LITED STATES ENVIRONMENTAL PROTECTION AGENCY

48234-8

Ar. william E. King Regal Chesical Company 600 Branch Road F.O. Box 900 Alkpharetta, CA 30201

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10/16/97

bear Mr. King:

Subject: RecalKade EFA Registration No. 48234-5 RegalKade 37 EFA Registration Ro. 40234-6 Recelkade Su EFA (COLECTEDION NO. 48239-8 hugadabe 25 LEA RE- istration to. solds-3 A LIICATIONE DETEN DUL, LI, 1997, NETWERT 10 e and asset to ratch maner of parricated a parenticity also helleds, challen

as a structure established to the two year pesticing attract FULLETISTICAL FARE DEED TOVIEWED AND LODAR ACCELTABLE ORDER the reserved insecticide, rungleice and roughlicide act (rikes) so effected _resviers that you:

- 1. Annibe the braidstant that recould "decarcar." is a W [15teled] If deemate of sensor, etc. ", to report Hubde ICANL IS a RELIEVER TRADERALK OF ROVARTIC Crep Protection, Inc.". 4. Alphabetize the list of weeds given onder the heading
- "needs Controlled".

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

Stamped copies of the labels are enclosed for your records.

Sincerely yours,

2		nne I. Miller deset Manager (23)	
INAME	äer	cicice Branch Stration Division	(73650)
PA Form 1320-1 (12-70)			OFFICIAL FILE COPY

REGALKADE 30

ACTIVE INGREDIENT:

Prodiamine: [N ³ ,N ³ -Di- <u>n</u> -propyl-2,4-dinitro-6-(trifluoromethyl)- <u>m</u> - phenylenediamine	0.30%
INERT INGREDIENTS:	
TOTAL:	

Guaranteed Fertilizer Analysis:

Nitrogen	32 %	(N)
Phosphorus	4 %	(P_2O_5)
Potassium	6 %	(K ₂ O)

ACCEPTED with COMMENTS In EPA Letter Dated 2 718

JCT | 6 1997 Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the posticide registered nuder EPA Beg. No. 48234-8

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Nitrogen from: Urea formaldehyde, Urea, Ammonia

For selective preemergence control of grass and broadleaf weeds in:

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

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

Net Weight:

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EPA Reg. No. 48234-8 EPA Est. No.

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

BARRICADE® is a Registered Trademark of Sandoz, Ltd.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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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

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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.

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STORAGE AND DISPOSAL

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

STORAGE

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

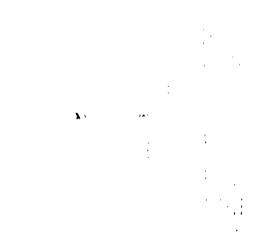
PESTICIDE DISPOSAL

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.

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DIRECTIONS FOR USE

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

REGALKADE 30 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 30 controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when REGALKADE 30 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 30.

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.

Application Directions

Apply uniformly with suitable, calibrated application equipment.

ESTABLISHED TURE

REGALKADE 30 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 30 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 30 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

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

Approximate Date

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Use Precautions

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The following precautions apply to the use of REGALKADE 30 in turf grasses and lawns:

Application of REGALKADE 30 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 30 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 30 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 30 to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.



Rates of Application

REGALKADE 30 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 30 will not control established weeds.

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Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by REGALKADE 30 is related to the rate applied.

Maximum Annual Rates

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REGALKADE 30 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 30 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	500	1.5	
Buffalograss Kentucky Bluegrass Perennial Ryegrass	334	1.0	
Creeping Red Fescue	250	0.75	
Creeping Bentgrass	215	0.65	

¹⁾ 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 173 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.

- Do not apply more than 500 lbs. of REGALKADE 30 per calendar year.
- Use higher rates of REGALKADE 30 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.

Weeds Controlled

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When used in accordance with this label REGALKADE 30 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

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)

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In many areas a single application of 215 to 500 lbs/A of REGALKADE 30 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 215 to 334 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.

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

WHEN TO OVERSEED AFTER APPLICATION

REGALKADE 30will 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 :	30 Rate (Ib/A)	Mor	nths Before Oversee	ding
Product	ai	North	Transition	South
165	.50	4	4	4
215	.66	5	4	4
250	.74	6	5	5
265	.80		6	6
334	1.00		7	7
380	1.14			9
433	1.30			10
500	1.50			12

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LANDSCAPE ORNAMENTALS

(including Established Perennials and Wildflower Plantings)

REGALKADE 30 may be applied for residual preemergence weed control in ornamentals.

Use Rates

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Apply REGALKADE 30 at 215 to 500 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 500 lbs/A.

Application Timing and Information

REGALKADE 30 is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when REGALKADE 30 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 30 is applied to soil free of clods, weeds, and debris such as leaves. Prior to application of REGALKADE 30, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

Established Landscape Ornamentals

REGALKADE 30 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 30 in the soil.

Newly Transplanted Landscape Ornamentals

REGALKADE 30 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 30. Apply REGALKADE 30 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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Tolerant Ornamental Species

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REGALKADE 30 will not harm most trees, shrubs, vines and flowers. The species listed below are tolerant to REGALKADE 30. Best results will be obtained when REGALKADE 30 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 30 may be applied over the top of these species.

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When plants are under stress (such as heat, drought, or frost damage) some cultivars of listed plants may be sensitive to REGALKADE 30.

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.	Aquilégia: 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	waity barberry
Boltonia asteroides	Snowbank
	د
pouyainville 4 spp Buddlaia davidi	Sougeinvilles
Buddleia davidii	Butterfly-Bush (Dwarf Blue); Royal Red
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* Do not use on food producing trees, vines, o	or plants.
** Not for use on container grown plants.	· · · · · · · · · · · · · · · · · · ·
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<u>Scientific Name</u> 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.

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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. kiautschovica Fatsia japonica Forsythia intermedia Forvsythis 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

Clevera Citrus species* Coreopsis (Calliopsis): Early Sunrise, Moonbeam Flowering Dogwood Americah 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 Greensteim Forsythia

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

** Not for use on container grown plants.

Scientific Name Gaillardia sp. Gardenia jasminoides Gaura sp. Gentiana dahurica Geranium cinerau Gladiolus spp. Gypsophila repens Hedera helix Hellanthemum sp. Hemerocallis sp.

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Hibiscus Hibiscus sp. Hibiscus Rosa-sinensis Hosta plantaginea H. Sieboldiana Houttuynia cordata var. variegata Hydrangea macrophylla Ilex Bernyi llex 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

<u>Common Name</u> Gaillardia, Blanket Flower: "Goblin" Gardenia, Cape-Jasmine, Radicans 14 7 18

Gentian Cranesb 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

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** Not for use on container grown plants.

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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 Paeonía 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

* Do not use on food producing trees, vines, or plants.
** Not for use on container grown plants.

Eastern White Pine

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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 (including Azalea)

Rosa Banksiae Rosmarinus officinalis Rudbeckia sp. Santolina virens Saxifraga sp. Scabiosa sp. Sedum album Sedum cauticola Sedum dasyphyllum Sedum spurium Spiraea Bumalda 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 Hawthome 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

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

** Not for use on container grown plants.

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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

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** Not for use on container grown plants.

REGAL CHEMICAL COMPANY Alpharetta, Georgia 30201

Regal Chemical Company warrants <u>that</u> this <u>product</u> conforms to the chemical descriptions on its label. When used in accordance with label directions under normal conditions, <u>this product</u> 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.