20 MAR 1992

As raren a. stumpt Asricultural Division CloA-Galdy Corporation P.J. Box 16300 Grachaboro, Ac. 17419

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LEA Registration Remoter 100-005

Application Requesting Amendments to Registration Later
Lebruary 25, 1992, to hist use sites and to head claim for use on Residential Turi

ine proposed amendments to the subject posticies product labeling submitted in connection with registration under section a or the rederal insecticion, fungiciae and kodentwicted not as amended are acceptable provided that you:

paralleling before releasing the product for snipment.

if this condition is not complied with, the registration will be subject to cancellation in accordance with Pichae, coding e(e). Four release for animent of the product constitutes acceptance of this condition.

n stamped copy of the lancing is enclosed for your records.

Sincerely yours.

Joanne 1. Miller Product Lanager (23) Fungleide-nerbicide branch Registration Division (2-70000)

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NAC-12.00. 3.17-92

(Front Panel)

Pennant® 5G

Granular Herbicide

For weed control in nurseries, turf and landscape plantings

40 Pounds Net Weight

10 Pounds Net Weight

Active Ingredient:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylpnenyl)-

N-(2-methoxy-1-methylethyl) acetamide 5.0%

95.0% <u>Inert Ingredients:</u> 100.0% Total

Control No. 54790 (40 lbs.)

Pennant 5G is a granular herbicide

CEPTEROL ARP COMMENLS **b** EPA Letter Dated:

KEEP OUT OF REACH OF CHILDREN

Under the Pederal Insecticide, Fungicide, sun Renember Act as amended, for the postude registy of paper Elly Res. No.

CAUTION

See additional precautionary statements and directions for use on back of bag.

EPA Reg. No. 100-665

EPA Est. 5905 IA-1

CIBA-GEIGY

BEST AVAILABLE COPY

Su: Tox 12ew. 1-51-92 Ermundal Tent

(Back Panel)

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire <u>Directions for Use</u> and the <u>Conditions of Sale and Warranty</u> before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The <u>Directions for Use</u> of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GELBY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the <u>Directions for Use</u> subject to the inherent risks referred to above. <u>CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the <u>Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.</u> CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing <u>Conditions of Sale and Warranty</u>, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.</u>

DIRECTIONS FOR USE

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

No user shall permit the application of this product in such a manner as to directly or indirectly expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Reentry Statement

Do not enter treated areas without protective clothing until dust has settled.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be entered without specific protective clothing until dust has settled, and appropriate actions to take as described under Precautionary Statements at the end of this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION. Area treated with Pennant 5G on (date of application). Do not enter without appropriate protective clothing until dust has settled. In case of accidental exposure, flush eyes or skin with plenty of water. Call a physician if irritation persists. Remove and wash contaminated clothing before reuse."

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

General Information

Pennant 5G Herbicide controls many annual grasses, certain broadleaf weeds and yellow nutsedge.

Pennant 5G may be used on commercial and residential turf and other non-crop land including, but not limited to: airports, roadsides, golf courses, sports fields, public recreational areas, ornamental gardens, cemeteries and other lanoscaped areas. Pennant 5G may also be used in and around container and field-grown ornamentals, nonbearing nursery stock and on sod farms.

The American

DO NOT USE IN GREENHOUSES OR OTHER ENCLOSED STRUCTURES.

NOTICE TO USER: Plant tolerances to Pennant 5G Herbicide have been found to be acceptable in the specific genera and species listed on this label. Because of the large number of species and varieties of plants, it is impossible to test each for tolerance to Pennant 5G. Neither the manufacturer nor the seller has determined whether or not Pennant 5G can be used safely on plants not specified on this label. Therefore, the professional user should determine if Pennant 5G can be used safely by testing the recommended rates on a particular group of similar unlabeled ornamental plants in a small area before widespread use or by checking with the local weed specialist for guidance.

Applicator Settings

Apply Pennant 5G using a rotary spreader or similar type applicator at rates indicated below. Calibrate spreader before application according to the manufacturer's directions. Refer to chart below for suggested settings. Settings are only reference points for calibration. Due to variations in equipment, equipment age and condition, humidity, variations in walking speed, and other variables, these settings should not be used without first checking them through calibration.

Suggested Applicator Settings

Rate Per Acre	40 lbs.	60 lbs.	80 lbs.
Rate per 1,000 sq. ft.	.9 lb.	1.35 lbs.	1.8 lbs.
Ounces per 1,000 sq. ft.	14.5 oz.	21.75 oz.	29 oz.
Applicator Brand	Suggested Settings		
Scott R-7			B+5.5/10
Scott R-8	G+8.5/10	H+3.5/10	н+6.5/10
Lesco	A+7.5/10		C+1.5/10
Warren-T	2.8	3.3	3.8
Spyker & Cyclone	2.6	2.8	3.0

Nurseries and Landscape Plantings

Weeds Controlled

annual bluegrass green foxtail (watergrass) crahgrass crowfootgrass fall panicum foxtail millet giant foxtail goosegrass

barnyardgrass prairie cupgrass red rice signalgrass (Brachiaria) southwestern cupgrass galinsoga witchgrass

yellow foxtail <u>vellow nutsedge</u> black nightshade carpetweed Florida pusley piqweed

Weeds Partially Controlled*: common purslane, groundsel, hairy nightshade, sandbur, seedling johnsongrass, shattercane and volunteer sorghum.

*Control of these weeds can be erratic due partially to variable weather conditions.

Note: If you plan to use Pennant 5G to control weed species not listed on this label, check with your local weed specialist or test Pennant 5G on a small-scale basis before widespread use.

<u>Application</u>

Broadcast Pennant 5G at rates shown below. Apply before grass and broadleaf weeds or yellow nutsedge emerge, or after existing weeds or nutsedge plants have been removed. A second application may be needed to provide control for an extended period. Do not make more than 2 applications per year.

Suggested Rates of Pennant 5G

Soil Texture	Lbs./A*	Lbs./1,000 sq. ft.
Coarse	40-60	0.9 - 1.4
Medium	40-60	0.9 - 1.4
Fine	60-80	1.4 - 1.8

*Use higher rates for a given soil texture on high organic matter soils and where yellow nutsedge and/or a heavy infestation : of weeds is expected. Use the lower rates on soils (with low organic matter content, and where light infestations of grass) weeds are expected. In peat and muck soils and soils highly enriched with organic matter (i.e., sawdust) and/or synthetic mixes, the activity of Pennant 5G may be reduced.

Note: Whenever rainfall does not occur within one week after application, overhead irrigation is recommended (1/4-1/2 inch) to move the herbicide into the soil to provide weed control



activity. Use the lower water volume (1/4 inch) on coarsetextured soils and the higher volume (1/2 inch) on fine-textured soils.

If band applications are used, calculate the amount of Pennant 5G needed as follows:

<u>Band width in inches</u> X Broadcast Rate = Band Rate Row Spacing in inches Per Acre Per Acre

Precautions: 1) To avoid plant injury, do not apply Pennant 5G to seedbeds, cutting beds, or unrooted cuttings before transplanting or to plants until the soil has firmly settled around roots. 2) Should Pennant 5G granules adhere to the foliage, follow with sufficient overhead irrigation to wash Pennant 5G from the foliage to reduce the chance of injury.

Pennant 5G has been found to be safe on the following plants:

Container-Grown Plants

Scientific Name

Abelia grandiflora Acer rubrum Ajuga reptans Aucuba japonica variegata Betula nigra Buxus spp. Carex spp. Cornus spp. Cotoneaster spp. Euonymus fortur 3i Euonymus kiautschovicus Forsythia spp. Ga⊥denia jasminoides Hedera helix Host !ancifolia Ilex Litenuata Ilex cornuta Ilex crenata Juniperus chinensis Juniperus horizontalis Juniperus sabina Juniperus virginiana Kalmia spp. Leucothoe fontanesiana Ligustrum japonicum Liriope muscara Liriope spicata Myrica cerifera Ophiopogon japonicus Pachysandra terminalis Pinus strobus Pinus thunbergii Pittosporum tobira Quercus phellos Rhododendron catawbiense Rhododendron indica Rhododendron obtusum Taxus cuspidata Thuja occidentalis Tsuga canadensis Viburnum spp.

Yucca spp.

Common Name/Variety

Glossy Abelia Red Maple Ajuga Variegated Aucuba River Birch **Boxwood** Carex Dogwood Cotoneast ~r Euonymus Manhattan Euonymus Forsythia Gardenia English Ivy Variegated Hosta Savannah Holly Dwarf Burford Holly Japanese Holly Chinese Juniper Juniper Hick's Juniper/Foemina Eastern Red Cedar Mountain Laurel Leucothoe Ligustrum or Privet Liriope Green Liriope Wax Myrtle Mondo Grass Japanese Pachysandra White Pine Japanese Black Pine Pittosporum Willow Oak Catawba Azalea Formosa/Indica Azalea Kurume Azalea Yew Globe Arborvitae Hemlock Viburnum Yucca

Field- and Liner*-Grown Plants and Plants in Landscape Plantings

*Plants transplanted normally in rows in a nursery or similar area for further growth before transplanting to final growing location (place of establishment).

Scientific Name _

Abelia spp.

Common Name/Variety_

Abies spp.
Acer spp.
Achillea spp.
Agapanthus africanus
Ageratum spp.
Ajuga reptans
Allium spp.
Allyssum spp.
Antirrhinum majus
Aquilegia spp.
Artemesia stoleriana
Asclepias spp.

Asclepias spp.
Aster spp.
Aucuba spp.
Berberis spp.
Betula spp.
Bougainvillea spp.
Buxus spp.

Camellia spp.
Campanula carpatica
Canna indica

Carex spp.
Chrysanthen

Chrysanthemum spp.

**Citrus spp. Coreopsis spp. Cornus spp.

Cortaderia selloana Cotoneaster spp.

Crocus spp.

Cryophytum crystallium

Cytisus racemosus
Daucus carota
Delphinium spp.
Dianthus barbatus
Eleagnus spp.

Endymion spp. Escallonia fradesii

Euonymus spp. Ficus spp. Forsythia spp. Fraxinus spp. Gaillardia spp. Glossy Abelia

Fir Maple Yarrow

African Lily Blue Ageratum

Ajuga
Allium
Allyssum
Snapdragon
Columbine
Dusty Miller
Milkweed
Aster

Aucuba Barberry Birch

Bougainvillea

Boxwood Camellia Bellflower Canna Lily

Carex

Chrysanthemum, Daisy

Citrus Coreopsis Dogwood Pampas Grass Cotoneaster

Crocus
Ice Plant
Sweet Broom

Queen Anne's Lace

Delphinium Sweet William

Eleagnus Endymion Escallonia Euonymus Fig

r ig

Forsythia

Ash

Gaillardia

Gardenia jasminoides Gazania splendoens Gelsemium sempervirens

Geranium spp. Geum spp. Gingko biloba

Gladiolus x hortulanus Gleditsia triacanthos

Hedera spp.

Hemerocallis spp. Hibiscus spp. Hosta lancifolia Hyacinthus spp. Hydrangea spp.

Hypericum spp. Ilex spp. Illicium spp. Impatiens spp. Iris spp.

Jasmine spp. Juniperus spp. Kalmia spp.

Lagerstroemia spp. Leucothoe spp. Ligustrum spp. Lilium spp. Liquidambar spp.

Liriodendron tulipifera

Liriope spp. *Lonicera spp.* Lupinus spp. Lythrum spp. Magnolia spp. **Malus spp.

Mesembryanthemum crystallinum Ice Plant

Morea spp.

Muscari armeniacum

Myrica spp.

Nandina domestica Narcissus spp. Nerium oleander Oenothera spp.

Ophiopogon japonicus Ornithogalum umbellatum

Osmanthus spp. Pachysandra spp.

Pelargonium x hortorum

Petunia spp. Phlox spp. Photinia spp. Physocarpus spp. Physostegia spp.

Picea spp.

Gardenia

Gazania Gold Rush Carolina Jessamine

Geranium Geum Gingko Gladiolus Honey Locust English Ivy Daylily Hibiscus Hosta

Hyacinth Hydrangea

St. John's Wort

Holly Spicebush Impatiens Iris

Jasmine Juniper Kalmia

Crepe Myrtle Leucothoe Privet Lily Sweetgum Tulip Tree Liriope Honeysuckle Lupines Loosestrife Magnolia

Crabapple, Apple

Fortnight Lily

Muscari Wax Myrtle Bamboo Narcissus Oleander Primrose Mondo Grass

Star of Bethlehem

Osmanthus Pachysandra Geranium Petunia Phlox Photinia Ninebark Physostegia

Spruce

Pieris japonica Pinus spp.

Pittosporum spp.
Podocarpus spp.
Populus spp.
Potentilla spp.
**Prunus spp.

Pseudotsuga menziesii

Pyracantha spp.

**Pyrus spp.

Quercus spp.

Raphiolepis spp.

Rhododendron spp.

Robinia spp. Rosa spp.

Rumohra adiantiformis

Salix spp. Scilla spp. Sedum spp.

Senecio doronicum

Spiraea spp.
Stachys spp.
Statice sinnata
Symphoricarpos spp.
Suringa spp.

Syringa spp. Tagetes spp.

Taxodium distichum

Taxus spp.

Ternstoemia gymanathera

Thuja spp.
Tsuga spp.
Tulipa spp.
Veronica spp.
Viburnum spp.
Vinca spp.

Viola x Wittrockiana Washingtonia robusta

Weigela spp.

Wisteria senensis

Yucca spp. Zinnia spp. Japanese Andromeda

Pine

Pittosporum Podocarpus

Poplar

Potentilla (Cinquefoil)

Cherry Douglas Fir Firethorn

Pear Oak

Indian Hawthorne
Rhododendron/Azalea

Locust Rose

Leatherleaf Fern

Willow
Scilla
Stone Crop
Leopard's-bane

Spiraea Stachys

Annual Statice

Snowberry Lilac Marigold Bald Cypress

Yew
Cleyera
Arborvitae
Hemlock
Tulip
Veronica
Viburnum
Periwinkle

Pansy

Mexican Fan Palm

Weigela Wisteria Yucca Zinnia

** Do not apply to trees or plants that will bear harvestable fruit within 12 months, or illegal residues may result.

Pennant 5G may also be applied before or after applications of other herbicides registered for ornamentals (e.g., Goal®, Princep®, Ronstar®, Surflan®, etc.) to broaden the spectrum of control.

Turfgrass

Warm Season Grasses (Bermudagrass, Centipedegrass, St. Augustinegrass, Bahiagrass and Zoysiagrass)

Apply Pennant 56 Sefore weeds emerge. Since soil moisture is necessary to activate Pennant 5G, irrigate with 1/2 inch of water if rainfall does not occur within 7 days after treatment. (See <u>Precautions</u> below).

Weeds Controlled

Scientific Name	Common Name	Rate of Pennant 5G
Cyperus compressus Cypereus esculentus Digitaria ischaemum Digitaria sanguinalis Leptochloa fascicularis Leptochloa uninervia Poa annua	Annual sedge Yellow nutsedge Smooth crabgrass Large crabgrass Bearded sprangletop Mexican sprangletop Annual Bluegrass	80 lbs./A 80 lbs./A 90 lbs./A 80 lbs./A 40-80 lbs./A 40-80 lbs./A

Note: To minimize potential turf injury, do not apply more than once per year.

Commercial St. Augustinegrass Sod Production

Apply Pennant <u>before weeds emerge</u>. Since soil moisture is necessary to activate Pennant 5G, irrigate with 1/2 inch of water if rainfall does not occur within 7 days after treatment (See Precautions below).

Weeds Controlled

Scientific Name	Common Name	Rate of <u>Pennant 5G</u>
Cyperus compressus Cypereus esculentus Digitaria ischaemum Digitaria sanguinalis Leptochloa fascicularis Leptochloa uninervia Poa annua	Annual sedge Yellow nutsedge Smooth crabgrass Large c_abgrass Bearded sprangletop Mexican sprangletop Annual Bluegrass	80 lbs./A 80 lbs./A 80 lbs./A 80 lbs./A 40-80 lbs./A 40-80 lbs./A 40-80 lbs./A

Notes: (1) Do not apply more than once every six wesks. (2), Po not apply more than a total of 160 lbs./A/year.

Precautions for all uses on turf: Temporary slowing of growth and yellowing may occur following application. To avoid turf injury, 1) use only on turfgrass not under stress from infestations of insects, nematodes, or diseases; 2) do not use on golf greens, tees, or aprons; 3) do not apply over the rooting area of trees or ornamentals not listed on this label; 4) do not seed

or overseed with desirable turfgrass 4 months before or 6 months after treatment and 5) do not apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system. 6) Weed control may be reduced when Pennant 5G is applied to turf which has accumulated thatch sufficient enough to interfere with the herbicide's movement to the soil surface.

Note: To avoid possible illegal residues, do not graze or feed turf clippings to animals.

Storage and Disposal

<u>Pesticide</u>

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke from burning bags.

For minor spills, follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372 day or night.



Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling and wash contaminated clothing before reuse.

Statement of Practical Treatment

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention.

If inhaled: Remove victim to fresh air.

Environmental Hazards

Cover or incorporate granules that are spilled during loading or are visible on soil surface in turn areas. Do not contaminate water when disposing of equipment wash waters. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.

Ground Water and Surface Water Advisory

Metolachlor has been identified in limited sampling of groundwater and there is the possibility that it may leach through the soil to ground water, especially where soils are coarse and ground water is near the surface. Following application and during rainfall events that cause runoff, metolachlor may reach surface water bodies including streams, rivers, and reservoirs.

Care must be taken when using this product to prevent spills or improper disposal of excess pesticide granules.

Goal® trademark of Rohm and Haas Company for oxyfluorfer

Pennant® trademark of CIBA-GEIGY Comporation for metalachlor U.S. Patent No. 3,937,730

Princep® trademark of CIBA-GEIGY Corporation for simazine

Ronstar® trademark of Rhone-Poulenc for oxidiazon
Surflan® trademark of Elanco Products Company for oryzalin
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Agricultural Division CIBA-GEIGY Corporation Greensboro, NC 27419

> December 11, 1985 Revised June 15, 1987 August 8, 1988 Revised Add Farmland Est. No. Revised November 15, 1989 Containerized plants September 12, 1991 Revised Additional ornamentals, containerized plants, and turf. March 1, 1992 Revised all turf

CGA 82L2 40 lb. bag (printed) CGA 82L3 PSL (40 lb.) CGA 82L6 10 lb. PSL CGA 82L7 40 lb. 5905-IA-1

[GANNONC.LABELP]PENNANT5G-F40 - 2/26/92