

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 24, 2022

Lisa Adamson Regulatory Manager Control Solutions, Inc. 5903 Genoa-Red Bluff Pasadena, TX 77507-1041

Subject: Registration Review Label Mitigation for Trifluralin Product Name: Trifluralin 5G EPA Registration Number: 53883-240 Application Date: 3/25/2020 Decision Number: 561056

Dear Lisa Adamson:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Trifluralin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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 the Federal Insecticide Fungicide and Rodenticide Act 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) list 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.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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If you have any questions about this letter, please contact Quinn Gavin by phone at 202-566-2284, or via email at <u>gavin.quinn@epa.gov</u>.

Sincerely,

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Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

# ACCEPTED

Mar 24, 2022

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 50000, 040

<sup>(eg. No.</sup> 53883-240

# Trifluralin GROUP 3 HERBICIDE

# **Trifluralin 5G**

# A selective preemergence herbicide for control of certain annual grasses and broadleaf weeds in:

- Container Grown Ornamentals 
   Ornamental Bulbs
- Landscape Ornamentals
- Nursery Stock
- Ground Covers
- Established Flowers
- Non- bearing Vineyards
- Christmas Tree Plantations

Non-bearing Fruit and Nut Trees and

- Non-cropland
- Under Paved Surfaces

# **Active Ingredient:**

Trifluralin: a,a, a-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine	5.0%
Inert Ingredients:	<u>95.0%</u>
Total	

Contains 2 pounds active ingredient per 40 pound bag.

# Keep Out of Reach of Children CAUTION PRECAUCION

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.)

# **Precautionary Statements**

# Hazards to Humans and Domestic Animals

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear long-sleeved shirt and long pants, socks and shoes. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

First Aid		
lf in eyes:	Flush eyes with plenty of water. 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 physician if irritation persists.	
If swallowed:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.	
lf on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.	
lf inhaled:	Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Safety Call® (866) 897-8050 for emergency medical treatment information		

# **Personal Protective Equipment (PPE)**

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves, such as butyl rubber > 11 mils; or natural rubber > 14 mils; or neoprene rubber > 14 mils; or nitrile rubber > 14 mils.
- Shoes plus socks

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

# **Engineering Controls**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

# User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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**

NON-TARGET ORANISM ADVISORY STATEMENT: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

This pesticide is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply in a manner that will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters.

# **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 over long-sleeved shirt and long pants, socks and chemical-resistant footwear and waterproof gloves.

# **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.

Do not enter or allow others to enter the treated area until dusts have settled. It soil incorporation is required after the application, do not enter or allow others to enter the treated area (except those persons involved in the incorporation) until the incorporation is complete. If the incorporation is accomplished by watering-in, do not enter or allow others to enter the treated area until the surface is dry after the watering-in.

# **Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. Keep in an area that is inaccessible to children and pets.

In case of leak or spill, contain material and dispose as waste.

**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: If empty:** Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Do not rinse unless required for recycling. If recycling is not available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**If partly filled:** Call your local solid waste agency for disposal instructions. Never pour unused product down any indoor or outdoor drain.

# **General Information**

Trifluralin 5G herbicide is a preemergence herbicide for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established flowers, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, Christmas tree plantations, noncropland, and under paved surfaces. Apply Trifluralin 5G before or after planting but prior to germination of target weeds, or immediately after cultivation. Length of weed control will vary with weed population, potting media or soil conditions, temperature, watering regime, and other factors. Following application, user should monitor and observe level of weed control over time to determine when additional applications may be needed. Repeat applications should not be made sooner than 60 days after a previous application of Trifluralin 5G. Do not apply over 240 pounds per acre total of Trifluralin 5G within a 12-month period.

This product must be soil-incorporated within 24 hours of application either by mechanical incorporation or at least 0.5 acre inch of water (rainfall, irrigation). If a second incorporation is needed it should be delayed 3 to 5 days after the first incorporation and be completed prior to planting.

## **Use Precautions**

Trifluralin 5G does not control established weeds. Existing weeds should be controlled by cultivation or with postemergence herbicides. Weed residues, prunings and trash should be removed or thoroughly mixed into soil prior to treatment. Soil should be in good condition and free of clods at the time of application. A single rainfall or sprinkler irrigation of 0.5 inches or more, or flood irrigation, is required to activate Trifluralin 5G. Optimum weed control is obtained when Trifluralin 5G is activated within 3 days of application. If rainfall or irrigation has not occurred within 3 days of application and tillage is possible, Trifluralin 5G may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil. Failure to activate Trifluralin 5G within 3 days of application may result in erratic weed control. Do not apply when wind conditions favor drift of Trifluralin 5G granules from the target area.

Optimum weed control will be obtained when followed by overhead irrigation or rainfall within a few hours after surface application.

#### Do not aerially apply this product.

#### Weed Resistance Management

For resistance management, Trifluralin 5G is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to Weed Preventer and other Group 3 herbicides. The resistant biotypes may dominate the weed population if 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 Quali-Pro T/I 2.5 G or other Group 3/Dinitroaniline and Group 21/Benzamide herbicides within
  a growing season sequence or among growing seasons with different herbicide groups that control the same
  weeds in a field.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide used 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.
- Report any incidence of non-performance of this product against a particular weed species to Control Solutions, Inc., your local retailer or your local extension specialist. If resistance is suspected, treat weed escapes with a herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

#### **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 resistant weeds. Scouting after herbicide application is important because it can 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 weed 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 reducing the spread of resistant weed seed.

## Weeds Controlled

The following list of weeds and grasses will be controlled when Trifluralin 5G is applied at 80 lb/acre (1.8 lb/1000 sq ft).

#### Annual Grasses

#### Common Name

barley, hare barnyardgrass (watergrass) bluegrass, annual brome cheat crabgrass cupgrass, southwestern fescue, rattail foxtail goosegrass junglerice lovegrass oat. wild panicum, fall sandbur, field signalgrass

secallnus Digitaria spp. Eriochloa gracilis Vulpia myuros Setaria spp. Eleusine indica Echinochloa colonum Eragrostis spp. Avena fatua Panicum dichotomiflorum Cenchrus incertus Brachiaria spp.

#### Scientific Name

Hordeum leporinum Echinochloa crus-galli Poa annua Bromus spp. Bromus

Optional Mark Lang 01/23/12

sprangletop, Mexican stinkgrass witchgrass Leptochloa univervia Eragrostis cilianensis Panicum capillare

#### **Annual Broadleaf Weeds**

#### Common Name

#### Scientific Name

chickweed, common goosefoot, nettleleaf knotweed, prostrate kochia lambsquarters, common nettle, stinging pigweed purslane, common thistle, Russian Sttellana media Chenopodium murale Polygonum aviculare Kochia scoparia Chenopodium album Urtica dioica Amaranthus spp. Portulaca oleracea Salsola iberica

The following weeds will be partially controlled or suppressed at 80 lb/acre (1.8 lb/1000 sq ft).

#### <u>Scientific Name</u> Mollugo verticillata Sorghum halepense Panicum texanum Richardia scabra Sorghum bicolor

#### Common Name

carpetweed johnsongrass (from seed) panicum, Texas pusley, Florida shattercane

# Application Instructions

Apply Trifluralin 5G using a drop or rotary-type spreader designed to apply granular herbicides or insecticides. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or plant injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first.

#### **Application Techniques**

1. When using a drop-type spreader, a splash board mounted under the hopper will provide more even granule distribution.

2. A chain fastened to the side of the spreader and allowed to drag on the soil surface can be used to mark the edge of the treated swath and help prevent skips or overlaps.

3. For treating smaller areas or rows of nursery stock or ornamental beds, a hand held or push-type rotary applicator such as whirlybird or cyclone unit is recommended. For hand held units, walk and turn the crank at a constant rate of speed.

4. A shaker-type applicator made from a small container with holes punched in the bottom is recommended for small, hard to treat areas. Carefully measure the amount of product needed to avoid over-application.

# **Use Sites**

Trifluralin 5G is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established flowers, ornamental bulbs, non-bearing fruit and nut trees and nonbearing vineyards and Christmas tree plantations. Apply Trifluralin 5G before or after planting but prior to germination of target weeds, or immediately after cultivation.

Refer to the "General Information" section of this label for general use precautions and information on application, application rates and weeds controlled.

#### **Use Precautions**

To avoid possible injury, do not apply Trifluralin 5G to:

- 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 four inches wide
- ground covers until they are established and well rooted

Do not apply Trifluralin 5G to newly transplanted ornamentals, nursery stock, ground covers, flowers and non-bearing fruit and nut crops and non-bearing vineyards until soil or potting media has been settled by packing and irrigation or rainfall and no cracks are present or injury may occur.

Do not make preplant applications of Trifluralin 5G to areas where gladioli corms less than one inch in diameter will be planted or injury may occur.

Do not apply Trifluralin 5G in greenhouse or other enclosed structures.

Repeat applications should not be made sooner than 60 days after a previous application of Trifluralin 5G. Do not apply over 240 pounds per acre total of Trifluralin 5G within a 12-month period.

Users who wish to use Trifluralin 5G on plant species not recommended on this label may determine suitability for such uses by making trial application of Trifluralin 5G at a recommended rate to small number of plants. Prior to using Trifluralin 5G on a larger number of plants, the treated plants should be observed for signs of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species. The user assumes responsibility for any plant damage or other liability resulting from the use of Trifluralin 5G on plant species not recommended on this label.

Trifluralin 5G May Be Used On The Following Established Plant Species When Container Grown or Field Grown:

#### Trees

<u>Scientific Name</u> Abies balsamea Abies concolor Abutilon hybridum

Acer gimmala Acer piatanoides Acer rubrum

Acer saccharinum Acer saccharum Areacastrum

romanzoffianum Betula nigra Betula papyrifera Betula pendula Brachychiton populneus Bucida buceras Castanea mollissima Ceratonia siliqua Cercis canadensis Chamaecyparis obtuse

Chamaecyparis pisifera

Chamaedorea cataractarum Chamaedorea costaricana Chamaedorea elegans Cornus florida

Cornus kousa Crataegus viridis Cupaniopsis anacardioides Cupressus glabra Elaeagnus angustifolia Eucalyptus camaldulensis Eucalyptus cinerea

Eucalyptus microtheca Eucalyptus sideroxyion Ficus benjamina

Fraxinus americana Fraxinus udhei Ginko biloba Gleditsia triacanthos

Heteromeles arbutiflora Illicium fioridanum Juniperus virginiana Larix kaempferi Common Name

Balsam fir White fir Albus-flowering maple Luteus-flowering maple Roseus-flowering maple Tangerine-flowering maple Vesuvius red-flowering maple flame maple Norway maple Red maple Red sunset maple Silver maple Sugar maple Queen palm River birch Paper birch European white birch Bottle tree Black olive Chinese chestnut Carob Redbud Filicoides-fernspray cypress Gracilis-slender Hinoki cypress Swara false cypress Squarrosa-moss cypress Palm Palm Parlor palm Cloud nine dogwood Flowering dogwood Dogwood, kousa Green hawthorn Carrot wood Arizona cypress Russian olive Redgum eucalyptus Mealy eucalyptus Silver dollar eucalyptus Coolibah tree Red ironbark eucalyptus Ficus Mini ficus White ash Sharnel ash Ginko-maidenhair tree Honey locust Shademaster honey locust Toyan Florida anise-tree Eastern red cedar Japanese larch

Liquidambar styraciflua Liriodendron tulipifera Magnolia spp. Malus spp. Morus alba Musa aluminata Nyssa sylvatica Oxydendrum arboreum Picea abies Picea glauca conica Picea glauca Picea pungens Pinus aristata Pinus canariensis Pinus contorta Pinus eldarica Pinus leucodermis Pinus mugo Pinus nigra Pinus radiata Pinus resinosa Pinus taeda Pinus strobus Pinus sylvestris Pinus thunbergiana Platanus acerifoiia Platanus occicentalis Platanus racemosa Podocarppus spp. Populus deltoides Prosopis chilensis Prunus yedoensis Pseudotsuga menziesii Quercus coccinea Quercus ilicifolia Quercus palustris Pin oak Quercus phellos Quercus rubra Quercus virginiana Robinia *pseudoacacia* Willow Salix spp. Sequoiadendron giganteum Swietenia mahogani Tabebula caraiba Taxodium distichum Linden Tilia spp. Tsuga canadensis Ulmus parvitolia Washingtonia robusta

American sweet gum Tuliptree Magnolia Crabapple White mulberry Banana Blackgum Sourwood Norway spruce Pendula-weeping Norway spruce Repens-spreading Norway spruce Dwarf Alberta spruce White spruce Dwarf globe blue spruce Glauca-Colorado blue spruce Haopsii-Hoop's blue spruce Koster-Koster blue spruce Bristlecone pine Canary Island pine Shore pine, beach pine Eldarica pine Bosnian pine Pumilio-shrubby Swiss mountain pine Austrian black pine Monterey pine Red pine Labially pine White pine Columnar Scotch pine Scotch pine Japanese black pine London planetree American sycamore Califorina sycamore Podocarpus Cottonwood Chilean mesquite Yoshino flowering cherry Douglasfir Scarlet oak Bear oak Willow oak Red oak Live oak Black locust Giant sequoia Mahogany Yellow tab Baldcypress Eastern hemlock Chinese elm Mexican fan palm

#### **Ornamental Shrubs**

Scientific Name Abelia grandiflora Acacia abyssinica Acacia redolens Acacia stenophylla Acalypha wilkesiana Acer ginnala Acer palmatum Agave americana Asti/be chinensis Athyrium nipponimcum Baccharis pilularis Berberis gladwynensii Berberis mentorensis Berberis thunbergii Bougainvillea spp. Buxus microphyla japonica Buxus microphylla Koreana Buxus sempervirens Callistemon citrinus Callistemon viminalis Calluna vulgaris Camellia sasangua Camellia japonica Cassia artemisloides Ceanothus spp. Cephalotaxus drupacae Cerastium tomentosum Chamaecyparis obtusa spp.

Chamaecyparis pisifera Chrysalldocarpus lutescens Clethra alnifolia Cleyera japonica Cornus alba Cornus stolonifera

Cotinus coggygria Cotinus dammeri

Cotoneaster adpressus

Common Name

Edward Goucher abelia Glossy abelia Abvssinica acacia Prostrate acacia Shoestring acacia Copper leaf Amur maple Coral bark Japanese maple Dwarf Japanese maple Century plant False spiraea Japanese painted fem Covotebush William Penn barberry Mentor barberry Atropurea-redleaf Japanese barberry Aurea-golden Japanese barberry Crimson pygmy barberry Rose glow barberry Barbara Karst California gold Pink pixie Scarlet O'Hara Temple fire Texas dawn Japanese boxwood Korean boxwood Common boxwood Lemon bottlebrush Weeping bottlebrush Spring torch scotch heather Sasangua camellia Japanese camellia Feathery cassia Wild lilac Plum yew Snow-in-summer Kosteri cypress Nana-dwarf Hinoki cypress Torulosa cypress Filifera-thread cypress Areca palm Summersweet Japanese clevera Sibirica-Siberian dogwood Baileyi red osier dogwood Flaviramea-vellowtwig dogwood Royal purple smoke tree Coral beauty smoke tree Eichholz smoke tree Praecox-early cotoneaster

Cotoneaster apiculatus *Cotoneaster* congestus Cotoneaster dammeri Cotoneaster himalayan *Cotoneaster* horizontalis Cotoneaster zabelii Cycas revoluta Cytisus praecox Cytisus scopanus Daphne odora Deutzia spp. Dodonea viscosa Elaeagnus pungens Erica cinerea Erica x darleyensa Erica vagans Euonymus alatus Euonymus fortunei

#### Euonymus japonica

Euonymous kiautschovica Feijoa sellowiana Forsythia spp. Gardenia jasminoides

Gaultheria shallon Gelsemium sempervirens Genista pilosa Hibiscus rosa-sinensis Hibiscus syriacus

*llex* spp. *lllicium annisatum Itea ilicifola Ixora collinea Juniperus spp. Kalmia latifolia Lagerstroemia indica Lantana spp. Leucothoe axillaris Leucothoe fontainesiana Ligustrum spp. Livistona chinensis Lonicera periclymenum* 

Lonicera sempervirens Mahonia bealel Mahonia repens Myrica cerifera Nandina domestica

Cranberry cotoneaster Pyrenees cotoneaster Bearberry cotoneaster Himalayan cotoneaster Rock cotoneaster Zabel cotoneaster Sago palm Hollandia-warminster broom Lena-Scotch broom Fragrant daphne Deutzia Hopseed bush Fruitland silver berry Purple bell heather Mediterranean pink heather Cornish heather Winged euonymus Canadale gold euonymus Emerald'n gold euonymus Sunspot euonymus Wintercreeper euonymus Silver king-euonymus Variegated evergreen euonymus Spreading euonymus Pineapple guava Forsythia August beauty gardenia Gardenia Radican gardenia Salallemon leaf Carolina jessamine Woadwaxen Ross Estey-hibiscus Rose of Sharon-heart Rose of Sharon-red bird Rose of Sharon-woodbridge Holly Mystery gardenia Henry Garnet holly leaf sweetspire Ixora Juniper Mountain laurel Crape myrtle Lantana Coast leucothoe Drooping leucothoe Privet Chinese fountain palm Flowering woodbine Serotina woodbine Trumpet honeysuckle Leather leaf mahonia Creeping mahonia Wax mvrtle Compacta-dwarf heavenly bamboo Nerium oleander

Osmanthus fortunei Philadelphus spp. Phoenix roeloelenii Photinia fraseri Pieris japonica

Pieris japonica x forestii Pinus mugo Piffosporum tobira

Plumbago ariculata Plumbago capensis Podocarpus macrophyllus Polystichum polyblepharum Potentilla spp. Prunus caroliniana Prunus gladulosa Pyracantha spp. Rhaphiolepis indica

Rhaphiolepis ovata Rhododendron spp. Rhus lancea Rosa rugosa Rosmarinus officinalis Skimmia japonica Skimmia revesiana Spiraea bumalda Spiraea japonica

Spiraea vanhouttii Syringa rothomagensis Syringa vulgarls Taxus cuspidata Taxus media Tecomaria capensis Ternstroemia gymnanthera Thuja occidentalis

Harbour dwarf-heavenly bamboo Heavenly bamboo Nana compacta-heavenly bamboo Nana purpurea-heavenly bamboo Woods dwarf heavenly bamboo Hardy red oleander Oleander Ruby lace oleander Fortunes osmanthus Mockorange Pigmy date palm Fraser's photinia Japanese andromeda Mountain fire lily-of-the-valley Snowdrift lily-of-the-valley Templebells lily-of-the-valley Valley rose lily-of-the-valley Valley valentine lily-of-the-valley Forest flame lily-of-the-valley Mugo-mugho pine Green pittosporum Japanese pittosporum Wheeler's dwarf pittosporum Blue cape pumbago Plumbago Yewpine Tassel fern Cinquefoil Carolina laurel cherry Dwarf pink flowering almond Pvracantha Charisma-Monruce rhaphiolepis Enchantress-Moness rhaphiolepis India hawthorn Springtime-Monme rhaphiolepis Roundleaf rhaphiolepis Azalea/rhododendron Atrica sumac Ramanas rose Rosemary Japanese skimmia Reeve's skimmia Anthony Waterer spiraea Dolchia spiraea Japanese alpine spiraea Shirobana spiraea Bridal wreath Chinese lilac Common lilac Upright Japanese yew Anglojap vew Cape honeysuckle American arborvitae

Emerald arborvitae

#### Thuja orientalis

Veitchia merrilli Viburnum spp. Weigela spp. Xylosma congestum Yucca filamentosa

## **Ground Covers**

#### **Scientific Name**

Achillea tomentosa Agapanthus spp. Ajuga spp. Ammophila breviligulata Arctotheca calendufa Armeria maritima Asparagus densiflorus Campanula spp. Carex spp. Carpobrotus edulis Ceratostigma plumbaginoides Cistus spp. Coreopsis spp. Coronilla vana Cortaderia selloana Cotoneaster spp. Delosperma alba Descampsia caespitosa Drosanthemum floribundum Drosantheumum hispidum Festuca ovina glauca Fragaria chiloensis Gazania spp. Hakonechloa macroaureola Hedera canariensis Hedera helix Hemerocallis spp. Herniaria glabra Hosta lancifoila Hypenicum spp.

Jasminum nitidum Lampranthus spectabilis Liriope gigantea Liriope muscari Globosa-globe arborvitae Little giant-dwarf arborvitae Nigra-dark American arborvitae Pyramidalis-pyramid arborvitae Rheingold arborvitae Techny arborvitae Aureus nana-dwarf golden arborvitae Minima glauca-dwarf arborvitae Christmas palm Viburnum Weigela Xylosma Yucca

# Common Name

Wooly yarrow Lily-of-the-nile Carpet bugle Beechgrass Cape weed Thrift Asparagus fern Bellflower Variegated carex Largeleaf iceplant Dwarf plumbago Rockrose Coreopsis Crown vetch Pampas grass Cotoneaster White iceplant Descampsia Trailing rosea iceplant Iceplant Blue fescue Strawberry, beach Gazania Golden hakonechloa Algerian ivy English ivy Daylilly Rupturewort Albomarginata hosta Aaronsbeard St. Johnswort Angelwing jasmine Trailing iceplant White lily turf Big blue lily turf Lilac beauty lily turf Magestic lily turf Silvery sunproof lily turf Liriope spicata Miscanthus sinensis Muehlenbeckia axillaris Myoporum laetum Ophiopogon japonicus

Osteospermum fruticosum Pachysandra terminalis Pennisetum alopecuroides Phalaris arundinacea picta Sedum spp. Teucrium chamaedrys Trachelospermum asiaticum Verbena spp. Veronica spp. Vinca spp. Variegated liriope lily turf Green/creeping lily turf Eulalia grass Creeping wirevine Myoporum Dwarf Mondo grass Mondo grass Trailing African daisy Japanese spurge Fountain grass Ribbon grass Stonecrop (sedum) Germander Asaian jasmine Verbena Speedwell Periwinkle

#### **Established Flowers**

#### Scientific Name

Achillea spp. Ageratum houstonianum Alyssum spp. Antirrhinum majus Arctotis spp. Artemisia schmidtiana Artemisia stellerana Aster spp. Begonia spp. Calendula officianalis Centaurea cyanus Centaurea gymnocarpa Centaurea moschata Chrysanthemum spp. Convolvulus spp. Coreopsis spp. Cosmos spp. Dahlia spp. Dianthus spp. Dicentra eximia Digitalis mertonensis Digitalis purpurea Dimorphotheca spp. Echinacea purpurea Eschscholzia californica Euphorbia marginata Geranium spp. Geum spp. Gaillardia spp. Gladiolus spp. Guara lindheiveri Gypsophila paniculata Helianthus spp.

#### Common Name

Yarrow Floss flower Alyssum Snapdragon African daisy Silver mound Dusty miller Aster (perennial) Begonia Calendula Cornflower Velvet centaurea Sweet sultan Chrysanthemum Morningglory Coreopsis Cosmos Dahlia Dianthus Bleeding heart Foxglove Common foxglove Marigold, cape Purple *coneflower* California poppy Snow-on-the-mountain Geranium Geum Gaillardia Gladiolus Guara Baby's breath Sunflower

Heuchera spp. Hypericum calycinum Impatiens balsamina Impatiens spp. Iris spp. Ixora spp. Lathyrus odoratus Lavandula angustifolia Leucanthemum superbum Liatris spicata Limonium spp. Lobelia spp. Lobularia maritima Lupinus spp. Matthiola spp. Mirabilis jalapa Monarda didyma Myosotis spp. Nicotiana spp. Oenothere *missouriensis* Papaver spp. Petunia hybrida Penstemon barbatus Perovskia atriplicifolia Phlox spp. Portulaca grandiflora Rosa spp. Rudbeckia hirta Rudbeckia laciniata Salvia spp. Scabiosa spp. Sedum spectible Stachys spp. Stokesia laevis Tagetes spp. Tanacetum cocineum Tropaeolum spp. Veronica spicatum Vinca spp. Zinnea spp.

Coral bells Aaron's beard Balsam Impatiens Iris Ixora Sweet pea English lavander Shasta daisy Gayfeather Statice Lobelia Sweet alyssum Lupine Stock Four o'clock Bee balm Forget-me-not Nicotiana Ozark sundrop Poppy, California Petunia Beard tongue Russian sage Phlox Portulaca Rose Blackeyed susan Golden glow Salvia Pincushion flower Stonecrop Lamb's ears Stoke's aster Marigold Painted daisy Nasturtium Speedwell Vinca Zinnia

#### **Ornamental Bulbs**

Trifluralin 5G may be applied for control of susceptible annual weeds in ornamental bulbs, e.g., bulbous iris, daffodil (narcissus), hyacinth and tulip. Apply Trifluralin 5G to the soil surface 2 to 4 weeks after planting, but prior to the emergence of annual weeds. Trifluralin 5G may also be applied following bulb emergence. For fall planted bulbs, apply Trifluralin 5G again in late winter or early spring to weed-free soil surfaces.

# Non-bearing\* Fruit and Nut Trees and Non-bearing Vineyards

\* 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.

# **Christmas Tree Plantations**

Apply Trifluralin 5G to established plantings of field grown Christmas tree species listed on this label. Do not apply to seedbeds or seedling transplant beds. 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. Follow all instructions provided in the "General Information" section of this label.

#### **Non-cropland Areas**

Trifluralin 5G is recommended as a preemergence herbicide for control of certain annual grasses and broadleaf weeds on industrial sites, utility substations, highway guard rails, sign posts and delineators.

Apply Trifluralin 5G 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 "General Information" section prior to using this product on non-cropland.

#### **Use Under Paved Surfaces**

#### Site Preparation

Trifluralin 5G should be used only where the soil to be treated has been prepared according to good construction practices. If rhizomes, stolons, tubers or other vegetative plant parts are present in the site, they should be removed by scalping with grader blade to a depth sufficient to ensure their complete removal.

#### Application

Applications may be made only when the final road bed is established or after the base rock has been added. Do not move soils following application of Trifluralin 5G and do not apply Trifluralin 5G to areas where asphalt is to be laid directly on top of soil.

Paving should follow applications of Trifluralin 5G as soon as possible.

Apply Trifluralin 5G to ensure thorough coverage of the base rock layer. Apply with any granular applicator that will apply uniformly.

Application Rate		
Amount of Trifluralin 5G		
Per Acre	Per 1000 sq ft	
240 - 320 lb	5.5 - 7.3 lb	

Optional marketing statement in brackets []

[Contains 1 pound (1 lb.) active ingredient per 20 pound (20 lb.) bag]

#### Warranty Statement

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY 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.

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Net Weight: