



Complete Directions For Use
Use Warnings
Weeds Controlled
Product Application

ELANCO PRODUCTS COMPANY
A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

TREFLAN® is the registered trademark for
Elanco Products trifluralin

ACCEPTED

1971-65

U

INDEX

	Page
Application Directions	5
Application Rates	6
Broadcast Application Rates	7
General Directions	4
Incorporation Directions	5
Species on which TREFLAN may be Applied	
Ornamental Woody Shrubs	8
Ornamental Trees	10
Ornamental Groundcover Plantings	11
Roses and Other Established Flowers	13
Surface Application	
(Ornamental Groundcover Plantings)	6
Under Paved Surfaces	7
Warning Statement	3
Weeds and Grasses Controlled	4

The manufacturer makes no warranties, express or implied, concerning this product or its use, which extend beyond the description on the label or in literature published by Elanco Products Company, and all statements made concerning this product apply only when used as directed. Elanco Products Company expressly disclaims all warranties, express or implied, in relation to any use of the product in combination or sequential use with any other product not specifically recommended in writing by Elanco Products Company. If used in a combination or sequential use recommended by Elanco Products Company, the liability of Elanco shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the Elanco product in such combination or sequential use.

2

WARNING

Human

Keep out of reach of children.
Do not get in eyes. Avoid contact with skin and clothing. Harmful if swallowed or absorbed through the skin.
Do not contaminate foodstuffs or feeds.
First Aid: In case of contact, immediately flush eyes or skin with plenty of water. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

Environmental

Direct contamination of any body of water with this emulsifiable concentrate may kill fish and other aquatic organisms. Do not contaminate any body of water by direct application, cleaning of equipment or disposal of wastes.

Storage

Avoid freezing. Store above 40°F. If frozen, poor weed control may result. Do not store near heat or flame.

Container Disposal Directions

- 1 Empty container into spray tank, drain in vertical position 30 seconds.
- 2 Refill container with water 1/5 to 1/4 full; rinse thoroughly, pour into tank, drain.
- 3 Repeat rinsing and draining 3 times.
- 4 Do not reuse. Dispose in an incinerator or landfill approved for pesticide containers, or bury in a safe place.
- 5 General: Consult federal, state or local disposal authorities for approved alternative procedures such as limited open burning.

DIRECTIONS FOR USE

TREFLAN® Emulsifiable Concentrate is a selective pre-emergence herbicide for use in ornamentals for the control of

3

annual grasses and broadleaf weeds in nursery stock, ornamental trees, ornamental woody shrubs, ornamental groundcover, gladioli, roses, established flowers, and under paved surfaces

Weeds Controlled

Annual Grasses

Crabgrasses	Stinkgrass
Barnyardgrass (watergrass)	Bromegrass
Foxtails	Brachiaria
(including giant foxtail)	Sandbur
Johnsongrass (from seed)	Jungle rice
Goosegrass	Annual bluegrass
Wild Cane (shattercane)	Sprangletop
Texas panicum	Cheat

Annual Broadleaf Weeds

Pigweeds (spiny, redroot)	Purslane
Carelessweed	Florida purslane (pusley)
Lambsquarters	Knotweed
Carpetweed	Stinging nettle
Russian thistle	Goosefoot
Kochia	Chickweed

Note: TREFLAN will not control certain resistant weeds such as Cocklebur, Velvetleaf, Jimsonweed, Ragweed, Venice Mallow and Nutgrass.

General Directions

TREFLAN is a pre-emergence herbicide which is incorporated (mixed) into the soil to provide long-lasting control of annual grasses and broadleaf weeds (see above list). TREFLAN controls weeds by killing their seeds as they germinate. It does not control established weeds.

Incorporation of TREFLAN helps assure effective weed control regardless of weather conditions and permits shallow cultivation, rotary hoeing and hand hoeing without reducing its weed control activity.

tion, rotary hoeing and hand hoeing without reducing its weed control activity

TREFLAN is recommended for use on a wide variety of ornamental trees, ornamental groundcover, shrubs, and flowers. The ornamental species on which TREFLAN can be used without damage include those listed in this booklet. Refer to the index for the page numbers on these lists.

Application Directions

TREFLAN emulsifiable concentrate is to be mixed with water and applied as a spray before, or in the same operation as soil incorporation. Apply in 5 to 40 gallons of water per acre (broadcast basis) using any properly calibrated low-pressure boom-type herbicide sprayer that will uniformly apply the spray. Pour the recommended amount of TREFLAN for your soil type into the spray tank during the filling operation and mix thoroughly before spraying. Do not apply more than the recommended amount.

Incorporation Directions

TREFLAN must be incorporated into the soil after application to prevent loss of its activity. Spraying and incorporation should be done in the same operation, if possible. Incorporation may be delayed up to 4 hours after application. Variable weed control may result from delayed incorporation if TREFLAN is applied to a wet, warm soil surface or if the wind velocity is 10 mph. or higher.

The machinery used for incorporation should break up large clods and mix TREFLAN thoroughly with the soil. The more thoroughly the TREFLAN is mixed with the soil, the more consistent the weed control will be.

Incorporation before planting (pre-plant): Thorough incorporation may be achieved with the following P. T. O.-driven equipment (tillers, cultivators, hoes) set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil.

double disc (or double disc with spiketooth harrow in tandem) set to cut 3 to 4 inches deep and operated in two different directions (cross disced) at 4 to 6 mph; mulch treader and other similar disc-type implements set to cut 3 to 4 inches deep and operated twice at 5 to 8 mph; rolling cultivators set to cut 2 to 4 inches deep and operated twice at 5 to 8 mph; or a bed conditioner (Do-All) set to cut 2 to 4 inches deep and operated at 4 to 6 mph.

Incorporation after planting (post-plant): Incorporation may be achieved around established plants by using P. T. O.-driven equipment (tillers, cultivators, hoes) set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil, or rolling cultivators set to cut 2 to 4 inches deep and operated twice at 6 to 8 mph. When incorporating TREFLAN in transplants, new liners, or established plants, the implement should be adjusted so that treated soil is thrown toward and around the plants in the row.

Clean cultivate area to be treated before application since TREFLAN will not control established weeds.

Shallow incorporation with implements set to cut less than 2 inches deep may result in erratic weed control. Do not use spiketooth or springtooth harrows alone for incorporation.

Surface Application and Water Incorporation to Ornamental Groundcover Plantings

Add TREFLAN to clean water in the spray tank during the filling operation. Agitate thoroughly prior to spraying. Apply in 5 to 40 gallons of water per acre using any properly calibrated low pressure herbicide sprayer that will uniformly apply the spray mixture. A one-half inch rain or its equivalent in sprinkler irrigation must be received within 24 hours or poor weed control will result.

Application Rates

Apply 1 gallon of Treflan E.C. per acre or 3 ounces per 1,000 sq. ft. of groundcover area.

6

Apply and incorporate TREFLAN prior to planting new nursery stock liners, ornamentals, trees and woody shrubs, and gladioli (Gladioli corms less than 1 inch in diameter may be injured by pre-plant applications of TREFLAN). TREFLAN may also be applied to established plantings by using a directed spray to the soil between the rows and beneath the plants.

Broadcast (overall) Application Rates for Soil Incorporation Only

Fine Soils	
Sand and sandy loam	1 pint per acre (1/2 pound active)
Medium Soils	
Loam, silt loam and silt	1 1/2 pints per acre (3/4 pound active)
Coarse Soils	
Clay loam, silty clay and clay	2 pints per acre (1 pound active)

For band applications, use the following formula to figure the proportionate amount:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \frac{\text{recommended broadcast rate}}{\text{per acre on band}} = \text{amount to apply}$$

TREFLAN is not recommended on muck soils.

Under Paved Surfaces

Directions For Use and Site Preparation: TREFLAN should be used only where the area 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 a grader blade to a depth sufficient to insure their complete removal.

7

Applications should be made only when final grade is established or after additions of base rock. Do not move soils following TREFLAN application and do not apply TREFLAN to areas where asphalt is to be laid directly on top of soil.

Paving should follow TREFLAN applications as soon as possible.

Application Directions: Large Areas—Apply TREFLAN in sufficient water to insure thorough wetting of the soil surface or penetration of the spray solution through the base rock layer. A minimum of 150 gallons per acre is recommended. Apply with any sprayer that will apply the spray uniformly. Add the recommended amount of TREFLAN to clean water in the spray tank during the filling operation. Agitate before spraying.

Small Areas—For treating small areas, a tank type hand sprayer or sprinkling can may be used. Before application determine the amount of water and TREFLAN necessary to uniformly cover the area to be treated. Shake & stir the spray solution prior to application.

The Proper Amount of TREFLAN E.C. to Apply

Apply the following amount of TREFLAN E.C.

	Ounces Per 1000 Sq. Ft.	Gallons Per Acre
TREFLAN E.C.	9 to 12 ounces	3 to 4 gallons

Ornamental Woody Shrubs

Scientific Name	Common Name
<i>Berberis mentorensis</i>	Barberry
<i>Berberis Thunbergii</i>	Japanese Barberry
<i>Buxus harlandii</i>	Harlandii Boxwood
<i>Buxus microphylla</i>	Boxwood
<i>Buxus sempervirens</i>	Common Boxwood
<i>Camellia japonica</i>	Camellia
<i>Camellia Sasanqua</i>	Sasanqua Camellia
<i>Cleyera japonica</i>	Sakaki

Cotoneaster apiculata

Cotoneaster Zabeli

Deutzia

Elaeagnus pungens

Euonymus alatus

Euonymus Fortunei

Euonymus newport

Feyoa Sellowiana

Forsythia

Ilex crenata

Ilex hetzi

Juniperus chinensis

Juniperus conferta

Juniperus virginiana

Kalmia latifolia

Ligustrum erectum

Ligustrum japonicum

Ligustrum odoratissimum

Ligustrum ovalifolium

Lonicera

Philadelphus Lemonei

Pieris japonica

Pittosporum Tobira

Podocarpum macrophylla

Potentilla

Prunus caroliniana

Pyracantha

Raphiolepis indica

Rhododendron indicum

Rhododendron obtusum

Sax

Spiraea vanhouttei

Syringa vulgaris

Taxus cuspidata

Taxus media

Cotoneaster

Cotoneaster

Deutzia

Elaeagnus

Euonymus

Euonymus

Euonymus

Pineapple Guava

Forsythia (Golden Bells)

Japanese Holly

Holly

Juniper

Shore Juniper

Red Cedar

Mountain Laurel

Privet

Privet

California Privet

Honeysuckle

Mock-Orange

Fetterbush

Robira

Yew Pine

Cinquefoil

American Cherry-Laurel

Firethorn

India Hawthorn

Azalea

Rhododendron

Willow

Spiraea

Common Lilac

Japanese Yew

Yew

<i>Thuja occidentalis</i>	American Arborvitae
<i>Viburnum odoratissimum</i>	Sweet Viburnum
<i>Viburnum suspensum</i>	Sandankwa Viburnum
<i>Viburnum tomentosum</i>	Doublefile Viburnum
<i>Viburnum wrightii</i>	Viburnum
<i>Weigela</i>	Weigela, Bristol Ruby

Ornamental Trees

Scientific Name	Common Name
<i>Abies balsamea</i>	Balsam Fir
<i>Acer platanoides</i>	Norway Maple
<i>Acer rubrum</i>	Red Maple
<i>Acer saccharinum</i>	Silver Maple
<i>Acer saccharum</i>	Sugar Maple
<i>Betula pendula</i> var. <i>laciniata</i>	European White Birch
<i>Castanea mollissima</i>	Chinese Chestnut
<i>Cercis canadensis</i>	Redbud
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus Kousa</i>	Kousa Dogwood
<i>Fraxinus americana</i>	White Ash
<i>Gleditsia triacanthos</i>	Honey Locust
<i>Juglans nigra</i>	Black Walnut
<i>Larix leptolepis</i>	Japanese Larch
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Tuliptree
<i>Malus</i> sp.	Apple
<i>Nyssa sylvatica</i>	Black Gum
<i>Picea Abies</i>	Norway Spruce
<i>Picea glauca</i>	White Spruce
<i>Picea pungens</i>	Colorado Blue Spruce
<i>Pinus nigra</i>	Austrian Pine
<i>Pinus resinosa</i>	Red Pine
<i>Pinus Strobus</i>	White Pine
<i>Pinus sylvestris</i>	Scotch Pine

<i>Pinus taeda</i>	Loblolly Pine
<i>Pinus Thunbergii</i>	Japanese Black Pine
<i>Platanus acerifolia</i>	London Plane-Tree
<i>Platanus occidentalis</i>	Sycamore
<i>Populus deltoides</i>	Cottonwood
<i>Prunus</i> sp.	Stone-Fruits
<i>Pseudotsuga taxifolia</i>	Douglas Fir
<i>Quercus coccinea</i>	Scarlet Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i>	Red Oak
<i>Robinia pseudoacacia</i>	Black Locust
<i>Taxodium distichum</i>	Bald Cypress
<i>Tsuga canadensis</i>	Canada Hemlock

Ornamental Groundcover Plantings

Scientific Name	Common Name
<i>Agapanthus</i>	Dwarf Peter Pan
<i>Armeria vulgaris</i>	Thrift - Sea Pink
<i>Achillea tomentosa</i>	Woolly Yarrow
<i>Asparagus densiflorus</i>	Asparagus
<i>Baccharis pilularis</i>	Dwarf Coyote Brush
<i>Campanula garganica</i>	Bellflower
<i>Campanula Poscharskyana</i>	Bellflower
<i>Ceanothus glaucus</i>	Ceanothus
<i>Cerastium tomentosum</i>	Snow-in-Summer
<i>Ceratostigma plumbaginoides</i>	Junge
<i>Cistus</i> sp.	Rock Rose
<i>Coreopsis</i> sp.	Tickseed
<i>Coronilla varia</i>	Crown Vetch
<i>Cotoneaster</i>	Cotoneaster
<i>Fragaria chiloensis</i>	Strawberry
<i>Gazania</i> sp.	Copper King Gazania
<i>Gazania</i> sp.	Gold Rush Gazania
<i>Gazania</i> sp.	New Orange Gazania
<i>Gazania</i> sp.	Feasta Red Gazania

Gazania sp.

Gazania leucolaena
Gazania sangalo
Hedera canariensis
Hedera helix
Hedera helix
Hernaria glabra
Hypericum sp.
Hypericum calycinum
Hypericum coris
Linope Muscari
Mesembryanthemum
edentulum
Muehlenbeckia axillaris
Myoporum sp.
Myoporum laetum
Osteospermum sp.
Osteospermum fruticosum
Rosmarinus sp.
Sedum sp.
Sedum sp.
Sedum confusum
Sedum guatemalense
Sedum musaneuse
Tagetes
Teucrium Chamaedrys
Verbena sp.
Verbena sp.
Verbena sp.
Verbena sp.
Verbena peruviana
Veronica sp.
Zoysia tenuifolia

Bronze Orange

Suprise Gazania

Gazania
Gazania
 Algerian Ivy
 Needlepoint Ivy
 California Ivy
 Rupture Wort
 St. John's-Wort
 Rose-of-Sharon
 St. John's-Wort
 Big Blue Lilyturf
 Ice Plant
 Wire Plant
 Myoporum
 Myoporum
 Myoporum
 Trailing African Daisy
 Trailing African Daisy
 Rosemary
 Utah Sedum
 Acre Sedum
 Sedum
 Sedum
 Sedum
 Sedum
 Marigold
 Germander
 Verbena
 Hybrid White Verbena
 Hybrid Apple Blossom Verbena
 Special Purple Verbena
 Verbena
 Speedwell
 Mascarene grass

Roses and Other Established Flowers

Achillea
Ageratum
Arctotis
Aster
Balsam
Calendula
 California Poppy
 Calliopsis
 Carnation
 Centaurea
 Chrysanthemums
 Cosmos
 Dahia
 Dianthus
 Dimorthea
 Forget-me-not
 Four O'Clocks
 Gaillardia
 Gladiolus
 Ixora
 Lobelia

Lupinus
 Marigold
 Morning Glory
 Nasturtium
 Nicotiana
 Periwinkle
 Petunia
 Phlox
 Portulaca
 Rudbeckia
 Salvia
 Scabiosa
 Shasta Daisy
 Snapdragon
 Stock
 Snow on the mountain
 Sunflower
 Sweet Alyssum
 Sweet pea
 Sweet William
 Zinnia

84-443