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ROUT(R) Ornamental Herbicide

For Sale To, Use And Storage By Commercial Nursery, Cut Flower, Foliage And Landscape Personnel Only.

For preemergence control of weeds in container, field grown and landscape ornamentals, cut flowers and foliage crops.

CAUTION: Keep out of reach of children. See back panel for additional caution statements.

Successful use of this product requires:

- Even distribution of particles at proper application rate.
- Application to dry foliage only.
- Application timing when plants are not breaking dormancy or making a flush of growth.
- Application at least two (2) weeks prior to enclosure in greenhouse/shadehouse type structures and two (2) weeks prior to shipping.

ACTIVE INGREDIENTS:

Oxfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4(trifluoromethyl)benzene..	2.00%
Oryzalin: 3,5-dinitro-N ⁴ , N ⁴ -dipropylsulfanilamide.....	1.00%
INERT INGREDIENTS:	97.00%
Total	100.00%

STORAGE AND DISPOSAL:

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

Storage: Store in a dry place. Protect from water and extreme heat.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Completely empty bag into application equipment. Then 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. Damaged container and/or spilled pesticide should be disposed of according to instructions.

EPA REG. NO. 58185-27 EPA EST. No. 279-CA-1 Product of U.S.A.

Net Weight 50 lbs. (22.6 Kg)

SIERRA

CROP PROTECTION COMPANY
1001 Yosemite Drive
Milpitas, CA 95035
Telephone 408/263-8080

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ROUT(R) For preemergence control of weeds in container, field grown and landscape
ornamentals, cut flower and foliage crops.

The species listed below have been tested under actual growing conditions
and found tolerant of the recommended application rate.

Abelia

x grandiflora

Alyogyne

huegelii(Blue Hibiscus)

Andromeda

polifolia(Bog Rosemary)

Anthurium andraeanum 'Ozaki Red'

Arctostaphylos

uva-ursi(Bearberry/Kinnikinnick)

Banksia menziesii 'Raspberry Frost'

Berberis

thunbergii 'Crimson Pygmy'

(Crimson Pygmy Barberry)

Bougainvillea sp.

'Barbara Karst'

Buxus

microphylla japonica (Japanese Boxwood)

sempervirens

Carissa

grandiflora 'Fancy' (Natal Plum)

Chamaecyparis

obtusa "Letinea Aurea"

pisifera "Filifera Aurea Nana"

(Dwarf Golden Thread-Branch Cypress)

Cercis

canadensis (Redbud)

Codiaeum

norma 'Low Life' (Low Life Croton)

Cornus

baileyi (Baileyi Dogwood)

florida (Flowering Dogwood)

Cotoneaster

dammeri 'Coral Beauty'

(Coral Beauty Cotoneaster)

salicifolius 'Repens'

Cupressus

sempervirens 'Glauca' (Italian Cypress)

Diosma

ericoides (Breath of Heaven)

Dracaena massangeana (Cornplant)

Dracaena warneckii

Elaeagnus

pungens 'Fruitlandii' (Fruitland Silverberry)

Eriobotrya

japonica(Loquat)

Escallonia

x exoniensis 'Fradesii'

ROUT(R) LABEL

Euonymus

- alata 'Compacta' (Dwarf Burning Bush)
- fortunei 'Emerald 'n Gold'
- fortunei 'Gold Edge'
- fortunei 'Vegeta'
- kiatschovica 'Manhattan'

Euphorbia

- mili (Crown of Thorns)

Ficus

- benjamina 'Lady Diane' (Weeping Fig)
- lyrata (Fiddleleaf Fig)
- microcarpa nitida

Forsythia

- x intermedia 'Lynwood'

Gardenia

- jasminoides 'August Beauty' (August Beauty Gardenia)

Gelsemium

- sempervirens (Carolina Jessamine)

Gypsophila sp. (Baby's Breath)

Hibiscus

- rosa-sinensis 'Brilliant' (Brilliant Hibiscus)
- rosa-sinensis 'Crown of Bohemia'

Hypericum sp. (St. Johnswort)

Iberis

- sempervirens (Evergreen Candy Tuft)

Ilex

- aquipernyi 'San Jose'
- cornuta 'Burfordii' (Burford Holly)
- cornuta 'Burfordii Nana' (Dwarf Burford Holly)
- cornuta 'Needlepoint'
- cornuta 'Rotunda' (Dwarf Chinese Holly)
- crenata 'Convexa'
- crenata 'Hetzii' (Japanese Holly)
- vomitaria 'Schillings' (Schillings Holly)

Jasminum

- nitidum (Jasminum magnificum) Angelwing Jasmine)
- sp. (Confederate Jasmine)

Juniperus

- chinensis 'Gold Coast' (Gold Coast Juniper)
- chinensis 'Mint Julip' (Mint Julip Juniper)
- chinensis 'pfitzerana glauca' (Blue Pfitzer Juniper)
- chinensis 'Pfitzerana Old Gold' (Old Gold Juniper)
- chinensis 'Sargentii Viridis' (Green Sargent Juniper)
- chinensis 'Sea Green' (Sea Green Juniper)
- conferta 'Blue Pacific'
- conferta (Shore Juniper)
- horizontalis 'Bar Harbor' (Bar Harbor Juniper)
- horizontalis 'Douglasii' (Waukegan Juniper)
- horizontalis 'Plumosa' (Andorra Juniper)
- sabina 'Broadmoor'
- sabina 'Tamariscifolia' (Tam Juniper)
- squamata 'Blue Star' (Blue Star Juniper)

Lantana

- montevidensis
- montevidensis 'Radiation'

Leucadendron hybrid

'Safari Sunset' (South African Rose)

Leucospermum cordifolium

(Pincushion Protea)

Ligustrum

japonicum 'Texanum' (Waxleaf Privet, Texas Privet)

lucidum (Glossy Privet)

sinense 'Variegata' (Dwarf Variegated Chinese Privet)

sp 'Jack Frost' (Jack Frost Ligustrum)

x 'Vicaryi' (Vicary Golden Privet)

Lonicera

x xylosteoides 'Clavey's Dwarf' (Clavey's Dwarf Honeysuckle)

Mahonia

aquifolium (Oregon Grape)

Microbiota

decussata

Nandina domestica 'Nana'

Nerium

oleander (Oleander)

Osmanthus

fragrans (Sweet Osmanthus)

heterophyllus 'Variegatus'

Photinia

x fraseri (Fraser Photinia, Red Tip)

Picea

abies 'Ohlendorffii' (Norway Spruce)

glauca 'Conica' (Dwarf Alberta Spruce)

pungens 'Glauca' (Colorado Blue Spruce)

Pieris

japonica 'Mountain Fire' (Mountain Fire Andromeda)

Pinus

elliottii (Slash Pine)

mugo mugo (Mugho Pine)

radiata (Monterey Pine)

strobus (Eastern White Pine)

thunbergiana (Japanese Black Pine)

Pittosporum

crassifolium (Evergreen pittosporum)

tenuifolium

tobira (Green Pittosporum)

tobira 'Wheeler's Dwarf'

Podocarpus

gracillior (Weeping Podocarpus)

Potentilla

fruticosa 'Gold Drop'

Protea neriifolia 'Pink Mink'

Prunus

x cistena (Dwarf Red-Leaf Plum)

Pyracantha

fortuneana 'Graberii'

'Mohave'

'Navajo'

Raphiolepis

- indica 'Ballerina' (India Hawthorn)
- indica 'Pinkie' (India Hawthorn)
- indica 'Pink Cloud' (Pink Cloud Raphiolepis)

Rhododendron

- sp. 'Dora Amateis'
- sp. 'Coral Bell' (Azalea)
- sp. 'Copperman' (Azalea)
- sp. x exbury (Azalea)
- sp. 'Hino Crimson' (Azalea)
- sp. 'Pink Ruffle' (Azalea)
- sp. 'Snow' (Azalea)

Salvia

- farinacea (Dwarf Blue Salvia)

Schefflera

- arboricola (Dwarf Schefflera)

Spiraea

- x bumalda 'Anthony Waterer' (Dwarf Pink Bridal Wreath)

Ternstroemia

- gymnanthera

Thuja

- occidentalis 'Nigra'
- occidentalis 'Ellwangeriana Aurea'
- occidentalis 'Hetz's Midget' (Hetz Midget Arborvitae)
- occidentalis 'Pyramidalis'
- occidentalis 'Smaragd' (Emerald Arborvitae)
- orientalis 'Aurea Nana' (Dwarf Golden Arborvitae)
- orientalis 'Blue Cone' (Blue Cone Arborvitae)

Trachelospermum

- asiaticum 'Solo' (Asiatic Jasmine)
- asiaticum 'White Mist' (Variegated Asiatic Jasmine)
- jasminoides (Confederate or Star Jasmine)

Vaccinium

- ashei 'Homebell' (Blueberry)

Verbena

- peruviana (Sand Verbena)

Viburnum

- dauidii (David Viburnum)
- macrocephalum
- plicatum 'Tomentosum' (Double-file Viburnum)

Vitis

- x SV5279 'Auroa' (White Wine Grape)

Weigela

- florida 'Java Red'
- sp. 'Boskoop Glory'

Xylisma

- congestum

The Species Listed Below Have Been Tested and Results Do Not Warrant Use At This Time.

Euonymus

japonica 'Silver King' (Silver King Euonymus)

Euryops

pectinatus (Greyleaf Daisy)

Ficus

pumila (Creeping Fig)

Ilex

crenata 'Helleri'

Trachelospermum

asiaticum 'Oblanceolatum'

ROUT(R) has been found to give preemergent weed control of the following weeds:

GRASSY WEEDS

- Annual Bluegrass (Poa annua)
- Barnyardgrass (Echinochloa crusgali)
- Crabgrass (Digitaria sanguinalis)
- Fall Panicum (Panicum dichotomiflorum)
- Foxtail, Green (Setaria viridis)
- Foxtail, Yellow (Setaria lutescens)
- Goosegrass (Eleusine indica)
- Kikuyu Grass (Pennisetum clandestinum)

BROADLEAF WEEDS

- Ageratum (Ageratum conyzoides)
- Artillery weed (Pilea microphylla)
- Bittercress (Cardamine pensylvanica)
- Buttonweed (Borreria laevis)
- Castor bean (Ricinus communis)
- Chickweed, Common (Stellaria media)
- Clover, white (Trifolium repens)
- Dandelion (Taraxacum officinale)
- Fireweed (Epilobium angustifolium)
- (Erechtites hieraciifolia)
- Groundsel (Senecio vulgaris)
- Lambsquarter (Chenopodium album)
- Marestail (Conyza canadensis)
- Medic (Medicago trunculata)
- Moss (Isopterygium albesceus)
- Oxalis (Oxalis stricta)
- Pearlwort (Sagina procumbens)
- Pigweed (Amaranthus retroflexus)
- Primrose, Cutleaf evening (Oenothera laciniata)
- Purslane (Portulaca oleracea)
- Shepherdspurse (Capsella bursa-pastoris)
- Sowthistle (Sonchus arvensis)
- Sowthistle, Common (Sonchus oleraceus)
- Spurge, Garden (Euphorbia hirta)
- Spurge, Hairy (Euphorbia vermiculata)
- Spurge, Prostrate (Euphorbia supina)
- Spurge, Spotted (Euphorbia maculata)

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PRECAUTIONARY STATEMENTS:

Hazard to Humans and Domestic Animals: CAUTION, causes eye injury. Do not get in eyes, on skin, or on clothing. This product may cause allergic skin reaction. In case of contact immediately wash eyes or skin with plenty of water. Get medical attention if irritation persists. Harmful if swallowed. Avoid inhalation.

Environmental Hazards: Do not apply directly to water. This pesticide is toxic to wildlife and fish. Use with care when applying in areas adjacent to any body of water. Apply this product only as specified on the label. Do not contaminate water by cleaning equipment or disposal of wastes.

DESCRIPTION:

ROUT is a preemergent herbicide and does not control established weeds. ROUT combines two selective herbicides on one clay granule giving the user a broader spectrum of weed control and ornamental plant tolerance. ROUT is not registered for use on vegetable or edible fruit bearing crops, turf, bedding plants or flowering crops.

DIRECTIONS FOR USE:

It is a violation of federal law to use this product in a manner inconsistent with its labeling. For use only on container, field grown, and landscape ornamentals. This herbicide product has been extensively researched; however, testing has not been conducted on all species or cultivars, or under all growing conditions. In some instances performance characteristics may vary.

APPLICATION RECOMMENDATIONS

The user should exercise reasonable judgment and caution with this product. Until familiar with results under his growing conditions, untreated check blocks should be left in each variety for performance comparisons.

ROUT should be applied at the recommended rate with a properly calibrated spreader which will assure accurate, even particle distribution. Do not disturb the soil surface once the product has been applied as the herbicide barrier will be broken. Best results are obtained when the product is watered in with approximately 1/2 inch of water immediately following application. Adequate moisture is required to activate the herbicide and wash particles off the foliage.

Users can determine if proper rate and distribution is being achieved by using a Sierra Rate Calibrator which is available free from Sierra Chemical Company. This simple tool allows you to quickly calibrate your application method.

APPLICATION RATES

Amount of ROUT(R)	Sq. Foot	100 Sq. Feet	Acre	Sq. Meter	100 Sq. Meters
1 ounce=28 grams(g)	1g	100g	100 lbs	10.8g	1.1kg

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A. CONTAINER GROWN ORNAMENTALS

Apply ROUT in the spring prior to weed seed germination or following complete weed removal. Repeat applications are required at three(3) month intervals during the growing season. If weed seed germination is observed prior to three(3) month normal application, product can be reapplied as recommended, but not less than two(2) months after previous application. Fall applications should be made two(2) weeks prior to placing plants in enclosed greenhouse structures.

Do not wait longer than three(3) months to reapply. Three months is the maximum residual for ROUT under most conditions. During periods of extreme temperature/rainfall conditions, product applications may be required at two(2) month intervals.

Potted liners-Remove established weeds from liners prior to transplanting into containers. Following planting, and prior to chemical application, irrigate with approximately 1/2 inch water to firm potting media around root systems. Allow foliage to dry. Broadcast product evenly over the container growing area. Water in with approximately 1/2 inch of water immediately after application.

Bare-root liners-Remove established weeds before herbicide application. Broadcast product evenly over the container growing area three (3) weeks after potting. Irrigate with approximately 1/2 inch of water immediately after application.

B. FIELD GROWN ORNAMENTALS AND LABELED CHRISTMAS TREES

Apply immediately after planting or in the spring prior to weed seed germination or following complete weed removal.

Apply ROUT at 50 lb/A rate (one bag/acre) for a maximum of two (2) applications per growing season, or at 100 lb/acre rate once a year. ROUT is not recommended for use on bare root stock if irrigation is not available.

Potted liners - Remove established weeds from liners prior to transplanting into field. Following planting and prior to chemical application irrigate with approximately 1/2 inch water to firm soil around root systems. Allow foliage to dry. Broadcast product evenly over the field growing area. Water in with approximately 1/2 inch of water immediately after application and leave the soil undisturbed.

Bare-Root liners - Irrigate with approximately 1/2 inch of water after planting to firm soil around root systems. Remove established weeds before herbicide application. Broadcast product evenly over the field growing areas three (3) weeks after planting. Irrigate with approximately 1/2 inch of water immediately after application and leave the soil undisturbed. Loosen the soil by light cultivation prior to reapplication of ROUT.

C. LANDSCAPE ORNAMENTALS**BEST AVAILABLE COPY**

Application of ROUT should be directed only to those species listed on the ROUT label. ROUT is not registered for use on vegetables or edible fruit bearing crops, turf, bedding plants or flowering crops. Apply Rout at 100 lb/acre rate.

Apply immediately after planting or in the spring prior to weed seed germination or following complete weed removal. Irrigate with approximately 1/2 inch of water immediately after application and leave the soil undisturbed. Do not apply more than two (2) applications per season.

D. CUT FLOWER AND FOLIAGE CROPS

Follow all use precautions listed on the label unless excluded under specific crops below. Apply prior to weed seed germination or following complete weed removal. Following planting, and prior to chemical application, irrigate (1/2 inch) to firm soil around roots. Always allow foliage to dry completely prior to Rout application. Broadcast product evenly over the production area at the proper rate. Irrigate immediately after application to activate the herbicide. Wait three (3) weeks before applying to bare root plantings.

FIELD GROWN PROTEA

Apply ROUT at 100 lb/A rate to field plantings of 1-2 year Protea nursery stock. Reapplications can be made at three (3) month intervals throughout the production cycle. Apply ROUT at 50 lbs/acre to soils with low organic matter levels (0.5-2%). Shallow feeder roots exposed by cultivation or erosion should be covered prior to ROUT application.

SARAN HOUSE GROWN ANTHURIUMS

Apply ROUT at 100 lb/A rate at three (3) month intervals. Do not reapply at less than three (3) month intervals in volcanic cinder soils. Do not treat greater than 1/4 (25%) of any saran production unit in a given day. All plant tissue (leaves/stems) must be completely dry prior to ROUT application. Avoid contact with leaf petiole attachments and flowering parts. Application should be made with granular spreaders which allow for directed placement of ROUT to the base of plants. Consideration should be given to providing optimum ventilation to areas treated with ROUT to avoid injury due to vapors.

DRACAENA FIELD STOCK

Apply ROUT at 100 lb/acre rate at three (3) month intervals. Applications must be made with a granular spreader which allows for directed placement of ROUT to the base of plants. When establishing new field stock plantings, bind foliage of unrooted cuttings with rubber bands or string to prevent lodging of granules in leaf whorls (see PRECAUTIONS) and to allow for placement of product to base of plants. ROUT may be reapplied after cuttings have been taken from field stock. Before application the remaining side shoots (with expanded leaves) should be removed to prevent lodging of product granules in the leaf whorls.

PRECAUTIONS

Do not apply product directly to bare roots of woody ornamentals as injury may result.

Do not apply product to wet or dew covered foliage. However, should this happen, irrigate immediately to completely remove herbicide particles from leaf surfaces.

Do not apply to whorl-leaved plants, such as *Dracaena* sp., as their leaves channel the herbicide granules to the leaf base. This makes removal of product granules difficult and may result in foliage injury.

Do not apply product in enclosed greenhouse or to enclosed shadehouse type structures.

Product should not be applied two(2) weeks prior to or two(2) weeks following leaf bud break, or during periods of flush growth. Newly forming leaves are particularly sensitive to this product. Spotting or leaf drop may result from such applications.

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