



20UL Tree Growth Regulator

Complete Directions for Use

U.S. Patent No. 4,234,405
EPA Reg. No. S24-XXX
©MONSANTO COMPANY 1988
Registered trademark of, and used under license from, Imperial Chemical Industries, PLC.

1989-1 858.25-000.01753

ACCEPTED
MCR - 1 1989
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. S24-426

MONSANTO COMPANY
AGRICULTURAL PRODUCTS
ST LOUIS MISSOURI 63167 U.S.A



Read the entire label before using this product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

REFORMULATION IS PROHIBITED.

LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR IF NO ACQUIRED BY PURCHASE REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
Keep out of reach of children

CONTAINS METHANOL



POISON



Get medical attention
or
Call a Poison Control Center

DANGER!

CONTAINS METHANOL WHICH IS FATAL OR MAY CAUSE BLINDNESS IF SWALLOWED

CANNOT BE MADE NON-POISONOUS

CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

MAY BE HARMFUL IF INHALED.

Do not get in eyes, on skin, or on clothing.

Wear goggles or face shield and rubber gloves when handling.

Avoid breathing vapor.

Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

FIRST AID: IF SWALLOWED, immediately get medical attention or call a poison control center. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

IF IN EYES, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Get medical attention. Wash clothing before reuse.

IF INHALED, remove individual to fresh air. Get medical attention if breathing difficulty develops.

NOTE TO PHYSICIAN: Consideration should be given to the administration of ethanol in order to competitively interfere with metabolism of methyl alcohol to more toxic degradation products. Use general supportive measures in conjunction with scrupulous monitoring of acid-base balance, electrolyte levels, and fluid intake.

In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000.

Environmental Hazards

Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters.

Physical or Chemical Hazards

FLAMMABLE: Do not use or store near heat or flame in case of: FIRE, use water spray, alcohol foam, dry chemical or carbon dioxide.

ACTIVE INGREDIENT:
 Paclobutrazol, (±)-(R*,R*)-2-[[4-chlorophenyl] Methyl]-2-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol..... 2.51%
INERT INGREDIENTS:..... 97.49%
 100.00%

Do not reapply this product until effects of previous applications wear off. In any event, do not reapply this product within 3 years of the last application.

In case of emergency involving this product, Call Collect, day or night, (314)694-4000

DIRECTIONS FOR USE

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

Storage and Disposal

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

STORAGE:

Keep container closed. Store in a cool environment when not in use.

DISPOSAL:

Wastes of this pesticide may be fatal and cause blindness and may be dangerous. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label use instructions, contact your state Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. **DO NOT CUT OR WELD ON OR NEAR THIS CONTAINER.** Do not reuse emptied container. Triple rinse and then puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

GENERAL INFORMATION

This product can be used on amenity trees found in areas such as utility rights-of-ways, urban environments and other non-crop areas.

Trunk injections of this product extend tree-trimming cycles by slowing regrowth of treated trees, allowing longer intervals between trimmings. This effect is achieved by inhibiting gibberellin biosynthesis which results in long-term growth reduction and internode compression on a wide range of trees. This product shows little or no phloem mobility. Activity occurs by xylem uptake from trunk injections. Once activated, this product results in intensified green of foliage with no phytotoxicity. Applications can enhance flower in some species.

CONTROL SYMPTOMS:

Results may not be visible following application of this product until up to 12 months after application. Initial effects of this product will be observed as an intense greening of foliage. At the time that normal vegetative growth extension should occur, trees treated with this product will exhibit shortened internodes which are somewhat thickened. Smaller leaf size and enhanced flowering may also be observed in some species.

APPLICATION DIRECTIONS

Do not dilute this product with water or solvents.

This product may be applied at any time of the year. However, the likelihood of bark damage is increased from dormant applications. For best results, avoid applications to deciduous species after leaf drop in the fall and prior to bud break in the spring. Dormancy may be induced by factors such as prolonged freezing weather or severe drought stress.

Table 1 CLIPPER 200L TRUNK INJECTION

Tree Species	Injector Spacing (inches)	Volume/hole (ml)
Norway Maple	6"	20 to 30
Red Maple	6"	20 to 30
Silver Maple	6"	20 to 40
Sugar Maple	6"	20 to 30
Australian Pine	6"	20 to 40
Sweetgum	6"	20 to 30
Laurel Oak	6"	50 to 75
Water Oak	6"	50 to 75
Willow Oak	6"	50 to 75
Live Oak	6"	30 to 75
Chinese Elm	6"	25
Siberian Elm	6"	40
Sycamore pop.	6"	100 to 150
Eucalyptus	6-8"	75 to 100

EPA Reg. No. 524-XXX 858 25-000 01/53

MONSANTO COMPANY
 AGRICULTURAL PRODUCTS
 ST. LOUIS, MISSOURI 63167 U.S.A.

Note to User: Specific recommendations for species and varieties or ornamental trees other than those listed in Table 1 are under development. Since xylem arrangement in trees can affect distribution of this product, narrow (6 inches) injector spacing may be required in certain tree species. The professional user should determine the proper injector spacing to be used on tree species not specifically mentioned in Table 1. If in doubt, use the 6 inch spacing method.

Injections Techniques:

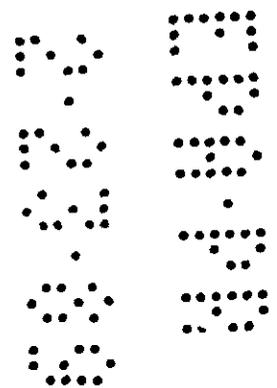
Injection holes should be uniformly spaced around the tree trunk and within 2 feet above the soil surface.

Drill injection holes angled slightly downward into the trunk at 45° to 60° angle to the plane of the trunk to intercept the outer sapwood. Injection holes should not exceed 2-1/2 inches (6.3 cm) in depth.

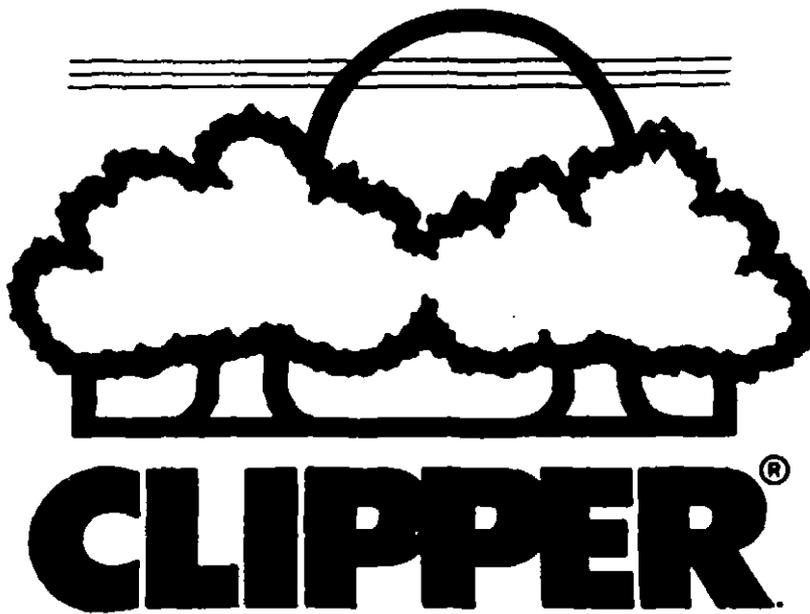
Use appropriate trunk-injection equipment capable of injection pressures from 50 to 100 psi

PRECAUTIONS

- Do not treat sugar maple trees or any other trees that are or could be tapped for sugar within one year.
- Do not treat nut or fruit trees that will be harvested within one year after application.
- Do not apply to trees which show visible symptoms of severe stress.
- Apply at the recommended rate. Follow safety procedures.
- Avoid injections at excessive pressures.



METAL DRUM - FRONT PANEL



20UL TREE GROWTH REGULATOR FOR ORNAMENTAL TREES

Keep out of reach of children.
Contains Methanol



POISON

DANGER

See Side Panel for Precautionary Statements

Read the entire label before using this product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using.
If terms are not acceptable, return at once unopened.

REFORMULATION OR REPACKAGING IS PROHIBITED.

ACTIVE INGREDIENT:

Paclobutrazol-(±)(R*,R*)-β-[(4-chlorophenyl)methyl]-α
 -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol 2.51%

INERT INGREDIENTS: 97.49%

100.00%

NET 1 GAL

EPA Reg. No. 524

858.25-000.02/53IC

PREC

Hazards t

DANGER!

CONTAINS METHANOL W
 CANNOT BE MADE NON-
 CAUSES EYE, SKIN AND
 MAY BE HARMFUL IF IN
 Do not get in eyes, on sk
 Wear goggles or face shi
 Avoid breathing vapor.
 Wash thoroughly with so
 using tobacco.

FIRST AID: IF SWALLOW
 center. NEVER GIVE A
 IF IN EYES, immediate
 attention.
 IF ON SKIN, immedia
 removing contaminate
 IF INHALED, remove in
 develops.

NOTE TO PHYSICIAN
 ethanol in order to co
 more toxic degradation
 with scrupulous moni
 toring.

In case
Call Col

Do not apply directly to
of equipment washwa

PH

FLAMMABLE.
 Do not use or store ne
 in case of:
 FIRE, use water spray

It is a violation of Feder
labeling.

Reg no: 524-426

PM-25

3 of 3
A

MONSANTO COMPANY
AGRICULTURAL PRODUCTS
ST. LOUIS, MISSOURI 63167 U.S.A.

EPA Est. 5905-AR-1
U.S. Pat. No. 4,243,405
©MONSANTO COMPANY 1988



FLAMMABLE LIQUID

3



**METHANOL
SOLUTION, UN 1230**