UNITED STATE ENVIRONMEN CARROTE

ar. Alliam E. Aing Regal Chemical Cospany teon donard bud F.G. Box 966 Alkpharetta, CA 30201

OCT 1 6 1997

bear Hr. King:

Subject:

kegalkade EPA Registration No. 48234-5

Regalitade 37

EFA Registration No. 40234-6

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ara Registration No. 40234-3

Regalacie z5

LPA Pegistration No. 40234-9

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are progress ereaction to the subject pesticide product Regulition have been teriesed and found occupitable amount the Pederal Insectición, rubylcide and accenticide Act (FFFAA) au effences provided that your

- i. Attion the attions to the tract of the other descriptions in the a Por intered Industrial Subjudy, (to.", to react "BARKITADE" in a Royantored Trademark of advertib Crop Protection, Inc. ".
- 2. Alyhabetize the list of weeds given under the heading "weeds Controlled".

If these conditions are not complied with, these registrations will be subject to cancellation in accordance with FIFRA, Section 6(e). Your release for snipsent or these products constitutes acceptance of these conditions.

Stamped copies of the labels are enclosed for your records.

Sincerely yours,

Joanne I. Miller

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EPA Form 1320-1 (12-70)

REGALKADE 25

Guaranteed Fertilizer Analysis:

Nitrogen 32 % (N) Phosphorus 4 % (P_2O_5) Potassium 6 % (K_2O)

Nitrogen from: Urea formaldehyde, Urea, Ammonia

ACCEPTED
with COMMENTS
In EPA Letter Dated

OCT | 6 1997

Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

For selective preemergence control of grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals (including established perennials & wildflower plantings)

KEEP OUT OF REACH OF CHILDREN

CAUTION

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

Net Weight:

EPA Reg. No. 48234-9 EPA Est. No.

> Regal Chemical Co. 600 Branch Road Alpharetta, GA 30201

BARRICADE® is a Registered Trademark of Saĥdoz, Ltd.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact while handling the material may cause allergic reactions in some individuals.

Statements of Practical Treatment

If in eyes: Flush thoroughly with water for several minutes. Get medical attention if irritation persists.

If on skin: Wash with soap and water. Rinse thoroughly. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air.

Environmental Hazards

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwaters.

If material is spilled: Contain and sweep up material of spill for disposal or use 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, cover with layer of soil, or leave exposed to sunlight, as deemed appropriate to the situation.

STORAGE AND DISPOSAL

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

STORAGE

Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

<u>Paper containers</u>: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or; if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

DIRECTIONS FOR USE

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

REGALKADE 25 is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals
- established perennials and wildflower plantings

REGALKADE 25 controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when REGALKADE 25 is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1-2 inches) incorporation, prior to weed seed germination and within 14 days following application.

Not for use on plants being grown (1) for sale or other commercial use, (2) for commercial seed production, or (3) for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

Do not graze or feed livestock forage cut from areas treated with REGALKADE 25.

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

Do not apply aerially.

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Do not apply to golf course putting greens.

Approximate Date

Application Directions

Apply uniformly with suitable, calibrated application equipment.

ESTABLISHED TURF

REGALKADE 25 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 REGALKADE 25 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 REGALKADE 25 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

After May 30

After May 10

After April 20

After March 20

January I to March 20

Use Precautions

The following precautions apply to the use of REGALKADE 25 in turf grasses and lawns:

Application of REGALKADE 25 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 REGALKADE 25 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 REGALKADE 25 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 REGALKADE 25 to putting greens of areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.

Rates of Application

REGALKADE 25 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. REGALKADE 25 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 REGALKADE 25 is related to the rate applied.

Maximum Annual Rates

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REGALKADE 25 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 REGALKADE 25 by Turf Grass Species ¹⁾				
Turf Species:	lbs product/A	lbs ai/A		
Bermudagrass ²⁾ Bahiagrass Centipedegrass Seashore Paspalum St. Augustinegrass Tall Fescue (including turf-type) Zoysia	600	1.5		
Buffalograss Kentucky Bluegrass Perennial Ryegrass	400	1.0		
Creeping Red Fescue	300	0.75		
Creeping Bentgrass	260	0.65		

¹⁾ These are the maximum rates per calendar year by species limitations.

- Do not apply more than 600 lbs. of REGALKADE 25 per calendar year.
- Use higher rates of REGALKADE 25 to achieve higher levels of fertility and longer periods of weed control for each turf type, but do not exceed the maximum application rates specified in the Maximum Annual Rates Table.

²⁾ May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 208 lbs/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.

Weeds Controlled

When used in accordance with this label REGALKADE 25 will provide control of the following weeds:

Barnyardgrass Bluegrass, Annual (Poa annua) Crabgrass (large, smooth) Crowfootgrass Cupgrass, Woolly Foxtails, Annual Goosegrass¹ Itchgrass Johnsongrass (from seed)

Junglerice

Lovegrass

Panicum (Texas, Fall, Browntop)

Rescuegrass³

Signalgrass, Broadleaf

Sprangletop Witchgrass

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Carpetweed Chickweed, Common

Chickweed, Mouseear (from seed)

Henbit Knotweed Kochia

Lambsquarter, Common

Pigweed

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

Woodsorrel, Yellow (from seed)

- In many areas a single application of 260 to 600 lbs/A of REGALKADE 25 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 260 to 400 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 TURE

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 REGALKADE 25 is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

WHEN TO OVERSEED AFTER APPLICATION

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REGALKADE 25 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.

REGALKADE 2	25 Rate (lb/A)	Months Before Overseeding			
Product	ai	North	Transition	Şouth	
200	.50	4	4	4	
260	.66	5	4	4	
300	.74	6	5	5	
320	.80		6	6	
400	1.00		7	7	
456	1.14			9	
520	1.30			10	
600	1.50			12	

LANDSCAPE ORNAMENTALS

(including Established Perennials and Wildflower Plantings)

REGALKADE 25 may be applied for residual preemergence weed control in ornamentals.

Use Rates

Apply REGALKADE 25 at 260 to 600 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 600 lbs/A.

Application Timing and Information

REGALKADE 25 is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when REGALKADE 25 is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1 to 2 inches) mechanical incorporation, prior to weed seed germination and within 14 days following application.

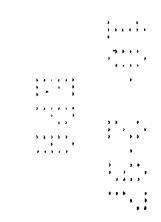
Best weed control is obtained when REGALKADE 25 is applied to soil free of clods, weeds, and debris such as leaves. Prior to application of REGALKADE 25, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

Established Landscape Ornamentals

REGALKADE 25 may be applied at any time to established ornamentals as a broadcast, over the top or directed application. Irrigation or rainfall soon after application will wash residues off plant foliage and activate REGALKADE 25 in the soil.

Newly Transplanted Landscape Ornamentals

REGALKADE 25 may be applied to newly transplanted ornamentals as a broadcast, over the top or directed application. Delay application to allow soil to settle around new transplants and water thoroughly before applying REGALKADE 25. Apply REGALKADE 25 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.



Tolerant Ornamental Species

REGALKADE 25 will not harm most trees, shrubs, vines and flowers. The species listed below are tolerant to REGALKADE 25. Best results will be obtained when REGALKADE 25 is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the soil surface. REGALKADE 25 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 REGALKADE 25.

Scientific name	Common name			
Abies spp.	Fir species * *			
	(Balsam, Fraser, Noble, etc.)			
Abelia grandiflora	Abelia: Sherwood			
Acer palmatum	Japanese Maple			
A. platanoides	Norway Maple			
Achillea sp.	Yarrow: King Edward			
Actinidia chinensis	Kiwi*			
Agapanthus africanus	Lily-of-the-Nile (African Lily)			
Agapanthus orientalis				
Akebia quintata	Five-Leaf or Chocolate Vine			
Allium cernuum	Lady's Leek, Nodding Onion			
Anemone hybrida	Japanese Anemone			
Aquilegia sp.	Aquilegia: Red and Gold			
Arctostaphylos densiflora	Vine Hill Manzanita			
Arctotheca calendula	Cape Weed			
Artemesia sp.	Wormwood; Silver Mound, Castle			
Aster sp.	Aster: Bonny Blue, Purple Dome			
Aster X Frikartii	, , , , ,			
Athrium Filiz-femina	Lady Fern; Fern Lady			
Aucuba japonica	Japanese Aucuba			
Begonia sp.	Fibrous Begonia: Hardy Grandis			
Berberis gladwynensis	Barberry			
B. Julianae	Wintergreen Barberry			
B. mentorensis	Mentor Barberry			
B. Thunbergii	Japanese Barberry			
B. verruculosa	Warty Barberry			
Bergenia cordifolia	,			
Boltonia asteroides	Snowbank			
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Buddleia davidii	Butterfly-Bush (Dwarf Blue); Royal Red			

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

** Not for use on container grown plants.

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Scientific Name
Buxus microphylla
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
Cretaegus spp.
Crocosmia sp.
Cupressus sempervirens

Delosperma alba
Delosperma sp.
Delphinium sp.
Dianthus deltoides
D. gratianopolitanus
Dodonea viscosa
Echinacea pupurea
Elaeagnus pungens
Euonymus Fortunei
E. japonica

E. japonica
E. kiautschovica
Fatsia japonica
Forsythia intermedia
Forysythis suspensa
F. viridissima

Common Name
Japanese Boxwood
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

Hawthorne Lucifer

Italian Cypress

White Trailing Ice Plant

Cooperi Pink

Larkspur: Blue Elf

Dianthus; Maiden Pinks "Zing"

Cheddar Pink

Hop Bush

Coneflower, Purple; Magnus

Silverberry Wintercreeper

Japanese Spindle Tree (Evergreen Euonymus)

Spreading Euonymus

Japanese Aralia Border Forsythia

Weeping Forsythia

Greenstem Forsythia

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

Scientific Name Gaillardia sp.

Gardenia jasminoides

Gaura sp.

Gentiana dahurica

Gladiolus spp.
Gypsophila repens
Hedera helix
Hellanthemum sp.
Hemerocallis sp.

Hibiscus

Hibiscus sp.

Hibiscus Rosa-sinensis

Hosta plantaginea

H. Sieboldiana

Houttuynia cordata var. variegata

Hydrangea macrophylla

Ilex Bernyi Ilex cornuta I. crenata I. opaca I. vomitoria

Inula ensifolia

Iris ensata Iris siberica

Iris spp.

Jasminium nudiflorum Juniperus chinensis

J. conferta J. davurica J. horizontalis Juglans sp.

Justicia brandegeana Lagerstromia indica

Lagerstomia indica X Fauriei

Lantana montevidensis

Lavender sp.

Leontopodium alpinum Ligustrum sinense Ligustrum amurense Common Name

Gaillardia, Blanket Flower: "Goblin" Gardenia, Cape-Jasmine, Radicans

Gentian

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Gladiolus species**
Baby's Breath

English Ivy Sunrose

Daylily: Aztec Gold, Stella De Oro, Tender

Love

Rose of Sharon**

Mallow: Disco Belle White

Chinese Hibiscus

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, Parsonnii

Shore Juniper; Blue Pacific

Parsoni

Creeping Juniper

Walnut*
Shrimp Plant
Crape Myrtle

Crape Myrtle; Tuscarora

Weeping Lantana Lavender; Munstead

Edelweiss

Chinese Privet; Variegata

Amur Privet

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

Scientific Name

L. japonicum L. lucidum Lillium sp. Liriope Muscari

Liriope Muscari var. variegata

Liriope spicata Lobelia Cardinalis Lonicera japonica

L. tatarica

Loropetalum chinense

Lythrum sp. Magnolia spp. Maleophora luteola

Malus sp.

Miscanthus sinensis Nandina domestica Narcissus spp. Nerium oleander Olea europaea

Ophiopogon japonicus
Osmanthus heterphyllus
Osteospermum fruticosum
Oxydendrum arboreum
Paeonia suffruticosa
Pennisetum setaceumi
Perovskia atriplicifolia

Persea americana Photinia Fraseri Physotegia Viginiana

Picea spp.
Pieris japonica
Pinus brutia
P. canariensis
P. elliottii
P. halepensis
P. nigra
P. palustrus
P. radiata

P. Thunbergiana

P. strobus

Common Name

Japanese Privet

Glossy Privet (Waxleaf)

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 Olive*

Mondo Grass

Osmanthus (False Holly): Gulf Tide

Trailing African Daisy

Sourwood Tree Peony

Fountain Grass (Dwarf)

Avocado*

Frasier'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

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

Scientific Name
P. sylvestris
P. taeda

P. virginiana

Pistachio 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 Raphiolepsis umbellata

Rhododendron

Rosa Banksiae

Rudbeckia sp.

Saxifraga sp.

Scabiosa sp. Sedum album

Santolina virens

Sedum cauticola

Sedum spurium

Spiraea Bumalda

Sedum dasyphyllum

Rosmarinus officinalis

(including Azalea)

Common Name

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 Hawthorne

Yedda Hawthorn

'Coral Bells'

'Delaware Valley White'

'Flame Creeper'

'Formosa'

'Girard Crimson'

'George L. Tabor'

'Hino-crimson'

'PJM'

'Roseum Elegans'

'Wakeiebisu'

'White Gumbo'

Lady Bank's Rose

Rosemary*

Black-Eyed Susan; Goldstrum

Santolina

Saxifrage; Purple Dome

Pincushion Flower

Stonecrop

Stonecrop; Lidakense

Stonecrop

Stonecrop; Dragon's Blood

Spirea: Anthony Waterer

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

Scientific Name

Syzygium paniculatum

Taxus cuspidata

T. media

Teucrium sp.

Thalictrum dipterocarpum

Thuja occidentalis

Trachelospermum asiatum

Tsuga canadensis

Tulipa spp.

Veroniac sp.

Viburnum japonicum

V. odoratissimum

V. plicatum

V. rigidum

V. suspensum

V. tinus

V. trilobium

V. wrightii

Vinca major

Vinca minor

Vitis sp.

Weigela florida

Yucca aloifolia

Y. filamentosa

Common Name

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

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.

^{* *} Not for use on container grown plants.

-REGAL CHEMICAL COMPANY Alpharetta, Georgia 30201

Regal Chemical Company warrants that this product conforms to the chemical descriptions on its label. When used in accordance with label directions under normal conditions, this product is reasonably fit for its intended purpose. Since timing, method of application, weather, plant and soil conditions, mixtures with other chemicals, and other factors affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label directions or under conditions which are abnormal or nor reasonably foreseeable. The user assumes all risks of any such use.