiatum Tsuga canadensis Viburnum japonicum V. odoratissimum V. plicatum V. rigidum

f

Common name

Monterey Pine Jananese Black Pine Eastern White Pine Scotch Pine Pistachio\* Queensland Pittosporum Mock Orange Japanese Yew English Laurel Almond, Apricot, Nectarine, Peach, Plum and Prune\* Firethorn Firethorn Firethorn Bradford Pear sp. Red Oak Indian Hawthorne 'Coral Bells' 'Formosa' 'Hino-crimson' 'PIM' 'Roseum Elegans' Lady Bank's Rose Rosemary Leatherleaf Fern Stonecrop Japanese Boxcherry Japanese Yew Yew American Arborvitae Star Jasmine Canada Hemlock Japanese Viburnum Sweet Viburnum Japanese Snowball **Canary Island Viburnum** 

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

Page 18 of 19

Scientific name

A 13

V. tinus V. trilobium V. wrightii Vinca minor Vitis sp. Weigela florida Yucca aloifolia Yucca filamentosa

Common name

200420

ł

Laurustinus Cranberry Bush

Dwarf Periwinkle Grape\* Old Fashioned Weigela Spanish Bayonet Yucca Adam's Needle

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

Page 19 of 19