

Prodiamine 0.58G Biodac

ACCEPTED FOR REGISTRATION

April 7, 2014

FOR PRE-EMERGENCE CONTROL OF GRASS AND BROADLEAF WEEDS IN LAWNS AND ORNAMENTAL TURF (excluding golf course putting greens)

LANDSCAPE ORNAMENTALS, ESTABLISHED PERENNIALS AND WILDFLOWER PLANTINGS
STOPS MANY WEED GRASSES BEFORE THEY GROW
PREVENTS CRABGRASS, ANNUAL BLUEGRASS, FOXTAIL

New York State Department of Environmental Conservation Division of Materials Management Pesticide Product Registration DOC ID: 538229

CTIVE INGREDIENT:	
rodiamine: (CAS # 29091-21-2)	0.58%
NERT INGREDIENTS:	99.42%
OTAL:	100 000

KEEP OUT OF REACH OF CHILDREN CAUTION

See back panel for further precautions and First Aid information

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 repeated skin contact with product may cause allergic reactions in some individuals.

FPA RFG NO 53883-171-961

(L) (D) EPA EST. NO. 961-PA-001: 961-IL-001:

	FIRST AID
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Call a poison control center or doctor for treatment advice.
IF ON SKIN OR	Take off contaminated clothing.
CLOTHING:	• Rinse skin immediately with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Call a poison control center or physician immediately for treatment advice.
	Have person sip a glass of water if able to swallow.
	Do not induce vomiting unless told to do so by the poison control center or physician.
	Do not give anything by mouth to an unconscious person.
IF INHALED:	Move person to fresh air.
	• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
	Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.

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.

DIRECTION FOR USE

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

Not for use on plants being grown for sale or other commercial use, for commercial seed production, or 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.

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

This product is a pre-emergence herbicide that provides residual control of many grass and broadleaf weeds in established lawns and ornamental turf (excluding golf course putting greens), landscape ornamentals and established perennials and wildflower plantings. It controls susceptible weeds by inhibiting weed seeds, germination and root development. When used according to directions, it will control; barnyardgrass; bluegrass; annual (Poa annua); carpetweed; chickweed, common; chickweed, mouseear (from seed); crabgrass (large, smooth); crowfootgrass; cupgrass, woolly; foxtails, annual; goosegrass1; henbit; itchgrass; johnsongrass (from seed); jungleric; knotweed; kochia; lambsquarter, common; lovegrass; panicum (Texas, fall, browntop); pigweed; purslane, common; pusley, Florida; rescuegrass3, shepherd's purse2, signalgrass, broadleaf; speedwell, Persian; sprangletop; spurge, prostrate; witchgrass; woodsorrel, yellow (from seed).

"In many areas a single application of 2.5 to 6 pounds/1,000 square feet (112 to 259 pounds/acre) will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained with an initial application of 2.5 to 3.9 pounds/1,000 square feet (112 to 173 pounds/acre), followed after 60 to 90 days by a second application at doses that would not exceed the maximum annual rate (see Winimum and Maximum Application Rate by Turfgrass Species' table in the Rates of Application section of this

²For this weed, apply in late summer, fall or winter prior to germination.

³Suppression only.

WHEN TO APPLY TO ESTABLISHED TURF: This product must be applied prior to germination of weed seeds, as it will not control established weeds.

THIS MAP SHOWS APPROXIMATE CRABGRASS GERMINATION DATES



APPLICATION DIRECTIONS: Apply this product uniformly, using a suitable spreader that has been properly calibrated. Most effective weed control will be obtained when this product 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 application.

USE PRECAUTIONS: The following precautions apply to the use of this product in turf grasses and lawns. Application of this product 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 this product 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 to turf stressed by drought, low fertility, or pest damage may result in turf injury. Disturbing the herbicide barrier with cultural practices (such as core aeration) may result in reduced weed control. Do not apply to putting greens, or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (Poa annua) are desirable species. Do not apply through any type of irrigation system. Do not apply aerailly. Do not graze or feed livestock forage cut from treated areas.

RATES OF APPLICATION: This product is recommended for use on the turf grass species listed in the following table. The maximum amount of this product that may be applied per year is given for each turf grass species. Do not exceed the maximum yearly rate listed:

MINIMUM AND MAXIMUM APPLICATION RATES (by Turf Grass Species)				
Turf Species	Minimum Rate	Maximum Annual Rate ¹		
Bahiagrass, Bermudagrass ²	4 lbs/1,000 sq. ft.	6 lbs/1,000 sq. ft. per year		
Centipedegrass, Zoysiagrass,	(175 lbs/acre)	(259 lbs/acre per year)		
Seashore Paspalum,				
St. Augustinegrass				
Tall Fescue (including turf- Type)				
Buffalograss, Kentucky Bluegrass	2 lbs/1,000 sq. ft.	4 lbs/1,000 sq. ft. per year		
Perennial Ryegrass	(87.5 lbs/acre)	(173 lbs/acre per year)		
Creeping Red Fescue	1.5 lbs/1,000 sq. ft.	2.9 lbs/1,000 sq. ft. per year		
	(65.3 lbs/acre)	(130 lbs/acre per year)		
Creeping Bentgrass	1.5 lbs/1,000 sq. ft.	2.5 lbs/1,000 sq. ft. per year		
	(65.3 lbs/acre)	(112 lbs/acre per year)		

¹These are the maximum rates per calendar year.

²May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 2 pounds/1,000 square feet (87.5 pounds/acre). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded. Suppression only of foxtail, goosegrass and rescuegrass due to reduced rates used in sprigging situations.

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. 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. The length of time of residual weed control provided by this product is related to the rate applied. Use the higher rates listed for longer periods of weed control.

WHEN TO OVERSEED AFTER APPLICATION: This product will inhibit germination of turf seed if overseeded too soon after application. Follow rates and intervals in table for best overseeding/reseeding results. (See map above.)

USE RATE	MONTHS BEFORE OVERSEEDING		DING
	North	Transition	South
1.9 pounds/1,000 sq. ft. (86 pounds/acre)	4	4	4
2.5 pounds/1,000 sq. ft. (112 pounds/acre)	5	4	4
2.9 pounds/1,000 sq. ft. (130 pounds/acre)	6	5	5
3.16 pounds/1.000 sq. ft. (138 pounds/acre)	-	6	6
4 pounds/1,000 sq. ft. (173 pounds/acre)	-	7	7
4.5 pounds/1,000 sq. ft. (197 pounds/acre)	-	-	9
5.14 pounds/1,000 sq. ft. (224 pounds/acre)	-	-	10
5.94 pounds/1,000 sq. ft. (259 pounds/acre)	-	-	12

LANDSCAPE ORNAMENTALS: (including established perennials and wildflower plantings): This product may be applied for residual pre-emergence weed control in ornamentals. Apply at the rate of 2.5 to 5.94 pounds/1,000 square feet (112 to 259 pounds/acre) 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 5.94 pounds/1,000 square feet (259 pounds/acre) per year.

SPREADER SETTINGS to apply at the listed pounds per 1,000 square feet						
	1.9 lbs.	2.5 lbs.	3.16 lbs.	4 lbs.	5 lbs.	6 lbs
LebanonTurf	3½	41/4	41/2	43/4	5	51/2
Andersons AccuPro	G	J	K	M	N	P
Earthway Rotary	12	141/2	15	16	18	20
Gandy	23	25	26	28	30	32
Lely	3 II	4½ II	5 II	6 II	6½ II	7 II
Lesco (letter/numeric)	E/12	H/16	1/17	J/19	K/22	L/24
PennMulch HVO	Н	K	L	N	0	Р
ProScape SS	Н	K	L	P	0	Р
Spyker	31/2	41/4	41/2	43/4	5	51/2
Vicon	21	23	24	26	28	31

APPLICATION TIMING AND INFORMATION: This product may be applied to newly transplanted and established ornamentals with a broadcast, over the top or directed application. Around new transplants, delay application to allow soil to settle and water thoroughly before applying. Apply 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. This product is a pre-emergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1 to 2 inch) mechanical incorporation, prior to weed seed germination and within 14 days following application. Best weed control is obtained when applied to soil free of clods, weeds and debris such as leaves. Prior to application, control existing vegetation by hand weeding, cultivation or the use of an appropriate post-emergence herbicide.

TOLERANT ORNAMENTAL SPECIES: This product will not harm most trees, shrubs, vines and flowers. The species listed below are tolerant to this product. Best results will be obtained when product 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.

Forsythia suspensa

F. viridissima

Weeping Forsythia

Greenstem Forsythia

COLUMN TIES C NAME	COMMON NAME	CCIENTIFIC NAME	COMMON NAME
SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME	COMMON NAME Edelweiss
Abies spp. Abelia grandflora	Fir species** (Balsam, Frasier, Noble, etc.) Abelia: Sherwood	Leonopodium alpinum Ligustrum amurense	Amur Privet
Acer palmatum	Japanese Maple	Ligustrum sinense	Chinese Privet; Variegata
A. Platanoides	Norway Maple	L. japonicum	Japanese Privet
Achillea spp.	Yarrow: King Edward	L. lucidum	Glossy Privet (Waxleaf)
Actinidia chinensis	Kiwi*	Lilium spp.	Lily; Jazz
Agapanthus africanus	Lily-of-the-Nile (African Lily)	Liriope muscari	Big Blue Lily, Silver Mound, Evergreen Giant
Agapanthus orientalis		Liriope muscari var. variegata	Liriope, Variegated
Akebia quintata	Five-leaf or Chocolate Vine	Liriope spicata	Liriope, Creeping
Allium cemuum	Lady's Leek, Nodding Onion	Lobelia Cardinalis	Cardinal Flower, Indian Pink
Anemone hybrida	Japanese Anenome	Lonicera japonica	Japanese Honeysuckle
Aquilegia spp.	Aquilegia: Red and Gold	L. tatarica	Tatarian Honeysuckle
Arctostaphylos densiflora Arctotheca calendula	Vine Hill Manzanita Cape Weed	Lorapetalum chinense	Burgundy Loosestrife; Modern Pink
Artemesia spp.	Wormwood; Silver Mound, Castle	Lythrum spp. Magnolia spp.	Magnolia species**
Aster spp.	Aster: Bonnie Blue, Purple Dome	Maleophora luteola	Ice Plant
Aster X Frikartii	roter. Donnie Dide, raipie Donne	Malus spp.	Crabapple*
Athrium Filiz-femina	Lady Fern; Fern Lady	Miscanthus sinensis	Yaku Jima, Silberfeder
Aucuba japonica	Japanese Aucuba	Nandina domestica	Heavenly Bamboo
Begonia spp.	Fibrous Begonia: Hardy Grandis	Narcissus spp.	Narcissus species**
Berberis gladwynensis	Barberry	Nerium oleander	Oleander
B. Julianae	Wintergreen Barberry	Olea europaea	Olive*
B. mentorensis	Mentor Barberry	Ophiopogon japonicus	Mondo Grass
B. Thunbergii	Japanese Barberry	Omanthus heterphyllus	Osmanthus (False Holly); Gulf Tide
B. Verruculosa	Warty Barberry	Osteospermum fruticosum	Trailing African Daisy
Bergenia cordifolia	C b I	Oxydendrum arboretum	Sourwood
Boltonia asteroides Buddleia davidii	Snowbank Butterfly-Bush (Dwarf Blue); Royal Red	Paeonia suffruticosa Pennisetum setaceumi	Tree Peony
Buxus microphylla	Japanese Boxwood	Pennisetum setaceumi Perovskia atriplicifolia	Fountain Grass (Dwarf)
Callistemon viminalis	Weeping Bottlebrush	Persea americana	Avocado*
Calluna vulgaris	Scotch Heather	Photinia Fraseri	Frasier's Photinia (Redtip)
Campanula carpatica	Tussock Bellflower, (White Clips)	Physotegia Virginiana	Dragonhead, False; Vivid
Campis X Tagliabuana	Trumpet Flower, Madame Galen	Picea spp.	Spruce species** (Colorado Blue, Norway, etc
Carpobrotus edulis	Hottentot Fig (Ice Plant)	Pieris japonica	Lily-of-the-Valley Bush
Cassia artemisoides	Feathery Cassia	Pinus brutia	Calabrian Pine
Ceanothus rigidus	Wild Lilac	P. canariensis	Canary Island Pine
Ceratostigma plumbagonoides		P. Elliottii	Slash Pine
Chamaecyparis pisifera	False Cypress	P. halepensis	Aleppo Pine
Cleyera japonica	Cleyera	P. nigra	Austrian Pine
Citrus spp.	Citrus species*	P. palustrus	Longleaf Pine
Coreopsis spp. Cornus florida	Coreopsis (Calliopsis) Early Sunrise, Moonbeam Flowering Dogwood	P. radiata P. strobus	Monterey Pine Eastern White Pine
C. Stolonifera	American Dogwood	P. sylvestris	Scotch Pine
Cortaderia selloana	Pampas Grass	P, taeda	Loblolly Pine
Cotoneaster apiculatus	Cranberry Cotoneaster	P. Thunbergiana	Japanese Black Pine
C. buxifolius	Cotoneaster	P. Virginiana	Virginia Pine
C. dammeri	Bearberry Cotoneaster	Pistachio spp.	Pistachio*
C. Microphyllus	Rockspray Cotoneaster	Pittosporum rhombifolium	Queensland Pittosporum
Cretaegus spp.	Hawthorne	P. tobira	Japanese Pittosporum
Crocosmia spp.	Lucifer	Podocarpus macrophyllus	Japanese Yew
Cupressus sempervirens	Italian Cypress	Prunus laurocerasus	English Laurel
Delosperma alba	White Trailing Ice Plant	Prunus spp.	Almond, Apricot, Nectarine, Peach,
Delosperma spp.	Cooperi Pink	D 1.	Plum and Prune*
Delphinium spp.	Larkspur: Blue Elf	Pseudotsuga menziesii	Douglas Fir**
Dianthus deltoides D. gratianopolitanus	Dianthus: Maiden Pinks "Zing" Cheddar Pink	Pyracantha coccinea P. fortuneana	Firethorn (Scarlet) Firethorn
Dodonea viscosa	Hop Bush	P. tortuneana P. koidzumii	Firethorn
Echinacea purpurea	Coneflower, Purple; Magnus	Pyrus spp.	Bradford Pear spp.
Elaeagnus pungens	Silverberry	Quercus Shumardii	Oak, Shumard's Red
Euonymus fortunei	Wintercreeper	Quercus snumarum Quercus spp.	Oak species
E. japonica	Evergreen Euonymus	Raphiolepsis indica	Indian Hawthorne
E. kiautschovica	Spreading Euonymus	Raphiolepsis umbellata	Yedda Hawthorne
Fatsia japonica	Japanese Aralia	Rhododendron	'Coral Bells," Formosa," Hino-crimson," PJM'
Forsythia intermedia	Border Forsythia	(including Azalea)	Delaware Valley White, ' Roseum Elegans,'
r orsy ama micerinicana	Weening Forsythia		

Flame Creeper', 'Girard Crimson', 'Wakeiebisu

'White Gumbo', 'George L. Tabor'

F. viridissima Greenstem Forsythia Gaillardia spp. Gaillardia, Blanket Flower: "Goblin"

Gentian

Gardenia jasminoides Gardenia, Cape-Jasmine Gaura spp.

Geranium cinereum Cranesbill Gladiolus spp. Gladiolus species** Gypsophilia repens Baby's Breath Hedera helix English lvy Hellanthemum spp.

Daylily: Aztec Gold, Stella de Oro, Tender Love Hemerocallis spp.

Rose of Sharon** Hibiscus Mallow: Disco Belle White Hibiscus spp. Hibiscus rosa-sinensis Chinese Hibiscus Hosta plantaginea Hosta, Plantain Lily (Fragrant) H. Sieboldiana Hosta, "Seersucker"

Houttuynia cordata var. variegata

Hydrangea macrophylla Bigleaf Hydrangea Ilex Bernyi Holly Chinese Holly llex cornuta I. crenata Japanese Holly I. opaca American Holly

I. vomitoria Inula ensifolia

Gentiana dahurica

Iris ensata Sword-Leaved Iris; Jodlesong Iris siberica Siberian Iris; Cabernet Iris species** Iris spp.

Winter Jasmine Jasminium nudiflorum Juniperus chinensis Chinese Juniper: Nick's Compact, Parsonnii

Yaupon Holly, Schillings

J. conferta Shore Juniper; Blue Pacific

J. davurica Parsoni J. horizontalis Creeping Juniper Juglans spp. Walnut* Shrimp Plant Justicia brandegeana

Crape Myrtle Lagerstromia indica Lagerstromia indica X Fauriei Crape Myrtle; Tuscarora Lantana montevidensis Weeping Lantana Lavender spp. Lavender; Munstead

Rosa banksiae Rosmarinus officinalis Rudbeckia spp. Santolina virens

'White Gumbo', 'George L. Tabor'

Black-Eyed Susan; Goldsturm

Saxifrage; Purple Dome

Pincushion Flower

Stonecrop: Lidakense

Stonecrop; Dragon's Blood

Spirea; Anthony Waterer

Australian Brushcherry

American Arborvitae

Veronica, Speedwell; Sunny Border

Lady Bank's Rose

Rosemary*

Santolina

Stonecrop

Stonecrop

Japanese Yew

Germander

Meadow Rue

Star Jasmine

Tulip species

Canada Hemlock

Japanese Viburnum

Japanese Snowball Canary Island Viburnum

Arrowood Viburnum

Leatherleaf Viburnum

Greater Periwinkle, Vinca

Old Fashioned Weigela

Spanish Bayonet, Yucca

Common Periwinkle, Vinca

Laurustinus

Cranberry Bush

Sweet Viburnum

Yew

Saxifraga spp. Scabiosa spp. Sedum album Sedum cauticola Sedum dasyphyllum

Sedum spurium Spiraea bumalda Syzygium paniculatum Taxus cuspidata T. media

Teucrium spp. Thalictrum diptercarpum Thuia occidentalis Trachelospermum asiatum

Tsuga canadensis Tulipa spp. Veronica spp. Viburnum japonicum

V. odoratissimum V. plicatum V. rigidum V. suspensum

V tinus V. trilobium V. wriahtii Vinca major Vinca Minor

Vitis spp. Weigela florida Yucca aloifolia Y filametosa

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

Adam's Needle, Yucca

Grape*

STORAGE AND DISPOSAL

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

STORAGE: Store in original container in a locked storage area out of reach of children and domestic animals.

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: Non refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling if available. If

recycling is not available; then dispose of empty bag in a sanitary landfill, or if allowed by State and local authorities, by burning. If burned, say out of smoke.

CONDITIONS OF SALE AND WARRANTY

The DIRECTIONS FOR USE of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of Control Solutions, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Lebanon Seaboard Corporation warrants that this product conforms to the chemical description on the label, and is reasonably fit for the purposes set forth in the DIRECTIONS FOR USE, when it is used in accordance with such directions, subject to the inherent risks mentioned above.

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