

10/10/88

ELANCO ID 5990

Trunk Injected Growth Regulator for Ornamental Trees

CUTLESS® TP

Net Weight 229.4 grams

CUTLESS TP is a trunk injected plant growth regulator for the reduction of growth and pruning frequency of ornamental trees.

Active Ingredient:

flurprimidol:  $\alpha$ -(1-methylethyl)- $\alpha$ -[4-(trifluoromethoxy)phenyl]-5-pyrimidinemethanol.....99%

Inert Ingredients.....1%

When CUTLESS TP is diluted to 1 gallon with alcohol, the resulting solution contains 227.1 grams active ingredient per gallon (60 grams per liter).

CUTLESS® TP (flurprimidol, Elanco)

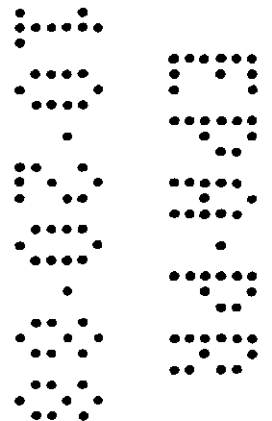
KEEP OUT OF REACH OF CHILDREN

CAUTION

See back panel for additional precautionary statements.

- EPA Reg. No. 1471-XXX
- EPA Est. No. 1471-IN-X

**ACCEPTED**  
 FEB 22 1988  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1471-173



2/9

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**CAUTION:** Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye irritation. Avoid breathing dust or spray mist and contact with eyes, skin, or clothing. Use eye protection and protective clothing such as coveralls, a long-sleeved shirt, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**STATEMENTS OF PRACTICAL TREATMENT:**

**If swallowed:** Do not induce vomiting. Call a physician or poison control center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

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

**If on skin:** Wash with plenty of soap and water. Get medical attention if irritation develops.

**If inhaled:** Remove individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, provide cardiopulmonary resuscitation assistance (mouth-to-mouth) and get medical attention.

**Environmental Hazards**

Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes.

**STORAGE AND DISPOSAL**

**Storage:** Store in original container only. Do not store after dilution with alcohol. In case of leak or spill contain material and dispose as waste.

**Pesticide Disposal:** Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at any approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

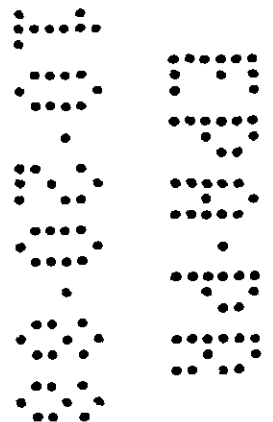
DIRECTIONS FOR USE

Read all directions carefully before applying this product.

See literature on containers for complete Directions for Use.

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

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, IN 46285, U.S.A.

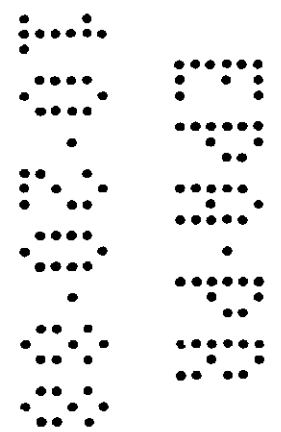


10/10/88

CUTLESS® TP                    ID5990

A trunk injected plant growth regulator for the reduction of growth and pruning frequency of ornamental trees.

TABLE OF CONTENTS	<u>Page</u>
Precautionary Statements.....	2
Statements of Practical Treatment.....	2
Storage and Disposal.....	3
Directions for Use.....	3
General Information.....	4
Use Precautions.....	4
Tree Injection.....	4
Mixing Directions.....	4
Note to User.....	4
Injection Techniques.....	5
Application Rates for CUTLESS TP Solution.....	5
Disclaimer of Warranties.....	7



10/10/88

ELANCO ID 5990

Trunk Injected Growth Regulator for Ornamental Trees

CUTLESS® TP

Net Weight 229.4 grams

CUTLESS TP is a trunk injected plant growth regulator for the reduction of growth and pruning frequency of ornamental trees.

Active Ingredient:

flurprimidol:  $\alpha$ -(1-methylethyl)- $\alpha$ -[4-(trifluoromethoxy)phenyl]-5-pyrimidinemethanol.....99%

Inert Ingredients.....1%

When CUTLESS TP is diluted to 1 gallon with alcohol, the resulting solution contains 227.1 grams active ingredient per gallon (60 grams per liter).

CUTLESS® TP (flurprimidol, Elanco)

PRECAUTIONARY STATEMENTS

KEEP OUT OF REACH OF CHILDREN

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye irritation. Avoid breathing dust or spray mist and contact with eyes, skin, or clothing. Use eye protection and protective clothing such as coveralls, long-sleeved shirt, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

STATEMENTS OF PRACTICAL TREATMENT:

If swallowed: Do not induce vomiting. Call a physician or poison control center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

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

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

If inhaled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, provide cardiopulmonary resuscitation assistance (mouth-to-mouth) and get medical attention.

Environmental Hazards

Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes.

STORAGE AND DISPOSAL

Storage: Store in original container only. Do not store after dilution with alcohol. In case of leak or spill contain material and dispose as waste.

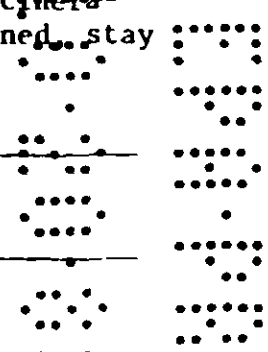
Pesticide Disposal: Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at any approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

Read all directions carefully before applying.

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



GENERAL INFORMATION

CUTLESS TP plant growth regulator suppresses regrowth of ornamental trees following trimming to allow the trimming interval to be extended. Growth suppression is achieved by inhibition of gibberellin biosynthesis resulting in reduced internode elongation in terminal shoot growth. Smaller leaves and intensified greening occur in some species. Trunk injected treatments are translocated through the xylem to growing leaves and stems and provide long-term growth suppression without affecting other development and reproductive processes.

CUTLESS TP suppresses growth in a broad range of ornamental tree species. CUTLESS may be injected to trees with actively transpiring leaves. Conditions favoring rapid transpiration reduce the time required for tree injection. Best results will be achieved when application is made prior to or in conjunction with pruning. Growth suppression may not be evident until the year following treatment. Repeat application can be made after three years or sooner if growth regulator effects start to decline.

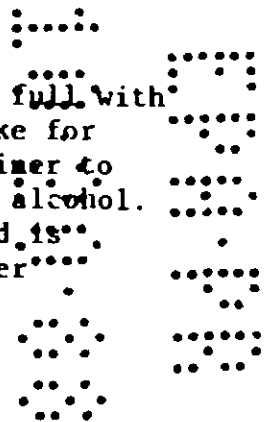
USE PRECAUTIONS

CUTLESS should not be applied to trees under the following conditions:

- Trees that appear to be unhealthy or diseased
- Sugar maple trees or any other trees that may be tapped for sugar
- Fruit or nut trees that may be harvested within one year after application

MIXING DIRECTIONS

Fill the one gallon container containing CUTLESS TP to approximately 3/4 full with isopropanol (containing no more than 9% water). Replace the lid and shake for approximately one minute to help dissolve the compound. Allow the container to stand for about five minutes and then fill to one gallon with additional alcohol. Mix the solution again for one minute and check to make sure the compound is completely dissolved. Make solution only as required. Do not store after dilution with alcohol.



TREE INJECTION TECHNIQUES

CUTLESS should be injected in a manner which results in even distribution throughout the tree. Specialized tree trunk injection equipment should be used which will meter the appropriate amount of CUTLESS solution into the injection sites. The number of injection holes needed per tree should be determined by measuring the tree diameter at the injection height. Injection holes should be uniformly spaced around the tree trunk no more than 24 inches above the soil surface. Injection holes should be spaced no greater than 8 inches apart. Since xylem arrangement in trees can affect distribution of CUTLESS, the professional user may determine that a more narrow injector spacing is required to achieve uniform growth suppression in certain tree species.

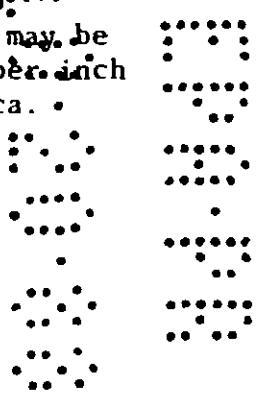
Drill injection holes horizontally into the tree trunk at a 45-60° angle to the surface plane of the trunk to intercept the outer sapwood. Avoid knots, wounds and areas of compression wood. Bleeding of materials from injection holes can be minimized if holes are drilled with a slight downward slope. Injection holes should be 2 1/2 to 3 inches in depth and drill diameter should allow for tight injector fit without leakage during injection. Use sufficient injection pressure to facilitate rapid uptake. Holes may be plugged after treatment to exclude disease organisms and speed healing of injection sites.

APPLICATION RATES FOR CUTLESS TP SOLUTION<sup>1</sup>

CUTLESS solution, when mixed as directed, contains 60 grams of active ingredient per liter (16.7 ml. per gram active ingredient).

Use the table below to determine the amount of CUTLESS TP solution to be injected per hole for four (4) inch, six (6) inch or eight (8) inch injector spacings. An application rate of 0.75 to 1.0 gram active ingredient per inch of tree diameter (at injection height) is required to produce acceptable growth suppression in most trees. When the tree crown has been severely reduced in size due to pruning, a rate of 0.5 grams active ingredient per inch of tree diameter may be used for optimum growth suppression. Up to 1.5 grams active ingredient per inch of tree diameter may be used to suppress certain species such as melaleuca.

Application Rate (Grams per Inch Tree Dia.)	4-Inch Hole Spacing (ML per Hole)	6-Inch Hole Spacing (ML per Hole)	8-Inch Hole Spacing (ML per Hole)
0.5	11	16	21
0.75	16	24	32
1.00	21	32	42
1.5	32	48	64



<sup>1</sup> Trees smaller than 6 inches in diameter require at least three injection holes equally spaced around the trunk. For the rate desired, use the injection volume that most closely corresponds to the spacing of the drilled holes. For example, if the drilled holes are about four (4) inches apart, use the injection volume corresponding to the desired rate and a 4-inch spacing. For a 3-inch spacing, use one-half the injection volume for a 6-inch spacing, etc.



CUTLESS TP may be applied by tree injection to the following ornamental tree species:

<u>Common Name</u>	<u>Scientific Name</u>
Alder, red	<u>Alnus rubra</u>
Ash	<u>Fraxinus spp.</u>
Aspen	<u>Populus tremuloides</u>
Blackolive	<u>Bucida buceras</u>
Black cherry	<u>Prunus serotina</u>
Black locust	<u>Robinia pseudoacacia</u>
Black walnut	<u>Juglans nigra</u>
Boxelder	<u>Acer negundo</u>
Cottonwood	<u>Populus deltoides</u>
Dogwood	<u>Cornus florida</u>
Elm, American	<u>Ulmus americana</u>
Elm, Chinese	<u>Ulmus parvifolia</u>
Elm, Siberian	<u>Ulmus pumila</u>
Elm, winged	<u>Ulmus alata</u>
Blue Gum Eucalyptus	<u>Eucalyptus globulus</u>
Hackberry	<u>Celtis spp.</u>
Maple, Norway	<u>Acer platanoides</u>
Maple, red	<u>Acer rubrum</u>
Maple, silver	<u>Acer saccharinum</u>
Maple, sugar (NOT TAPPED FOR SUGAR)	<u>Acer saccharum</u>
Melaleuca	<u>Melaleuca quinquenervia</u>
Oak, laurel	<u>Quercus laurifolia</u>
Oak, live	<u>Quercus virginiana</u>
Oak, pin	<u>Quercus palustris</u>
Oak, post	<u>Quercus stellata</u>
Oak, red	<u>Quercus rubra</u>
Oak, southern red	<u>Quercus falcata</u>
Oak, water	<u>Quercus nigra</u>
Oak, willow	<u>Quercus phellos</u>
Pine, Australian	<u>Casuarina equisetifolia</u>
Sugarberry	<u>Celtis laevigata</u>
Sweetgum	<u>Liquidambar styraciflua</u>
Sycamore	<u>Platanus occidentalis</u>
Tallowtree, Chinese	<u>Sapium sebiferum</u>
Willow, black	<u>Salix nigra</u>