



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs

Registration Division (7505T)

1200 Pennsylvania Ave., N.W.

Washington, D.C. 20460

EPA Reg. Number:

53883-524

Date of Issuance:

1/14/25

NOTICE OF PESTICIDE:

☒ Registration

☐ Reregistration

(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

CSI 21-411 Isoxaben SC

Name and Address of Registrant (include ZIP Code):

Control Solutions Inc.

5903 Genoa Red Bluff

Pasadena, TX 77507-1041

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2.

Continues page 2

Signature of Approving Official:

Curtis Hildebrandt for

Mindy Ondish, Product Manager 23

Herbicide Branch, Registration Division (7505T)

Date:

1/14/25

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 53883-524."
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 10/31/2024
- Alternate CSF 1 dated 10/31/2024

If you have any questions, please contact Lydia Crawford by phone at 202-566-2575, or via email at Crawford.Lydia@epa.gov.

Enclosure

ACCEPTED

01/14/2025

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

53883-524

[Text in brackets and italics are notes to the label editor.]

[Text in brackets alone are optional statements or alternative statements.]

ISOXABEN	GROUP	29	HERBICIDE
----------	-------	----	-----------

CSI 21-411 Isoxaben SC

[ABN: Quali-Pro Isoxaben SC]

A preemergence herbicide for control of certain broadleaf weeds

ACTIVE INGREDIENT:

Isoxaben..... 45.45%

OTHER INGREDIENTS*: 54.55%

TOTAL: 100.00%

Contains 4.26 lbs active ingredient per gallon.



ADAMA

Consumer &
Professional
Solutions

Manufactured for:

Control Solutions, Inc.
5903 Genoa Red Bluff [Rd][Road]
Pasadena, TX 77507

EPA Reg. No: 53883-XXX

EPA Est. No: _____

Net Contents: _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

[Alternate text – all or in part: See side panel(s) for Precautionary Statements, Directions for Use and Storage and Disposal.]

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® (866) 897-8050 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

DO NOT apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift may result in reduced germination or emergence of non-target plants adjacent to treated area. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters.

DO NOT allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

Ground Water Advisory: This pesticide has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory: This pesticide may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soil and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of isoxaben from runoff water and sediment.

DIRECTIONS FOR USE

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

READ ALL DIRECTIONS COMPLETELY BEFORE USE.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements of this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: When this product is applied to turf and ornamental plantings in landscape settings and non-cropland areas, **DO NOT** allow entry into treated areas until sprays have dried unless wearing coveralls and shoes plus socks.

PRODUCT INFORMATION

This product is a preemergence product for control of certain broadleaf weeds in established turfgrass, landscape ornamentals, container grown ornamentals, field grown ornamentals, groundcovers/perennials, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, Christmas tree/conifer plantations and non-cropland areas including airports, communication transmission lines, dry barrow ditches, dry non-irrigation ditchbanks, and dry storm water retention areas, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military sites, mining and drilling areas, oil and gas pads, parking lots, petroleum tank farms, oil and gas pipelines, railroads, roadsides, storage areas, substations, vacant lots and other non-crop residential areas.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites only when dry. **DO NOT** apply directly to water. Note: Consult with local water control authorities before applying this product around public water. Permits may be required.

Apply this product in late summer to early fall, in early spring, or anytime prior to germination of target weeds, or immediately after cultivation. This product also demonstrates limited early post-emergent control of hairy bittercress (*Cardamine hirsuta*), and several brassica species such as wild mustard (*Sinapsis arvensis*), black mustard (*Brassica nigra*), wild radish (*Raphanus raphanistrum*) and annual bastard cabbage (*Rapistrum rugosum*).

USE PRECAUTIONS

This product controls weeds germinating from seed. This product does not control established weeds other than the limited exceptions noted in previous paragraph (hairy bittercress and some brassica species), or weeds growing from stolons, rhizomes, or root pieces. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings, and trash should be removed or thoroughly mixed into the soil prior to application. Soil in non-turfgrass areas should be in good condition and free of clods at the time of application. This product is stable on the soil surface for up to 21 days, but must be incorporated by moisture to be effective. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation after application, is necessary to activate this product. If this product is not activated by rainfall or irrigation within 21 days after application, erratic weed control may result. In non-turfgrass areas, if weeds emerge due to lack of rainfall or irrigation, shallow cultivation to a depth of 1 to 2 inches will incorporate the herbicide and destroy existing weeds.

Treatment of Turfgrass or Ornamental Species Not Listed on the Label

Although this label contains a large number of ornamental species, it is not possible to include all of the ornamental plants that may be encountered when this product is used on a plant in nursery or landscape settings. Users who wish to use this product species not listed on this label may determine the suitability for such use by treating a small area or small number of plants at a specified rate. Prior to treatment of larger areas, the treated area/plants should be observed for any sign of herbicidal injury during 30 to 60 days of typical growing conditions. The user assumes the responsibility for any plant damage or other liability resulting from use of this product on species not listed on this label.

USE RESTRICTIONS

- **Chemigation:** **DO NOT** apply this product through any type of irrigation system.

- Not for sale, distribution or use in New York State.
- **DO NOT** apply by air.
- **DO NOT** repeat applications of 30 fl oz per acre (1 lb AI/A) this product sooner than 60 days after a previous application of this product.
- **DO NOT** apply more than a total of 120 fl oz/A (4 lbs AI/A) of this product per acre within a 12-month period.
- For non-Bearing Fruit and Nut Trees and Non-Bearing Vineyards, make a single application prior to germination of target weeds or immediately after cultivation. Application is to be made in a minimum of 10 gal/A. **DO NOT** exceed 1.0 lb ai/A/yr.

Weed Resistance Management:

For resistance management, this product is a Group 29 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 29 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of this product or other Group 29 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your local sales rep.

Best Management Practices:

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance. It is recommended to scout for weeds before this product application for identification and growth stage, and after application to facilitate the early identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to implement

measures to avoid allowing weeds to reproduce by seed or to proliferate vegetatively. Cleaning equipment between sites and avoiding movement of plant material between sites will greatly aid in retarding the spread of resistant weed seed.

Spray Drift Management:

Spray equipment and weather affect spray drift. Consider all factors when making application decisions. Where states have more stringent regulations, they must be observed. Avoiding spray drift is the responsibility of the applicator or grower. To reduce the potential for drift, the application equipment must be set to apply medium to coarse droplets (i.e., ASABE Standard 572) with corresponding spray pressure. Use high flow rate nozzles to apply the highest practical spray volume. With most nozzle types, narrower spray angles produce larger droplets. Follow the nozzle manufacturer's directions on pressure, orientation, spray volume, etc. in order to minimize drift and optimize coverage and control.

Wind: Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and non-target plants are growing. **DO NOT** spray near sensitive plants if wind is gusty, below 2 mph, or in excess of 10 mph and moving in the direction of adjacent sensitive areas. Local terrain may influence wind patterns; the applicator must be familiar with local conditions and understand how they may impact spray drift.

Sensitive Areas: Sensitive areas to this product are defined as bodies of water (ponds, lakes, rivers, streams, and ditches), wetlands, habitats of endangered species, and non-labeled agricultural crop areas. Applicators must take all precautions necessary to keep spray drift from reaching those areas.

Temperature Inversion: A surface temperature inversion (i.e., increasing temperature with increasing altitude) greatly increases the potential for drift. Presence of ground fog is a good indicator of a surface temperature inversion. **DO NOT** apply during temperature inversions. Always make applications when there is some air movement to determine the direction and distance of possible spray drift.

Boom Height: Set the boom and make applications at the lowest height that safely permits uniform coverage of the soil and minimizes droplet evaporation. Boom or nozzle shielding can reduce the effects of wind or air currents on drift. Verify that the shields **DO NOT** interfere with uniform deposition of product prior to application.

APPLICATION DIRECTIONS

Apply this product with a properly calibrated low pressure herbicide sprayer that provides uniform spray distribution. Nozzle screens should be no finer than 50 mesh (50 mesh is finer than 16 mesh). In-line screens and strainers should be no finer than 16 mesh. Apply this product in 10 gallons or more of water carrier per acre. As the spray volume decreases, the importance of accurate calibration and uniform application increases. Take precautions to avoid spray drift when applying this product. Drift may result in reduced germination or emergence of non-target plants adjacent to the treated area. Maintain agitation from mixing through application. Avoid boom overlaps that will increase rates above those specified. Calibrate application equipment prior to use according to manufacturer's directions. Check calibration frequently to be sure equipment is working properly and distributing spray uniformly.

Mixing Directions

Alone

Check to be sure spray equipment is clean and not contaminated with other herbicides. Using clean water, fill the tank to 1/2 of the final volume required and start agitation. Add the required quantity of this product to the spray tank, continue agitation and complete filling the tank. Maintain agitation during filling and throughout application. Sparger pipe agitation generally provides the best agitation. If spraying and agitation is stopped, this product may settle to the bottom of the spray tank. If settling occurs, material must be re-suspended before continuing spray application. Clean the spray tank, lines and screens thoroughly after use.

Application Rate Conversion Table for this product

lb ai/A	fl oz per acre	fl oz per 1000 sq ft	mls per 1000 sq ft
---------	----------------	----------------------	--------------------

0.50	15	0.3	10.2
0.75	22.5	0.5	15.3
1.00	30	0.7	20.4

Tank Mix

This product may be applied in tank mix combination with labeled rates of other products provided (1) the tank mix product is labeled for the crop, timing and method of application for the use site to be treated; (2) tank mixing with this product is not prohibited by the label of the tank mix product; and (3) the tank mix combination is compatible as determined by a "jar test" described in the Tank Mix Compatibility Testing section below.

Fill the spray tank to 1/4 to 3/4 of the final volume required. Start Agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:

- (1) Water dispersible granules
- (2) Wettable powders
- (3) Aqueous suspensions (such as this product)

Maintain agitation and fill spray tank to ¾ of total spray volume.

Then add:

- (4) Emulsifiable concentrates and water-based solutions
- (5) Spray adjuvants, surfactants and oils
- (6) Foliar fertilizers

Agitate continuously until each product is completely dispersed in water, and add water to the final volume. Maintain agitation during filling and through application. If a buildup of materials is observed on the walls of the spray tank, wash the tank with soapy water between fillings, rinse and then continue the spraying operation. Follow label directions for each material added to the tank. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Weeds Controlled or Suppressed

Weeds controlled when applied at 15 fl oz per acre (0.3 fl oz or 10.2 mls per 1000 sq ft):

Common Name	Scientific Name
Aster, slender	<i>Symphyotrichum divaricatum</i>
bursage, annual	<i>Ambrosia acanthicarpa</i>
burweed, lawn	<i>Soliva sessilis</i>
celery, wild	<i>Cyclospermum leptophyllum</i>
chickweed, common	<i>Stellaria media</i>

clover, white	<i>Trifolium repens</i>
cudweed, purple	<i>Gnaphalium purpureum</i>
fiddleneck, coast	<i>Amsinckia menziesii</i> var. <i>intermedia</i>
filaree, redstem	<i>Erodium cicutarium</i>
fleabane, blackleaved	<i>Conyza bonariensis</i>
fleabane, dwarf	<i>Conyza ramosissima</i>
groundcherry, lanceleaf	<i>Physalis angulata</i>
Henbit	<i>Lamium amplexicaule</i>
knotweed, prostrate	<i>Polygonum aviculare</i>
lambsquarters, common	<i>Chenopodium album</i>
mallow, little	<i>Malva parviflora</i>
mustard, Indian	<i>Brassica juncea</i>
mustard, wild	<i>Sinapis arvensis</i>
nightshade, black	<i>Solanum nigrum</i>
pepperweed, Virginia	<i>Lepidium virginicum</i>
pigweed	<i>Amaranthus</i> spp.
pineappleweed	<i>Matricaria discoidea</i>
plantain, slender	<i>Plantago heterophylla</i>
purslane, common	<i>Portulaca oleracea</i>
radish, wild	<i>Raphanus raphanistrum</i>
ragweed, common	<i>Ambrosia artemisiifolia</i>
rocket, London	<i>Sisymbrium irio</i>
shepherd's-purse	<i>Capsella bursa-pastoris</i>
sibara	<i>Sibara virginica</i>
smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
sowthistle, annual	<i>Sonchus oleraceus</i>
speedwell, purslane	<i>Veronica peregrina</i>
telegraphplant	<i>Heterotheca grandiflora</i>
thistle, Russian	<i>Salsola tragus</i>

Weeds controlled when applied at 22.5 fl oz per acre (0.5 fl oz or 15.3 mls per 1000 sq ft):

Common Name	Scientific Name
aster, heath	<i>Symphyotrichum ericoides</i>
bittercress, little	<i>Cardamine oligosperma</i>
bittercress, hairy	<i>Cardamine hirsuta</i>
brassbuttons, southern	<i>Cotula australis</i>
carrot, wild	<i>Daucus carota</i>
chamber-bitter	<i>Phyllanthus urinaria</i>
chickweed, mouseear	<i>Cerastium fontanum</i> ssp. <i>vulgare</i>
dandelion	<i>Taraxacum officinale</i>
eclipta	<i>Eclipta prostrata</i>
galinsoga, hairy	<i>Galinsoga quadriradiata</i>
geranium, Carolina	<i>Geranium carolinianum</i>
horseweed (or maretail)	<i>Conyza canadensis</i>
ladysthumb	<i>Polygonum persicaria</i>
lespedeza, Japanese	<i>Lespedeza striata</i>
lettuce, prickly	<i>Lactuca serriola</i>
mallow, common	<i>Malva neglecta</i>
mayweed, chamomile	<i>Anthemis cotula</i>
morningglory, ivyleaf	<i>Ipomoea hederacea</i>
mustard, black	<i>Brassica nigra</i>
pennywort	<i>Hydrocotyle</i> spp.
plantain, bracted	<i>Plantago aristata</i>
plantain, broadleaf	<i>Plantago major</i>

plantain, buckhorn	<i>Plantago lanceolata</i>
pokeweed, common	<i>Phytolacca americana</i>
rockpurslane, redmaids	<i>Calandrinia ciliata</i>
sida, prickly	<i>Sida spinosa</i>
sorrell, red	<i>Rumex acetosella</i>
speedwell, thymeleaf	<i>Veronica serpyllifolia</i>
spurge, hyssop	<i>Chamaesyce hyssopifolia</i>
spurge, spotted	<i>Chamaesyce maculata</i>
sweetclover, yellow	<i>Melilotus officinalis</i>
tansymustard, green	<i>Descurainia pinnata ssp. brachycarpa</i>
woodsorrel, yellow	<i>Oxalis stricta</i>

Weeds controlled when applied at 30 fl oz per acre (0.7 fl oz or 20.4 mls per 1000 sq ft):

Common Name	Scientific Name
burclover, California	<i>Medicago polymorpha</i>
dogfennel	<i>Eupatorium capillifolium</i>
eveningprimrose	<i>Oenothera spp.</i>
fescue, rattail	<i>Vulpia myuros</i>
filaree, whitestem	<i>Erodium moschatum</i>
goosefoot, nettleleaf	<i>Chenopodium murale</i>
groundsel, common	<i>Senecio vulgaris</i>
jimsonweed	<i>Datura stramonium</i>
knotweed, silversheath	<i>Polygonum argyrocoleon</i>
kochia	<i>Kochia scoparia</i>
medic, black	<i>Medicago lupulina</i>
mullein, turkey	<i>Croton setigerus</i>
nettle, burning	<i>Urtica urens</i>
ox tongue, bristly	<i>Picris echioides</i>
parthenium weed	<i>Parthenium hysterophorus</i>
pimpernel, scarlet	<i>Anagallis arvensis</i>
sowthistle, spiny	<i>Sonchus asper</i>
spurge, petty	<i>Euphorbia peplus</i>
spurge, prostrate	<i>Chamaesyce humistrata</i>
sunflower	<i>Helianthus spp.</i>
swinecress	<i>Coronopus didymus</i>
thistle, musk	<i>Carduus nutans</i>
willoweed, panicle	<i>Epilobium brachycarpum</i>
woodsorrel, creeping	<i>Oxalis corniculata</i>

SPECIFIC USE DIRECTIONS

Established Turfgrass

Use this product as a preemergence treatment for control of certain broadleaf weeds in established cool season and warm season turfgrass.

Apply this product anytime prior to germination of target weeds.

Note: Refer to the Product Information section of this label for use precautions and restrictions and information on mixing and application, application rates, and weeds controlled prior to using this product.

Tank Mixing

This product may be tank mixed with Dithiopyr and/or other pre-emergent herbicides (i.e. Prodiamine) and applied as a preemergence treatment to broaden the spectrum of annual grass and broadleaf weed

control. This product may also be applied as a separate treatment to supplement the effectiveness of a benefluralin + trifluralin herbicide in cool and warm season turfgrass. This product may be tank mixed with post emergence broadleaf herbicides registered for use on established turfgrass to control existing broadleaf weeds to provide residual preemergence broadleaf weed control. Applied as directed, this product in tank mix with other products registered for use on turfgrass will provide control of susceptible weed species listed on the respective labels. When using this product in tank mix combinations with other products, read and follow all applicable use directions, precautions, and limitations on the respective product labels. Refer to tank mix instructions for this product in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Specific Use Restrictions:

Apply this product to newly seeded turfgrass (including overseeded turfgrass) only after seedlings are established (three leaf stage and tillering) and well rooted.

- **DO NOT** apply this product to golf course putting greens.
- **DO NOT** apply this product to dichondra.
- **DO NOT** apply this product to turfgrass grown for seed.
- **DO NOT** overseed established turfgrass sooner than 60 days following an application of this product.

Use this product on the following turfgrass species:

Common Name	Scientific Name
Established Cool Season Turfgrass	
bentgrass, creeping	<i>Agrostis stolonifera</i>
bentgrass, colonial	<i>Agrostis tenuis</i>
bluegrass, Kentucky	<i>Poa pratensis</i>
fescue, chewing	<i>Festuca rubra</i> var. <i>commutata</i>
fescue, creeping red	<i>Festuca rubra</i>
fescue, sheeps	<i>Festuca ovina</i>
fescue, tall	<i>Festuca arundinaceae</i>
ryegrass, perennial	<i>Lolium perenne</i>
Established Warm Season Turfgrass¹	
bahiagrass	<i>Paspalum notatum</i>
bermudagrass	<i>Cynodon dactylon</i>
buffalograss	<i>Buchloe dactyloides</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
fescue, tall (growing in warm season areas)	<i>Festuca arundinaceae</i>
Seashore paspalum	<i>Paspalum vaginatum</i>
St. Augustinegrass	<i>Stenotaphrum secundatum</i>
zoysiagrass	<i>Zoysia japonica</i>
zoysiagrass	<i>Zoysia tenuifolia</i>

¹**Sprigged Warm Season Turfgrass:** Use this product post-sprigging as a preemergence treatment for control of certain broadleaf weeds in warm season turfgrass. Apply anytime after sprigging in the following turfgrass species: bermudagrass, bahiagrass, St. Augustinegrass, centipedegrass and buffalograss. **DO NOT** apply more than 22.5 fl oz of this product per acre during the establishment phase for newly sprigged warm season turfgrass. **DO NOT** apply this product to varieties of dwarf-type bermudagrass or to any turfgrass species being sprigged on golf course tees or greens.

Ornamental Plantings, Non-Bearing Fruit and Nut Trees and Non-Bearing Vineyards

Use this product as a preemergence treatment for control of certain broadleaf weeds in landscape ornamentals, container grown ornamentals, field grown ornamentals, groundcovers/perennials, nonbearing fruit and nut trees and non-bearing vineyards.

Apply this product anytime prior to germination of target weeds or immediately after cultivation.

Non-bearing means trees or vines where nuts and/or fruit are not harvested for food within one year of treatment.

Note: Refer to the Product Information section of this label for use precautions and restrictions and information on mixing and application, application rates, and weeds controlled prior to using this product.

Tank Mixing

This product may be tank mixed with glyphosate or other postemergence herbicides registered for control of existing unwanted vegetation in labeled use sites and recommended crops to provide residual preemergence broadleaf weed control. This product may also be tank mixed with Dithiopyr and applied preemergence to provide broad spectrum control of annual grasses and broadleaf weeds in ornamental areas and non-bearing fruit and nut trees and non-bearing vineyards and other use sites where both products are labeled. Applied as directed, tank mixes of this product will provide control of susceptible weed species listed on the respective labels. When using this product in tank mix combination with other products, read and follow all applicable use directions, precautions, tolerant species listings and limitations on the respective product labels. Refer to tank mix instructions for this product in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Note: DO NOT apply sprays containing glyphosate or other non-selective herbicides over the top of ornamental plants. Extreme care must be exercised to prevent contact of sprays containing glyphosate with foliage or stems of turfgrass, trees, shrubs, or other desirable vegetation since severe damage or death may result. If spraying glyphosate in areas adjacent to desirable plants, use a shield to prevent spray from contacting foliage or stems of desirable plants.

Specific Use Restrictions:

- **DO NOT** apply this product to newly transplanted ornamentals, nursery stock, groundcovers, non-bearing fruit and nut trees, non-bearing vineyards or ornamental bulbs, until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or plant injury may occur.
- **DO NOT** apply to container grown crops.

Specific Use Precautions:

Injury may be incurred if this product is applied in the following manner.

- Nursery, forest, or Christmas tree seedling beds, cutting beds, or transplant beds
- Unrooted liners or cuttings that have been planted in pots for the first time
- Pots less than six inches wide
- Groundcovers until they are established and well rooted
- Bedding plants or areas where bedding plants will be planted or transplanted within one year after application

When planting into a site treated with this product in the past 8 months, use untreated soil as fill around roots when replacing plants or injury may occur.

Precaution: Injury to certain ornamental plants has been observed following application of this product. To avoid plant injury, **DO NOT** use this product for weed control in the following ornamental plant species:

Common Name	Scientific Name
-------------	-----------------

bugleweed or ajuga	<i>Ajuga spp.</i>
cajeput tree	<i>Melaleuca quinquenervia</i>
candytuft	<i>Iberis spp.</i>
Carolina rhododendron	<i>Rhododendron caroliniaum</i>
dwarf burning bush	<i>Euonymus alatus 'Compacta'</i>
green yucca	<i>Yucca recurvifolia</i>
hydrangea	<i>Hydrangea spp. (those cultivars not listed as tolerant on this label)</i>
mustard	<i>Brassica spp.</i>
Prince of Wales juniper	<i>Juniperus horizontalis 'Prince of Wales'</i>
purple coneflower	<i>Echinacea purpurea</i>
roseum elegans rhododendron	<i>Rhododendron catawbiense 'Roseum elegans'</i>
spurge	<i>Euphorbia spp.</i>
stonecrop	<i>Sedum spp. (those cultivars not listed as tolerant on this label)</i>

This product may be used in the culture of the following established plant species: (Note: Limitations on treatment methods)

Trees

Common Name	Scientific Name	Treatment Method¹
albus-flowering maple	<i>Abutilon hybridum</i>	C, F
American sweetgum	<i>Liquidambar styraciflua</i>	F
American sycamore	<i>Platanus occidentalis</i>	F
Arizona cypress	<i>Cupressus arizonicus</i> or <i>glabra</i>	F
Australian tree fern	<i>Alsophila australis</i>	C, F
Austrian black pine	<i>Pinus nigra</i>	C, F
Babylon weeping willow	<i>Salix babylonica</i>	F
bald cypress	<i>Taxodium distichum</i>	C, F
balsam fir	<i>Abies balsamea</i>	C, F
banana	<i>Musa aluminata</i>	C, F
bear oak	<i>Quercus ilicifolia</i>	F
black olive	<i>Bucida buceras</i>	F
Blue pindo palm	<i>Butia capitata</i>	C
blue pyramid cypress	<i>Cupressus ariz 'Blue Pyramid'</i>	C, F
Bosnian pine	<i>Pinus leucodermis</i>	C, F
bottle tree	<i>Brachychiton populneus</i>	C, F
bright 'n tight Carolina laurel cherry	<i>Prunus caroliniana</i>	C, F
bristlecone pine	<i>Pinus aristata</i>	F
California fan palm	<i>Washingtonia robusta</i>	C, F
California sycamore	<i>Platanus racemosa</i>	F
canary Island pine	<i>Pinus canariensis</i>	F
cardboard palm	<i>Zamia furfuracea</i>	C, F
carob	<i>Ceratonia siliqua</i>	F
Carolina laurel cherry	<i>Prunus caroliniana</i>	C, F
carrot wood	<i>Cupaniopsis anacardioides</i>	F
cat palm	<i>Chamaedorea cataractarum</i>	F
Chilean mesquite	<i>Prosopis chilensis</i>	C, F
Chinese elm	<i>Ulmus parvifolia</i>	F
cloud nine dogwood	<i>Cornus florida</i>	C, F

coast redwood	<i>Sequoia sempervirens</i>	C, F
Colorado blue spruce	<i>Picea pungens</i> 'Glaucous'	C, F
Colorado spruce	<i>Picea pungens</i>	C, F
columnar Scotch pine	<i>Pinus sylvestris</i>	C, F
coolibah tree	<i>Eucalyptus microtheca</i>	C, F
corkscrew willow	<i>Salix matsudana</i> 'Torulosa'	F
cottonwood	<i>Populus deltoides</i>	F
crabapple non-bearing	<i>Malus sargentii</i>	C, F
D. D. Blanchard magnolia	<i>Magnolia grandiflora</i>	C, F
dwarf alberta spruce	<i>Picea glauca</i> 'Conica'	F
eastern hemlock	<i>Tsuga canadensis</i>	C, F
eastern redcedar	<i>Juniperus virginiana</i>	C, F
eastern white pine	<i>Pinus strobus</i>	C, F
eldarica pine	<i>Pinus eldarica</i>	C, F
emerald isle leyland cypress	<i>Cupressocyparis leylandii</i> 'Emerald Isle'	C, F
English laurel	<i>Prunus laurocerasus</i>	C, F
European beech	<i>Fagus sylvatica</i>	C, F
European white birch	<i>Betula pendula</i>	C, F
Everglades palm	<i>Acoelorrhaphe whrightii</i>	C, F
fig	<i>Ficus benjamina</i>	C, F
filicoides-fernspray cypress	<i>Chamaecyparis obtusa</i>	F
flame maple	<i>Acer ginnala</i>	F
Florida anise-tree	<i>Illicium floridanum</i>	C, F
flowering dogwood	<i>Cornus florida</i>	C, F
giant sequoia	<i>Sequoiadendron giganteum</i>	F
gilt edge elaeagnus	<i>Elaeagnus x ebbengei</i> 'Gilt edge'	C, F
ginkgo (maidenhair tree)	<i>Ginkgo biloba</i>	F
glaucous Italian cypress	<i>Cupressus sempervirens</i> 'Glaucous'	C, F
gracilis-slender hinoki cypress	<i>Chamaecyparis obtusa</i>	F
green hawthorn	<i>Crataegus viridis</i>	F
hoopsi blue spruce	<i>Picea pungens</i> 'Hoopsia'	C, F
Italian cypress	<i>Cupressus sempervirens</i> 'Glaucous'	C, F
Japanese black pine	<i>Pinus thunbergii</i>	C, F
Japanese cryptomeria	<i>Cryptomeria japonica</i>	C, F
king palm	<i>Archontophoenix cunninghamiana</i>	C, F
koster blue spruce	<i>Picea pungens</i> 'Koster'	F
kousa dogwood	<i>Cornus kousa</i>	C, F
laurel oak	<i>Quercus laurefolia</i>	C, F
live oak	<i>Quercus virginiana</i>	C, F
long leafed yellowwood	<i>Podocarpus henkelii</i>	C, F
luteus-flowering maple	<i>Abutilon hybridum</i>	C, F
mahogany	<i>Swietenia mahoganii</i>	F
majesty palm	<i>Ravenea rivularis</i>	C, F
mealy eucalyptus	<i>Eucalyptus cinerea</i>	F
Mediterranean fan palm	<i>Chamaerops humilis</i>	C, F
Mexican fan palm	<i>Washingtonia robusta</i>	F
mini fig	<i>Ficus benjamina</i>	C, F
monterey pine	<i>Pinus radiata</i>	F
Naylor's blue leyland cypress	<i>Cupressus sempervirens</i>	C, F
New Zealand tea tree	<i>Leptospermum scoparium</i>	C, F
Norfolk island pine	<i>Araucaria heterophylla</i>	C, F
Norway spruce	<i>Picea abies</i>	C, F
palm	<i>Chamaedorea costaricana</i>	C, F

paper birch	<i>Betula papyrifera</i>	F
parlor palm	<i>Chamaedorea elegans</i>	C, F
pendula-weeping Norway spruce	<i>Picea abies</i>	C, F
pin oak	<i>Quercus palustris</i>	F
Pink dawn chitalpa tree	<i>Chitalpa tashkentensis</i>	C, F
podocarpus	<i>Podocarpus spp.</i>	F
Ponderosa pine	<i>Pinus ponderosa</i>	C, F
pumilio mugo pine	<i>Pinus mugo</i> var. <i>pumilio</i>	C, F
queen palm	<i>Areacastrum romanzoffianum</i>	C, F
queen palm	<i>Syagrus romanzoffianum</i>	C, F
red bauhinia	<i>Bauhinia galpinii</i>	C, F
red gum eucalyptus	<i>Eucalyptus camaldulensis</i>	F
red ironbark eucalyptus	<i>Eucalyptus sideroxylon</i>	
red maple	<i>Acer rubrum</i>	F
red oak	<i>Quercus rubra</i>	C, F
red sunset maple	<i>Acer rubrum</i>	F
redbud	<i>Cercis canadensis</i>	C, F
repens-spreading Norway spruce	<i>Picea abies</i>	C, F
river birch	<i>Betula nigra</i>	C, F
roseus-flowering maple	<i>Abutilon hybridum</i>	C, F
royal star magnolia	<i>Magnolia stellata</i>	C, F
ruby glow New Zealand tea tree	<i>Leptospermum scoparium</i>	F
Russian olive	<i>Elaeagnus angustifolia</i>	C, F
sago palm	<i>Cycas revoluta</i>	C, F
saucer magnolia	<i>Magnolia soulangeana</i>	C, F
sawara-false cypress	<i>Chamaecyparis pisifera</i>	F
Scotch pine	<i>Pinus sylvestris</i>	C, F
shademaster honeylocust	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	F
shamel ash	<i>Fraxinus udhei</i>	C, F
shore pine, beach pine	<i>Pinus contorta</i>	F
shumard oak	<i>Quercus shumardii</i>	C, F
silk tree	<i>Albizia julibrissin</i>	C, F
silver dollar eucalyptus	<i>Eucalyptus cinerea</i>	F
silver maple	<i>Acer saccharinum</i>	C, F
sourwood	<i>Oxydendrum arboreum</i>	C, F
southern magnolia	<i>Magnolia grandiflora</i>	C, F
squarrosa-moss cypress	<i>Chamaecyparis pisifera</i>	F
tangerine-flowering maple	<i>Abutilon hybridum</i>	C, F
thornless honeylocust	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	F
toyon	<i>Heteromeles arbutiflora</i>	F
vesuvius red-flowering maple	<i>Abutilon hybridum</i>	F
voshino flowering cherry	<i>Prunus yedoensis</i>	C, F
white mulberry	<i>Morus alba</i>	F
white or concolor fir	<i>Abies concolor</i>	F
white pine	<i>Pinus strobus</i>	C, F
white spruce	<i>Picea glauca</i>	C, F
willow oak	<i>Quercus phellos</i>	C, F
windmill palm	<i>Trachycarpus fortunei</i>	C, F
yellow tab	<i>Tabebuia caraiba</i>	F

¹C=container grown, F=field grown

Shrubs

Common Name	Scientific Name	Treatment Method ¹
'Alice' oakleaf hydrangea	<i>Hydrangea quercifolia</i>	C, F
abyssinica acacia	<i>Acacia abyssinica</i>	C, F
Adam's needle yucca	<i>Yucca filamentosa</i>	C, F
African sumac	<i>Rhus lancea</i>	C, F
allgold warminster broom	<i>Cytisus spp.</i>	C, F
Am. cranberrybush viburnum	<i>Viburnum trilobum</i>	C, F
American holly	<i>Ilex opaca</i>	C, F
American rhododendron	<i>Rhododendron spp. hybrids</i>	C, F
amur maple	<i>Acer ginnala</i>	C, F
andorra juniper	<i>Juniperus horizontalis</i>	C, F
Anthony Waterer spiraea	<i>Spiraea x bumalda 'Anthony Waterer'</i>	C, F
areca palm	<i>Chrysalidocarpus lutescens</i>	F
August beauty gardenia	<i>Gardenia jasminoides</i>	C, F
aureus nana-dwarf golden arborvitae	<i>Thuja orientalis</i>	C, F
baileyi redosier dogwood	<i>Cornus sericea</i>	F
baileyi-dogwood	<i>Chamaecyparis pisifera</i>	F
Balkans English holly	<i>Ilex aquifolium</i>	F
ballerina Indian hawthorn	<i>Raphiolepis indica 'Ballerina'</i>	C, F
banana shrub	<i>Michelia figo</i>	C, F
bar harbor juniper	<i>Juniperus horizontalis</i>	C, F
Barbara karst	<i>Bougainvillea spp.</i>	C, F
bayberry	<i>Myrica pennsylvanica</i>	C, F
bearberry	<i>Arctostaphylos uva-ursi</i>	C, F
bearberry cotoneaster	<i>Cotoneaster dammeri</i>	C, F
bigleaf wintercreeper	<i>Euonymus vegetus</i>	C, F
bloodstone sea thrift	<i>Armeria maritima 'Bloodstone'</i>	C, F
blue boy holly	<i>Ilex x meserveae</i>	C, F
blue cape plumbago	<i>Plumbago ariculata</i>	F
blue chip juniper	<i>Juniperus horizontalis</i>	C, F
blue danube azalea	<i>Rhododendron kaempferi</i>	C, F
blue girl holly	<i>Ilex x meserveae</i>	C, F
blue juniper	<i>Juniperus squamata</i>	C, F
blue marguerite	<i>Felicia amelloides</i>	C, F
blue mist bluebeard	<i>Caryopteris clandonensis</i>	C, F
Blue prince or princess holly	<i>Ilex x meserveae</i>	C, F
blue rug juniper	<i>Juniperus horizontalis</i>	C, F
blue star juniper	<i>Juniperus squamata</i>	C, F
bog rosemary	<i>Andromeda polifolia</i>	C, F
border forsythia	<i>Forsythia x intermedia</i>	C, F
boxleaf hebe	<i>Hebe buxifolia</i>	C, F
Brilliant azalea	<i>Rhododendron indicum</i>	C, F
bristol Ruby weigela	<i>Weigela florida</i>	C, F
broadmoor juniper	<i>Juniperus sabina</i>	C, F
burford holly	<i>Ilex cornuta</i>	C, F
bush germander	<i>Teucrium fruticans</i>	C, F
bush morning glory	<i>Convolvus cneorum</i>	C, F
butterfly rhododendron	<i>Rhododendron campylocarpum</i>	F
California gold	<i>Bougainvillea spp.</i>	C, F

California privet	<i>Ligustrum ovalifolium</i>	F
camellia	<i>Camellia japonica</i>	C, F
canadale gold euonymus	<i>Euonymus fortunei</i>	C, F
cannon's double azalea	<i>Rhododendron calendulaceum</i>	C, F
cannon's double azalea	<i>Rhododendron exbury</i>	C, F
cape honeysuckle	<i>Tecomaria capensis</i>	C, F
cape mallow	<i>Anisodonteia hypomandarum</i>	C, F
carissa holly	<i>Ilex cornuta</i>	C, F
Carolina jessamine	<i>Gelsemium sempervirens</i>	C, F
carror azalea	<i>Rhododendron spp. hybrids</i>	C, F
cassine holly	<i>Ilex cassine</i>	C, F
catawba album rhododendron	<i>Rhododendron catawbiense</i>	C, F
catawba rhododendron	<i>Rhododendron catawbiense</i>	C, F
charisma-monruce raphiolepis	<i>Raphiolepis indica</i>	C, F
cherry bomb barberry	<i>Berberis thunbergii</i> var. <i>atropurpurea</i> 'Cherry Bomb'	C, F
chihuahan sage	<i>Leucophyllum laevigatum</i>	C, F
China boy holly	<i>Ilex x meserveae</i>	C, F
China girl holly	<i>Ilex x meserveae</i>	C, F
Chinese fountain palm	<i>Livistona chinensis</i>	C, F
Chinese holly	<i>Ilex cornuta</i>	C, F
Chinese lilac	<i>Syringa rothomagenesis</i>	C, F
Chinese plumbago	<i>Ceratosigma willmottianum</i>	C, F
Chinese snowball viburnum	<i>Viburnum macrocephalum</i>	C, F
chioniodes rhododendron	<i>Rhododendron ponticum</i>	C, F
chirimen marlberry	<i>Ardisia japonica</i>	C, F
chollipo euonymus	<i>Euonymus japonicus</i>	C, F
Christmas palm	<i>Veitchia merrilli</i>	F
cinquefoil	<i>Potentilla fragiformis</i>	F
cinquefoil	<i>Potentilla fruticosa</i>	C, F
cinquefoil	<i>Potentilla spp.</i>	F
coast leucothoe	<i>Leucothoe axillaris</i>	C, F
common boxwood	<i>Buxus sempervirens</i>	C, F
common lilac	<i>Syringa vulgaris</i>	F
common snowball viburnum	<i>Viburnum opulus sterile</i>	F
common witch hazel	<i>Hamamelis virginiana</i>	C, F
compact inkberry holly	<i>Ilex glabra</i>	C, F
compacta-dwarf heavenly bamboo	<i>Nandina domestica</i>	C, F
compacta-dwarf Japanese holly	<i>Ilex crenata</i>	C, F
convexa holly	<i>Ilex crenata</i>	C, F
copper leaf	<i>Acalypha wilkesiana</i>	C, F
coral bark Japanese maple	<i>Acer palmatum</i>	C, F
coral beauty smoke tree	<i>Cornus sericea</i>	C, F
coral bells azalea	<i>Rhododendron kerume</i>	C, F
Coral bells azalea	<i>Rhododendron obtusum</i>	C, F
cornish heather	<i>Erica vagans</i>	C, F
coyotebush	<i>Baccharis pilularis</i>	F
cranberry cotoneaster	<i>Cotoneaster apiculatus</i>	C, F
crape myrtle	<i>Lagerstroemia indica</i>	C, F
creeping juniper	<i>Juniperus horizontalis</i>	C, F
creeping mahonia	<i>Mahonia repens</i>	C, F
crimson pygmy barberry	<i>Berberis thunbergii</i> var. <i>atropurpurea</i> 'Crimson Pygmy'	C, F

cunningham white rhododendron	<i>Rhododendron caucasicum x ponticum</i>	C, F
daphnoides rhododendron	<i>Rhododendron ponticum</i>	C, F
dark knight bluebeard	<i>Caryopteris x clandonen 'Blk night'</i>	C, F
David viburnum	<i>Viburnum davidii</i>	C, F
dolchia spiraea	<i>Spiraea japonica</i>	C, F
doublefile viburnum	<i>Viburnum plicatum var. tomentosum</i>	C, F
drooping leucothoe	<i>Leucothoe fontanesiana</i>	C, F
dusty miller	<i>Senecio cineraria</i>	F
dwarf Am. cranberrybush viburnum	<i>Viburnum trilobum 'Compactum'</i>	C, F
dwarf andorra juniper	<i>Juniperus horizontalis</i>	C, F
dwarf brush cherry	<i>Eugenia myrtifolia 'Globulus'</i>	C, F
dwarf burford holly	<i>Ilex cornuta</i>	C, F
dwarf Chinese holly	<i>Ilex crenata</i>	C, F
dwarf flowering almond	<i>Prunus glandulosa</i>	C, F
dwarf gardenia	<i>Gardenia jasminoides</i>	C, F
dwarf Japanese maple	<i>Acer palmatum</i>	C, F
dwarf ninebark	<i>Physocarpus opulifolius</i>	C, F
dwarf Oregon hollygrape mahonia	<i>Mahonia aquifolium 'Compactum'</i>	C, F
dwarf plumbago	<i>Ceratostigma plumbaginoides</i>	C, F
dwarf scarlet wonder rhododendron	<i>Rhododendron racemosum</i>	C, F
ebony magic holly	<i>Ilex x meserveae</i>	F
Edward goucher abelia	<i>Abelia x grandiflora</i>	C, F
eichholz smoke tree	<i>Cornus sericea</i>	C, F
Elizabeth rhododendron	<i>Rhododendron forrestii x griersonianum</i>	C, F
emerald arborvitae	<i>Thuja occidentalis</i>	C, F
Emerald gaiety wintercreeper	<i>Euonymus fortunei</i>	C, F
emerald green juniper	<i>Juniperus scopulorum</i>	F
emerald 'n gold euonymus	<i>Euonymus fortunei</i>	F
emerald sea shore juniper	<i>Juniperus conferta</i>	C, F
enchantress-moness raphiolepis	<i>Raphiolepis indica</i>	F
English roseaum rhododendron	<i>Rhododendron spp. hybrids</i>	F
escallonia	<i>Escallonia spp.</i>	C, F
fashion azalea	<i>Rhododendron spp. hybrids</i>	C, F
feathery cassia	<i>Cassia artemisioides</i>	C, F
filifera-thread cypress	<i>Chamaecyparis pisifera</i>	C, F
first snow spiraea	<i>Spiraea x cinerea 'Grefsheim'</i>	C, F
flame azalea	<i>Rhododendron calendulaceum</i>	F
flaviramea yellowtwig dogwood	<i>Cornus sericea</i>	F
flaviramea-dogwood	<i>Chamaecyparis pisifera</i>	F
floppy disc cinquefoil	<i>Potentilla fruticosa</i>	C, F
flowering woodbine	<i>Lonicera periclymenum</i>	C, F
foemina-hicks juniper	<i>Juniperus sabina</i>	C, F
forest flame lily-of-the-valley	<i>Pieris x 'Forest Flame'</i>	C, F
formosa azalea	<i>Rhododendron indicum</i>	C, F
fortune's osmanthus	<i>Osmanthus x fortunei</i>	C, F
foster holly	<i>Ilex x attenuata</i>	C, F
Fradesi pink princess escallonia	<i>Escallonia x exoniensis</i>	C, F

fragrant daphne	<i>Daphne odora</i>	C, F
fraser photinia	<i>Photinia x fraseri</i>	C, F
fruitland silver berry	<i>Elaeagnus pungens</i>	C, F
George Peabody arborvitae	<i>Thuja occidentalis</i>	C, F
gerard Christina azalea	<i>Rhododendron spp. hybrids</i>	F
girard Roberta azalea	<i>Rhododendron spp. hybrids</i>	C, F
Girard's crimson azalea	<i>Rhododendron spp. hybrids</i>	C, F
globosa-globe arborvitae	<i>Thuja occidentalis</i>	C, F
glossy abelia	<i>Abelia x grandiflora</i>	C, F
glossy privet	<i>Ligustrum lucidum</i>	C, F
gold coast English holly	<i>Ilex aquifolium</i>	F
gold coast juniper	<i>Juniperus chinensis 'Gold Coast'</i>	C, F
gold drop potentilla	<i>Potentilla fruticosa</i>	F
gold mound	<i>Spiraea japonica</i>	C, F
gold spot euonymus	<i>Euonymus japonicus</i>	C, F
golden flare azalea	<i>Rhododendron calendulaceum</i>	C, F
golden flare azalea	<i>Rhododendron exbury</i>	C, F
golden flare exbury azalea	<i>Rhododendron spp. hybrids</i>	F
golden Japanese barberry	<i>Berberis thunbergii 'Aurea'</i>	F
golden vicary privet	<i>Ligustrum x vicaryi</i>	F
goldfinger potentilla	<i>Potentilla fruticosa</i>	C, F
golf ball pittosporum	<i>Pittosporum tenuifolia 'Golf Ball'</i>	C, F
gomer waterer rhododendron	<i>Rhododendron forrestii repens</i>	C, F
Grace smoke tree	<i>Cotinus coggygria obovatus</i>	C, F
green beauty boxwood	<i>Buxus microphylla var. japonica 'Green Beauty'</i>	C, F
green luster holly	<i>Ilex crenata</i>	C, F
green pittosporum	<i>Pittosporum tobira</i>	C, F
green velvet boxwood	<i>Buxus x 'Green velvet'</i>	C, F
grey owl juniper	<i>Juniperus virginiana</i>	C, F
ground morningglory	<i>Convolvulus mauritanicus</i>	C, F
gumpo pink azalea	<i>Rhododendron satuski</i>	F
H. H Hume azalea	<i>Rhododendron spp. hybrids</i>	C, F
harbour dwarf-heavenly bamboo	<i>Nandina domestica</i>	C, F
hardy red oleander	<i>Nerium oleander</i>	C, F
Harry Lauder's walking stick	<i>Corylus americanus 'Contorta'</i>	C, F
heavenly bamboo (nandina)	<i>Nandina domestica</i>	C, F
helleri-heller's Japanese holly	<i>Ilex crenata</i>	C, F
helmut vogel azalea	<i>Rhododendron spp. hybrids</i>	F
Henry's garnet sweetspire	<i>Itea virginica</i>	C, F
hershey red azalea	<i>Rhododendron spp. hybrids</i>	F
hetzii's Japanese holly	<i>Ilex crenata</i>	C, F
higasa azalea	<i>Rhododendron satuski</i>	C, F
Himalayan cotoneaster	<i>Cotoneaster himalayan</i>	C, F
hino crimsom azalea	<i>Rhododendron obtusum</i>	C, F
hino crimson azalea	<i>Rhododendron kerume</i>	C, F
hino pink azalea	<i>Rhododendron kerume</i>	C, F
holandia-Scotch broom	<i>Cytisus spp.</i>	F
holandia-warminster broom	<i>Cytisus praecox</i>	C, F
holly fern	<i>Cyrtomium fortunei</i>	C, F
hollywood juniper	<i>Juniperus chinensis</i>	C, F
hopseed bush	<i>Dodonea viscosa</i>	F
hot shot azalea	<i>Rhododendron spp. hybrids</i>	C, F

Howard privet	<i>Ligustrum texanum</i>	C, F
huntington blue juniper	<i>Juniperus horizontalis</i>	C, F
Inga azalea	<i>Rhododendron spp. hybrids</i>	F
Irene Koster azalea	<i>Rhododendron spp. hybrids</i>	C, F
ixora	<i>Ixora collinea</i>	C, F
Japanese alpine spiraea	<i>Spiraea japonica</i>	C, F
Japanese aralia	<i>Fatsia japonica</i>	C, F
Japanese cleyera	<i>Cleyera japonica</i>	C, F
Japanese laurel	<i>Aucuba japonica</i> 'Goldstrike'	F
Japanese littleleaf boxwood	<i>Buxus microphylla</i> var. <i>japonica</i>	F
Japanese painted fern	<i>Athyrium nipponicum</i>	C, F
Japanese plum yew	<i>Cephalotaxus harringtonia</i> var. <i>drupacea</i>	C, F
Japanese privet	<i>Ligustrum japonicum</i>	C, F
Japanese skimmia	<i>Skimmia japonica</i>	C, F
Japanese ternstroemia	<i>Ternstroemia gymnanthera</i>	C, F
Japanese viburnum	<i>Viburnum japonicum</i>	F
Japanese yew	<i>Taxus cuspidata</i>	F
java red weigela	<i>Weigela florida</i>	C, F
Jean Marie rhododendron	<i>Rhododendron griffithianum</i>	C, F
judd viburnum	<i>Viburnum judd</i> (V. x <i>juddii</i>)	C, F
Klondike azalea	<i>Rhododendron calendulaceum</i>	C, F
Klondike azalea	<i>Rhododendron exbury</i>	C, F
Korean boxwood	<i>Buxus microphylla</i> var. <i>Koreana</i>	F
Koreanspice vibunum	<i>Viburnum carlesii</i>	C, F
kosteri cypress	<i>Chamaecyparis obtusa</i>	C, F
lalandei firethorn	<i>Pyracantha coccinea</i> 'Lalandei'	C, F
leather leaf mahonia	<i>Mahonia bealei</i>	C, F
lemon bottlebrush	<i>Callistemon citrinus</i>	F
lena-Scotch broom	<i>Cytisus scoparius</i>	C, F
lilac time broom	<i>Cytisus spp.</i>	C, F
lilac vine	<i>Hardenbergia violacea</i>	C, F
lily-of-the-valley	<i>Pieris japonica</i>	C, F
little giant-dwarf arborvitae	<i>Thuja occidentalis</i>	C, F
little John lemon bottlebrush	<i>Callistemon citrinus</i> 'Little John'	C, F
lodense common privet	<i>Ligustrum vulgare</i> 'Lodense'	C, F
lolendei monrovia pyracantha	<i>Pyracantha fortuneana</i>	C, F
Lord Roberts rhododendron	<i>Rhododendron catawbiense</i>	C, F
magic carpet spiraea	<i>Spiraea japonica</i>	C, F
Manhattan euonymus	<i>Euonymus kiatschovicus</i> 'Manhattan'	C, F
marmalade bush	<i>Streptosolen jamesonii</i>	C, F
meadowlark forsythia	<i>Forsythia ovate</i> x <i>F. europae</i>	C, F
media-old gold juniper	<i>Juniperus chinensis</i>	C, F
Mediterranean pink heather	<i>Erica x darleyensa</i>	C, F
mentor barberry	<i>Berberis mentorensis</i>	C, F
midnight flare azalea	<i>Rhododendron spp. hybrids</i>	C, F
Mildred azalea	<i>Rhododendron kerume</i>	C, F
miniature gardenia	<i>Gardenia jasminoides</i>	C, F
minima glauca-dwarf arborvitae	<i>Thuja orientalis</i>	C, F
minuet weigela	<i>Weigela florida</i>	C, F
monon pyracantha	<i>Pyracantha fortuneana</i>	F
mountain fire lily-of-the-valley	<i>Pieris japonica</i>	C, F
mountain laurel	<i>Kalmia latifolia</i>	C, F
Mrs. G.G. Gerbing azalea	<i>Rhododendron indicum</i>	C, F

mugo pine	<i>Pinus mugo</i> var. <i>mugo</i>	C, F
mystery gardenia	<i>Illicium annisatum</i>	C, F
nakiana-dwarf deutzia	<i>Deutzia crenata</i>	C, F
nana compacta-heavenly bamboo	<i>Nandina domestica</i>	C, F
nana purpurea-heavenly bamboo	<i>Nandina domestica</i>	C, F
nana-dwarf hinoki cypress	<i>Chamaecyparis obtusa</i>	C, F
nana-dwarf Japanese garden juniper	<i>Juniperus procumbens</i>	C, F
nana-dwarf yaupon holly	<i>Ilex vomitoria</i>	C, F
needlepoint holly	<i>Ilex cornuta</i>	C, F
Nellie R. Stevens holly	<i>Ilex</i> x ' <i>Nellie Stevens</i> '	C, F
neon flash spiraea	<i>Spiraea japonica</i>	C, F
nigra-dark American arborvitae	<i>Thuja occidentalis</i>	C, F
nordica-inkberry holly	<i>Ilex glabra</i>	C, F
nova zembla rhododendron	<i>Rhododendron</i> spp. <i>hybrids</i>	C, F
Nuccio's wild cherry azalea	<i>Rhododendron</i> spp. <i>hybrids</i>	C, F
oleander	<i>Nerium oleander</i>	C, F
orange flowering quince	<i>Chaenomeles japonica</i>	C, F
otto luykens English laurel	<i>Prunus laurocerasus</i> ' <i>Otto luykens</i> '	C, F
Paraguay nightshade	<i>Solanum rantonetii</i> ' <i>Royal purple</i> '	C, F
parsonii juniper	<i>Juniperus davurica</i>	C, F
parsonii juniper	<i>Juniperus squamata</i>	C, F
pendula-weeping yaupon holly	<i>Ilex vomitoria</i>	C, F
pfitzer juniper	<i>Juniperus chinensis</i>	C, F
pfitzerana glauca-blue juniper	<i>Juniperus chinensis</i>	C, F
pfitzerana-pfitzer juniper	<i>Juniperus chinensis</i>	C, F
pigmy date palm	<i>Phoenix roebelenii</i>	C, F
pink breath of heaven	<i>Colanema pulchrum</i>	C, F
pink dawn viburnum	<i>Viburnum bodnantense</i>	C, F
pink pixie	<i>Bougainvillea</i> spp.	C, F
PJM rhododendron	<i>Rhododendron carolinianum</i> x <i>dauricum</i>	C, F
plumbago	<i>Plumbago capensis</i>	C, F
plumosa-andorra juniper	<i>Juniperus horizontalis</i>	C, F
praecox-early cotoneaster	<i>Cotoneaster adpressus</i>	C, F
Prague viburnum	<i>Viburnum</i> x <i>pragense</i>	C, F
President Clay azalea	<i>Rhododendron</i> spp. <i>hybrids</i>	C, F
pride of Mobile azalea	<i>Rhododendron indicum</i>	C, F
princes flower	<i>Tibouchina urvilleana</i>	C, F
prostrata juniper	<i>Juniperus prostrata</i>	C, F
prostrate acacia	<i>Acacia redolens</i>	C, F
purple bell heather	<i>Erica cinerea</i>	C, F
purple fountain grass	<i>Pennisetum setaceum</i> ' <i>Rubrum</i> '	C, F
purple queen bougainvillea	<i>Bougainvillea</i> ' <i>Purple Queen</i> '	C, F
putah creek	<i>Myoporum parvifolium</i>	C, F
pyramidalis arborvitae	<i>Thuja occidentalis</i>	C, F
Pyrenees cotoneaster	<i>Cotoneaster congestus</i>	C, F
radican gardenia	<i>Gardenia jasminoides</i>	C, F
ramanas rose	<i>Rosa rugosa</i>	C, F
ramapo rhododendron	<i>Rhododendron sassthigiatim</i> x <i>carolinianum</i>	C, F

razzleberri fringe flower	<i>Loropetalum chinense</i> var. <i>rubrum</i> 'Razzlebern'	C, F
red ace potentilla	<i>Potentilla fruticosa</i>	C, F
red bird rose of sharon	<i>Hibiscus syriacus</i>	C, F
red elf hybrid pyracantha	<i>Pyracantha fortuneana</i>	F
red groundcover rose	<i>Rosa</i> x 'Flower carpet'	C, F
red heart rose of sharon	<i>Hibiscus syriacus</i>	F
red riding hood mandevilla	<i>Mandevilla splendens</i> 'Red Riding Hood'	C, F
Red ruffle azalea	<i>Rhododendron simsii</i>	C, F
redleaf Japanese barberry	<i>Berberis thunbergii</i> var. <i>atropurpurea</i>	F
red-veined enkianthus	<i>Enkianthus companulatus</i>	C, F
reeve's skimmia	<i>Skimmia revesiana</i>	C, F
reijn azalea	<i>Rhododendron satsumi</i>	C, F
raphiolepis (India hawthorn)	<i>Raphiolepis indica</i>	C, F
rheingold arborvitae	<i>Thuja occidentalis</i>	C, F
rhodie max (rosebay)	<i>Rhododendron maximum</i>	C, F
rhododendron	<i>Rhododendron impeditum</i>	C, F
rhododendron	<i>Rhododendron mucronulatum</i>	F
rock cotoneaster	<i>Cotoneaster horizontalis</i>	C, F
rocket rhododendron	<i>Rhododendron catawbiense</i>	C, F
rose daphne	<i>Daphne cneorum</i>	C, F
rose glow red barberry	<i>Berberis thunbergii</i> var. <i>atropurpurea</i> 'Rose Glow'	C, F
rosemary	<i>Rosmarinus officinalis</i>	F
rosenka bougainvillea	<i>Bougainvillea</i> 'Rosenka'	C, F
ross estey-hibiscus	<i>Hibiscus rosa-sinensis</i>	C, F
roundleaf raphiolepis	<i>Raphiolepis ovata</i>	C, F
royal purple smoke tree	<i>Cotinus coggygria</i>	C, F
ruby lace oleander	<i>Nerium oleander</i>	C, F
rutgers hybrid pyracantha	<i>Pyracantha fortuneana</i>	C, F
sago palm	<i>Cycas revoluta</i>	C, F
salal/lemon leaf	<i>Gaultheria shallon</i>	C, F
San Jose holly	<i>Ilex</i> x <i>aquipernyi</i>	C, F
Santa Claus fuchsia	<i>Fuchsia</i> x "Santa Claus"	C, F
Santa Cruz pyracantha	<i>Pyracantha fortuneana</i>	C, F
Saskatoon serviceberry	<i>Amelanchier alnifolia</i>	C, F
Savannah holly	<i>Ilex</i> x <i>attenuata</i>	C, F
savin juniper	<i>Juniperus sabina</i>	C, F
sawara-false cypress	<i>Chamaecyparis pisifera</i>	F
scarlet o'hara	<i>Bougainvillea</i> spp.	C, F
scintillation rhododendron	<i>Rhododendron</i> spp. <i>hybrids</i>	C, F
sea green juniper	<i>Juniperus chinensis</i>	F
senna	<i>Cassia, eremophila</i>	F
serotina woodbine	<i>Lonicera periclymenum</i>	C, F
Shiny xylosma	<i>Xylosma senticosa</i>	F
shirobana spiraea	<i>Spiraea japonica</i>	C, F
shoestring acacia	<i>Acacia stenophylla</i>	C, F
shore juniper	<i>Juniperus conferta</i>	C, F
sibirica-Siberian dogwood	<i>Cornus alba</i>	C, F
silver king euonymus	<i>Euonymus japonicus</i>	F
silver princess euonymus	<i>Euonymus japonicus</i>	C, F
sizzling pink fringe flower	<i>Lorpetalum chinense</i>	C, F
Sky pencil	<i>Ilex crenata</i>	C, F

slender gracilis	<i>Deutzia gracilis</i>	C, F
snow azalea	<i>Rhododendron kerume</i>	C, F
Snow Indian hawthorne	<i>Raphiolepis indica</i>	C, F
snowdrift lily-of-the-valley	<i>Pieris japonica</i>	C, F
snow-in-summer	<i>Cerastium tomentosum</i>	C, F
Snowmound Nippon spirea	<i>Spiraea nipponica</i>	C, F
southern waxmyrtle	<i>Myrica cerifera</i>	C, F
spreading euonymus	<i>Euonymus kiatschovicus</i>	C, F
spring bouquet viburnum	<i>Viburnum tinus 'Compactum'</i>	C, F
spring cinquefoil	<i>Potentilla verna</i>	C, F
spring glory forsythia	<i>Forsythia x 'Spring glory'</i>	C, F
spring torch Scotch heather	<i>Calluna vulgaris</i>	C, F
springfire lehua	<i>Metrosideros collina</i>	C, F
springtime-Monme raphiolepis	<i>Raphiolepis indica</i>	F
squarrosa minima cypress	<i>Chamaecyparis pisifera</i>	C, F
staghorn sumac	<i>Rhus typhina</i>	C, F
steeds Japanese holly	<i>Ilex crenata 'Steeds'</i>	C, F
stokesii Japanese holly compacta-	<i>Ilex glabra</i>	C, F
strawberry guava	<i>Psidium cattleianum</i>	C, F
summersweet	<i>Clethra alnifolia</i>	C, F
sunrise variegated abelia	<i>Abelia x grandiflora</i>	C, F
sunset potentilla	<i>Potentilla fruticosa</i>	C, F
sunspot euonymus	<i>Euonymus fortunei</i>	C, F
sweet olive osmanthus	<i>Osmathus fragrans</i>	C, F
sweet pea shrub	<i>Polygala fruticosa</i>	C, F
tamariscifolia-tam juniper	<i>Juniperus sabina</i>	C, F
tangerine potentilla	<i>Potentilla fruticosa</i>	C, F
tassel fern	<i>Polystichum polyblepharum</i>	C, F
tea viburnum	<i>Viburnum setigerum</i>	F
techny arborvitae	<i>Thuja occidentalis</i>	F
teenie genie brushcherry	<i>Eugenia myritifolia</i>	C, F
temple bells lily-of-the-valley	<i>Pieris japonica</i>	C, F
temple fire	<i>Bougainvillea spp.</i>	C, F
Texas dawn	<i>Bougainvillea spp.</i>	C, F
Texas sage	<i>Leucophyllum frutescens</i>	C, F
Thunderbird evergreen huckleberry	<i>Vaccinium ovatum</i>	C, F
torulosa cypress	<i>Chamaecyparis obtusa</i>	C, F
torulosa-hollywood juniper	<i>Juniperus chinensis</i>	C, F
traditional azalea	<i>Rhododendron spp. hybrids</i>	C, F
trailing indigo bush	<i>Dalea greggii</i>	C, F
tribly rhododendron	<i>Rhododendron racemosum</i>	C, F
trumpet honeysuckle	<i>Lonicera sempervirens</i>	C, F
unique rhododendron	<i>Rhododendron racemosum</i>	C, F
valley rose lily-of-the-valley	<i>Pieris japonica</i>	C, F
valley valentine lily-of-the-valley	<i>Pieris japonica</i>	C, F
vanhoutte spirea	<i>Spiraea x vanhouttei</i>	C, F
variegata	<i>Weigela florida</i>	C, F
variegated evergreen euonymus	<i>Euonymus japonicus</i>	C, F
victory pyracantha	<i>Pyracantha fortuneana</i>	F
vulcan rhododendron	<i>Rhododendron racemosum</i>	C, F

waucabusa azalea	<i>Rhododendron indicum</i>	C, F
wax leaf privet	<i>Ligustrum texanum</i>	C, F
wax privet	<i>Ligustrum japonicum</i>	C, F
wayfaringtree viburnum	<i>Viburnum lantana</i>	F
weeping bottlebrush	<i>Callistemon viminalis</i>	C, F
wheeler's dwarf pittosporum	<i>Pittosporum tobira</i>	C, F
white mugwort	<i>Artemisia lactiflora</i>	C, F
wichita blue juniper	<i>Juniperus scopulorum</i>	C, F
wild lilac	<i>Ceanothus</i> spp.	F
William Penn barberry	<i>Berberis x gladwynensis</i>	C, F
wiltonii-blue carpet juniper	<i>Juniperus horizontalis</i>	C, F
winter honeysuckle	<i>Lonicera fragrantissima</i>	C, F
wintergreen	<i>Gaultheria procumbens</i>	C, F
woadwaxen	<i>Genista pilosa</i>	C, F
woodbridge rose of sharon	<i>Hibiscus syriacus</i>	C, F
woods dwarf-heavenly bamboo	<i>Nandina domestica</i>	C, F
woodwardii arborvitae	<i>Thuja occidentalis</i>	C, F
xylosma	<i>Xylosma congestum</i>	F
yaupon holly	<i>Ilex vomitoria</i>	C, F
yellow oleander	<i>Thevetia nerifolia</i>	C, F
yellow tip privet	<i>Ligustrum japonicum</i>	C, F
yewpine	<i>Podocarpus macrophyllus</i>	C, F
Yoshino cherry	<i>Prunus x yedoensis</i>	C, F

¹C=container grown, F=field grown

Groundcovers/Perennials

Common Name	Scientific Name	Treatment Method ¹
	<i>Asparagus retrofractus</i>	C, F
	<i>Asparagus</i> var. 'Meegers'	C, F
absynnian banana	<i>Ensete ventricosum</i>	C, F
African iris	<i>Moraea iridioides</i>	C, F
albo-marginata hosta	<i>Hosta lancifolia</i>	C, F
Algerian ivy	<i>Hedera canariensis</i>	F
angelita daisy	<i>Hymenoxys acaulis</i>	C, F
angelwing jasmine	<i>Jasminum nitidum</i>	C, F
apple blossom penstemon	<i>Penstemon</i> x 'Apple blossom'	C, F
Asian jasmine	<i>Trachelospermum asiaticum</i>	C, F
autumn fern	<i>Dryopteris erythrosora</i>	C, F
autumn joy stonecrop	<i>Sedum</i> x 'Autumn joy'	C, F
avens	<i>Geum</i> spp	C, F
baby's breath	<i>Gypsophila paniculata</i>	C, F
ballerina cranesbill	<i>Geranium cinerium</i> "Ballerina"	C, F
beechgrass	<i>Ammophila breviligulata</i>	C, F
big blue lily turf	<i>Liriope muscari</i>	C, F
bigleaf periwinkle	<i>Vinca major</i>	C, F
black eyed magenta cranesbill	<i>Geranium subcaulescens</i>	C, F
black prince hens & chicks	<i>Echeveria</i> x black prince	C, F
blackeyed susan	<i>Rudbeckia fulgida</i>	C, F
blanket flower	<i>Gaillardia</i> x grandiflora	C, F
bloody cranesbill	<i>Geranium sanguineum</i> 'Bloody cran'	C, F
blue dawn morning glory	<i>Ipomea acuminata</i> 'Blue dawn'	C, F
blue daze	<i>Evolvulus nuttallianus</i>	C, F
blue dracaena	<i>Cordyline indicia</i>	C, F

blue fescue	<i>Festuca ovina glauca</i>	C, F
blue glow agave	<i>Agave attenuate x Agave ocahui</i>	C, F
bressingham coral bells	<i>Heuchera x 'Bressingham'</i>	C, F
Brilliancy sunset orchid rockrose	<i>Cistus purpureus</i>	C, F
broom teatree/manuka	<i>Leptospermum scoparium</i>	C, F
butcher's broom (Israeli ruscus)	<i>Ruscus hypophyllum</i>	C, F
butterfly argyranthemum	<i>Argyranthemum frutescens "Butterfly"</i>	C, F
cape weed	<i>Arctotheca calendula</i>	F
cast iron plant	<i>Aspidistra elatior</i>	C, F
century plant, American aloe	<i>Agave americana</i>	F
chameleon houttuynia	<i>Houttuynia cordata 'Chameleon'</i>	C, F
China aster	<i>Callistepheus chinensis</i>	C, F
chrimson fountaingrass	<i>Pennisetum setaceum</i>	C, F
Christmas fern	<i>Polystichum acrostichoides</i>	C, F
chrysanthemum species	<i>Chrysanthemum spp.</i>	C, F
cinnamon fern	<i>Osmunda cinnamomea</i>	C, F
columbine	<i>Aquilegia x 'Dragon fly'</i>	C, F
common heliotrope	<i>Heliotropium fragrans</i>	C, F
common yarrow	<i>Achillea millefolium</i>	C, F
Coppertone stonecrop	<i>Sedum nussbaumerianum</i>	C, F
coral bells	<i>Heuchera micrantha</i>	C, F
cottage pink	<i>Dianthus plumaris</i>	C, F
cow horn agave	<i>Agave bovicornuta</i>	C, F
crimson treasure cheddar pink	<i>Dianthus gratianopolitanus 'Treasure'</i>	C, F
crosby compact jade	<i>Crasulla argentea compacta</i>	C, F
darkest of all fleabane	<i>Erigeron speciosum 'Darkest of all'</i>	C, F
daylily	<i>Hemerocallis spp.</i>	C, F
deranosa hens & chicks	<i>Echeveria deranosa</i>	C, F
descampsia	<i>Descampsia caespitosa</i>	C, F
diamond marguerite	<i>Dymondia margaritae</i>	C, F
dixie wood fern	<i>Dryopteris x australis</i>	C, F
dotted loosestrife	<i>Lysimachia punctata</i>	C, F
dwarf bamboo	<i>Sasa pygmaea</i>	C, F
dwarf dahlia	<i>Dahlia hybrid Dwarf</i>	C, F
dwarf dahlia wendy pink	<i>Dahlia x 'Royal Dahlietta pink'</i>	C, F
dwarf euryops	<i>Euryops pectinatus 'Munchkin'</i>	C, F
dwarf horsetail	<i>Equisetum scirpoides</i>	C, F
dwarf mondo grass	<i>Ophiopogon japonicus</i>	C, F
dwarf periwinkle	<i>Vinca minor</i>	F
dwarf umbrella grass	<i>Cyperus albostriatus</i>	C, F
Echeveria 'perle von Nurnberg'	<i>Echeveria gibbiflora x E. elegans</i>	C, F
English ivy	<i>Hedera helix</i>	C, F
eulalia grass	<i>Miscanthus sinensis</i>	C, F
false or Mexican heather	<i>Cuphea hyssopifolia</i>	C, F
firewitch cheddar pink	<i>Dianthus gratianopolitanus 'Firewitch'</i>	C, F
flamenco red hot poker	<i>Kniphofia uvaria 'Flamenco'</i>	C, F
floristan violet gay feather	<i>Liatris spicata 'Floristan Violet'</i>	C, F
fortnight lily	<i>Dietes vegeta</i>	C, F
fountain grass	<i>Pennisetum alopecuroides</i>	C, F
francee plantain lily	<i>Hosta 'Francee'</i>	C, F
frosty curls sedge	<i>Carex albula</i>	C, F

garden petunias	<i>Petunia-hybrids</i>	C, F
gazania	<i>Gazania</i> spp.	C, F
gazania, trailing	<i>Gazania rigens leucolaena</i>	C, F
geum	<i>Geum quellyon</i>	C, F
giant lily turf	<i>Liriope gigantea</i>	C, F
goblin blanket flower	<i>Gaillardia x grandiflora 'Goblin'</i>	F
golden barrel cactus	<i>Echinocactus grusonii</i>	C, F
golden hakonechloa	<i>Hakonechloa macroaureola</i>	C, F
graham's sage	<i>Salvia grahamii</i>	C, F
green sheen Japanese spurge	<i>Pachysandra terminalis 'Green sheen'</i>	C, F
green/creeping lily turf	<i>Liriope spicata</i>	C, F
gypsum century plant	<i>Agave gypsophila</i>	C, F
hardy ice plant	<i>Delosperma nubigenum</i>	C, F
hardy pampasgrass	<i>Erianthus ravennae</i>	C, F
heartleaf bergenia	<i>Bergenia cordifolia</i>	C, F
ice plant	<i>Delosperma cooperi</i>	C, F
iceplant	<i>Drosantheumum hispidum</i>	C, F
iris	<i>Iris siberica</i>	C, F
ivy geranium	<i>Pelargonium peltatum</i>	C, F
Jack Spratt New Zealand flax	<i>Phormium tenax 'Jack Spratt'</i>	C, F
Japanese aralia	<i>Fatsyhedra japonica</i>	C, F
Japanese blood grass	<i>Imperata cylindrical 'Rubra'</i>	C, F
Japanese honeysuckle	<i>Lonicera japonica</i>	F
Japanese spurge	<i>Pachysandra terminalis</i>	C, F
kafir lily	<i>Clivia miniata 'French hybrid'</i>	C, F
Kleinia talinoides	<i>Senecio kleinia</i>	C, F
largeleaf ice plant	<i>Carpobrotus edulis</i>	F
lilac beauty lily turf	<i>Liriope muscari</i>	C, F
lilly of the nile	<i>Agapanthus africanus</i>	C, F
lily of the nile	<i>Agapanthus 'Peter pan'</i>	C, F
lipstick impatiens	<i>Impatiens walleryana 'Lipstick'</i>	C, F
little bluestem	<i>Schizachyrium scoparium</i>	C, F
little hero marigold	<i>Tagetes patula 'Little Hero'</i>	C, F
Madagascar periwinkle	<i>Catharanthus roseus</i>	C, F
maiden grass	<i>Miscanthus sinensis 'Gracillimus'</i>	C, F
majestic lily turf	<i>Liriope muscari</i>	C, F
marginal wood fern	<i>Dryopteris marginalis</i>	C, F
Mexican hat	<i>Ratbida columnifera</i>	C, F
Mexican hens & chicks	<i>Echeveria nodulosa</i>	C, F
mondo grass	<i>Ophiopogon japonicus</i>	C, F
moneywort	<i>Lysimachia mummularia</i>	C, F
monroe white lily turf	<i>Liriope muscari</i>	C, F
moonbeam coreopsis	<i>Coreopsis verticillata 'Moonbeam'</i>	C, F
moonshine-fern/leaf yarrow	<i>Achillea filipendulina</i>	C, F
moss pink	<i>Phlox subulata</i>	C, F
nanum ruru pink leptospermum	<i>Leptospermum chinensis</i>	C, F
narrow leafed plantain lily	<i>Hosta lancifolia</i>	C
New England aster	<i>Aster novae-angliae</i>	C, F
New York aster	<i>Aster novi-belgii</i>	C, F
northern sea oats	<i>Chasmanthium latifloium</i>	C, F
oregano	<i>Origanum libanoticum</i>	C, F
ostrich fern	<i>Matteuccia struthiopteris</i>	C, F
ozark sundrops	<i>Oenothera missouriensis</i>	C, F

Pachyveria	<i>Pachyveria haagii</i>	C, F
pampas grass	<i>Cortaderia selloana</i>	C, F
paprika yarrow	<i>Achillea millefolium</i> 'Paprika'	C, F
patriot plantain lily	<i>Hosta x 'Patriot'</i>	C, F
periwinkle	<i>Vinca</i> spp.	F
Persian rose dwarf aster	<i>Aster novi-belgii</i> 'Persian rose'	C, F
Peter's gold bidens	<i>Bidens ferulifolia</i> 'Peters gold'	C, F
pink jasmine	<i>Jasminum polyanthum</i>	C, F
pink lisianthus	<i>Eustoma grandiflorum</i> 'Pink'	C, F
plantain lily	<i>Hosta fortunei</i>	C, F
platinum sage	<i>Salvia daghestanica</i>	C, F
pony tail fern	<i>Asparagus densiflorus</i> 'Myers'	C, F
queen anne lily of the Nile	<i>Agapanthus africanus</i>	C, F
red apple aptenia	<i>Aptenia cordifolia</i>	C, F
red edge echeveria	<i>Echeveria subrigida</i>	C, F
red yucca	<i>Hesperaloe parvifolia</i>	C, F
ribbon grass	<i>Phalaris arundinacea picta</i>	C, F
royal fern	<i>Osmunda regalis</i>	C, F
Royal standard hosta	<i>Hosta plantaginea x H. sieboldiana</i>	C, F
Russian sage	<i>Perovskia atriplicifolia</i>	C, F
sea lavender	<i>Limonium latifolium</i>	C, F
sensitive fern	<i>Onoclea sensibilis</i>	C, F
shasta daisy	<i>Chrysanthemum maximum</i>	C, F
silver dragon lily turf	<i>Liriope spicata</i>	C, F
silvery sunproof lily turf	<i>Liriope muscari</i>	C, F
siskiyou evening primrose	<i>Oenothera speciosa</i> "Siskiyou pink"	C, F
skull cap	<i>Scutellaria resinosa</i>	C, F
society garlic	<i>Tulbaghia violacea</i>	C, F
southern shield wood fern	<i>Dryopteris ludoviciana</i>	C, F
St. Johnswort	<i>Hypericum</i> spp.	C,,F
star clusters	<i>Pentas lanceolata</i>	C, F
statice	<i>Limonium perezii</i>	C, F
stock	<i>Matthiola incana</i> 'Harmony'	C, F
swan river daisy new amethyst	<i>Brachycome x 'New amethyst'</i>	C, F
tassel fern	<i>Polystichum polyblepharum</i>	C, F
Tentacles agave	<i>Agave vilmoriniana</i>	C, F
threadleaf coreopsis	<i>Coreopsis verticillata</i>	C, F
Tiscalatengo gorge sedum	<i>Sedum clavatum</i>	C, F
trailing African daisy	<i>Osteospermum fruticosum</i>	F
trailing iceplant	<i>Lampranthus spectabilis</i>	F
trailing rosea iceplant	<i>Drosanthemum floribundum</i>	F
tree fern	<i>Asparagus varieegata</i>	C, F
variegated carex	<i>Carex</i> spp.	C, F
variegated liriope lily turf	<i>Liriope muscari</i>	C, F
veined verbena	<i>Verbena rigida</i>	C, F
Vera Jameson stonecrop	<i>Sedum x 'Vera Jameson'</i>	C, F
Virginia creeper	<i>Parthenocissus quinquefolia</i>	C, F
white ambassador begonia	<i>Begonia sepmerflorens</i> 'Amb white'	C, F
white iceplant	<i>Delosperma alba</i>	F
white licorice helichrysum	<i>Helichrysum petiolare</i> 'White licorice'	C, F
white lily turf	<i>Liriope gigantea</i>	C, F
wooly yarrow	<i>Achillea tomentosa</i>	C, F
yarow	<i>Achillea</i> spp.	C, F

yellow dwarf bearded iris	<i>Iris pumila</i> 'Yellow'	C, F
zonal geranium	<i>Pelargonium x hortorum</i>	C, F

¹C=container grown, F=field grown

Field-Grown Non-Bearing Trees and Vines¹

Common Name

almond	grape, European
apple	grapefruit
apricot	kiwi
avocado	lemon
blackberry	loganberry
black walnut	macadamia nut
blueberry	nectarine
boysenberry	olive
cherry, sour	orange
cherry, sweet	peach
currant	pear
dewberry	pecan
elderberry	pistachio
English walnut	plum
fig	pomegranate
filbert	prune
gooseberry	raspberry
grape, American	

¹Apply only to listed field grown crops. Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants that will not bear fruit for at least one year after treatment.

Ornamental Bulbs

This product may be applied for control of susceptible annual weeds in ornamental bulbs such as bulbous iris, daffodil (narcissus), gladiolus, hyacinth, lilies, and tulip except as noted below. Apply this product to the soil surface 2 to 4 weeks after planting but prior to the emergence of annual weeds. This product may also be applied following bulb emergence but prior to bud set, or after flowering. For fall planted bulbs, apply this product in late winter or early spring to weed-free soil surfaces. For bulbs, make a single application within 30 days following planting and prior to bulb emergence.

Specific Use Restrictions:

- **DO NOT** use this product for weed control in ornamental bulbs grown for commercial bulb production.
- **DO NOT** apply to:
 - Tulip plants that have emerged to a height greater than 3/4 inch.
 - Gladiolus prior to emergence or if corms are less than one inch in diameter.
 - Bulbs while they are flowering.
- **DO NOT** exceed the 15 oz per acre of this product (0.5 lb. ai).
- **DO NOT** exceed 3 applications per year or a maximum yearly of 45 oz/A (1.5 lb ai/A).

Shadehouse Areas

This product may be applied in open shadehouse-type structures where the natural flow of air is unimpeded.

Specific Use Restrictions:

- **DO NOT** apply in enclosed greenhouses or in enclosed shadehouse-type structures.

- **DO NOT** apply within three weeks prior to enclosing greenhouses or poly-type structures.

Christmas Tree and Conifer Plantations

Alone

Apply this product as a directed spray to the soil surface or as an over the top spray to established plantings of field grown Christmas tree and conifer species listed in this label. Follow all instructions provided in the Product Information section of this label.

Specific Use Restrictions:

- **DO NOT** apply more than 30 fl oz/acre (1 lb AI/A) of this product in a single application.
- **DO NOT** repeat applications sooner than 60 days after a previous application of this product.
- **DO NOT** apply more than a total of 120 fl oz/A (4 lbs AI/A) of this product per acre within a 12-month period.

Precautions:

- Injury may be incurred if this product is applied in the following manner.
- For optimum plant tolerance, apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

Tank Mix

Tank mix combinations of this product plus other labeled herbicides may be used in established Christmas tree plantings. When applied according to use directions, these tank mixes will provide control of susceptible weed species listed on the respective product labels. Refer to tank mix product labels for specific use directions, precautions and limitations before use. Refer to tank mix instructions for this product in the Mixing Directions section. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product plus glyphosate formulations registered for this use site: Apply tank mix combinations of this product plus glyphosate as directed soil sprays only in Christmas tree plantings. When applied as directed, this product plus glyphosate will provide postemergence control of susceptible weed species listed on the label for glyphosate and residual preemergence control of susceptible weed species listed on the label for this product. Refer to the label for glyphosate for specific use directions, precautions and limitations before use. Refer to tank mix instructions for this product in the Mixing Directions section.

Specific Use Precautions for glyphosate tank mixes:

- Extreme care must be exercised to prevent contact of sprays containing glyphosate with foliage or stems of Christmas trees or other desirable plants or severe plant damage or death may result.
- Sprays containing glyphosate over the top of Christmas tree plantings should not be applied.

Non-Cropland Areas

Use this product as a preemergence herbicide for control of listed broadleaf weeds in non-cropland including airports, communication transmission lines, dry barrow ditches, dry non-irrigation ditchbanks, and dry storm water retention areas, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, military sites, mining and drilling areas, oil and gas pads, parking lots, petroleum tank farms, oil and gas pipelines, railroads, roadsides, storage areas, substations, vacant lots and other non-crop residential areas where maintenance of bare ground is

desired.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites only when dry. Note: Consult with local water control authorities before applying this product around public water. Permits may be required

Apply this product anytime prior to germination of target weeds. Areas to be treated should be free of established weeds or existing weeds should be controlled with postemergence herbicides.

Refer to the Product Information section prior to using this product on non-cropland areas.

Specific Use Restrictions:

- **DO NOT** apply directly to water.

Tank Mixing

This product is compatible and can be tank mixed with other herbicides registered for use on non-cropland areas such as Dithiopyr, glyphosate and aminopyralid. Applied as directed, tank mixes containing this product will provide control of susceptible weed species listed on the respective labels. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Refer to tank mix instructions for this product in the Mixing Directions section.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in original container. **DO NOT** store in direct sunlight. **DO NOT** store at temperatures above 120°F. In case of leak or spill, contain material and dispose as waste.

PESTICIDE DISPOSAL: Wastes resulting from use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable rigid containers 5 gal or less:

CONTAINER HANDLING: Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable rigid containers larger than 5 gal:

CONTAINER HANDLING: Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container.

Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then

offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable rigid containers larger than 5 gal:

CONTAINER HANDLING: Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and 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.

WARRANTY STATEMENT

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Control Solutions, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Control Solutions, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, Control Solutions, Inc. 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, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Control Solutions, Inc., and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CONTROL SOLUTIONS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, IT IS **CONTROL SOLUTIONS INC., AND SELLERS INTENTION THAT** in no event shall Control Solutions or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF CONTROL SOLUTIONS, INC., AND 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 CONTROL SOLUTIONS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

To the extent consistent with applicable law, Control Solutions, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and

Liability, which may not be modified except by written agreement signed by a duly authorized representative of Control Solutions, Inc.

Optional Marketing Claims and/or Logos:

