

U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF PESTICIDE PROGRAMS
Registration Division (7505C)
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, DC 20460-0001

EPA Reg. Number **67690-34**

Date of Issuance

Term of Issuance Conditional

Name of Pesticide Product Flurprimidol Solution

NOTICE OF PESTICIDE

X Registration
Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Sepro Corporation

11550 N. Meridian St., Suite 600

Carmel, IN 46032 - 4565

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby reregistered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or approval of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for re-registration of your product under FIFRA Section 4.

Signature of Approving Official:

Toný Kish

Product Manager, Team 22

Fungicide Branch

Registration Division (7505C)

Date:

DEC 2 0 2005

EPA Form 8570-6

EPA Reg. No. 67690-34

- 2. You must submit the following conditional data listed below, before the due date of December 31, 2006:
- A. You must submit the results (conducted under GLP) of the product's storage stability and corrosion characteristics of GLN 830.6317 and 830.6320, respectively.
- 3. You must submit two copies of a final printed label within 30 days from the data of this notice which makes the following changes:
 - A. Add the phrase "EPA registration No. 67690-34".
 - B. On page 2 in the General Information Section, first paragraph, second line delete "or less."
 - C. On page 7, 9th paragraph, delete "five minutes or less" and replace with "in as little as."

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release of shipment of the product constitutes acceptance of these conditions.

A copy of the label is stamped "Accepted with Comments" is enclosed for your records.

If you have any questions regarding this submission, contact Rose Kearns of my team at (703) 305-5611 or myself at (703) 308-9443.

Sincerely

Tony Kish

Product Manager (22)

Fungicide Branch

Registration Division (7505C)

Enclosure

Flurprimidol Solution: Page 1 of 7

FLURPRIMIDOL SOLUTION

{Insert}

FLURPRIMIDOL SOLUTION SePRO Direct-Inject™ Chemical

For management, reduction or regulation of shoot growth and overall canopy growth of a wide variety of ornamental trees in utility rights-of-way, urban environments, residential areas and interior plantscapes

(such as those in domestic landscape/garden areas, public display plantings, recreation areas, highway and other transportation rights-of-way, scenic corridors, storage areas, forest areas, campgrounds, and other uncultivated, nonagricultural areas)

For Use By Professional Arborists/Applicators, Grounds Maintenance Professionals, City Foresters, Electric Utility Foresters/Contractors and Landscapers

To be used only with the SePRO Direct-Inject™ Tree Injection System

• Easy • No Drilling • No Posting •

Active Ingredient:

Flurprimidol* (CAS No. 56425-91-3)	48.1%		
Other ingredients	<u>51.9%</u>		
Total	100.0%		
*a-(1-methylethyl)-a-[4-(trifluromethoxy) phenyl]-5-pyrimidinemethanol			

Contains 2.3 oz. (65.6 grams) active ingredient per 4 fl. oz. (120 ml) bottle [Contains 19.4 oz. (547 grams) active ingredient per 1 qt. 2 fl. oz. (1000 ml) pack]

Keep Out of Reach of Children CAUTION

See inside [below] for additional precautionary statements and complete Directions for Use.

Net Contents 4 fl. oz. (120 ml)
[Net Contents 1 qt. 2 fl. oz. (1000 ml)]

EPA Reg. No. 67690-

EPA Est. 69117-NE-1

with COMMENTS In EPA Letter Dated DEC 2 0 2005

Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 167690-34 Manufactured by

SePRO Corporation

Carmel, IN 46032 USA www.sepro.com

PRECAUTIONARY STATEMENTS

Hazards to Humans & Domestic Animals

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before reuse.

Flurprimidol Solution: Page 2 of 7

First Aid

If Swallowed	Immediately call a poison control center or doctor for treatment advice.
	Have person sip a glass of water if able to swallow.
l	Do not induce vomiting unless told to do so by the poison control center or doctor.
	Do not give anything by mouth to an unconscious person.
If in Eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes.
	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
	Call a poison control center or doctor for treatment advice.
lf on Skin	Take off contaminated clothing.
or Clothing	Immediately rinse skin with plenty of water for 15-20 minutes.
	Call a poison control center or doctor for treatment advice.
Have the pro	duct container or label with you when calling a poison control center or doctor, or going for treatment.

{Note: The First Aid statements' grid format will be used if market label space permits; otherwise a paragraph format will be used.}

Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

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

For Use By Professional Arborists/Applicators, Grounds Maintenance Professionals, City Foresters, Electric Utility Foresters/Contractors and Landscapers

General Information Do not inject Food Bearing Trees

SePRO Direct-Inject™ Tree Injection Systems

The SePRO Direct-Inject™ Tree Injection Systems are easy to use. Many trees can be treated in as little as five minutes or less, allowing applicators to treat trees quickly. There is no need to wait for absorption (translocation) because the chemical is injected into the cambial area of the tree (the active vascular system) and held inside by the self-sealing WedgeCheks™. Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased. Use in sunny or overcast conditions, rainy or dry, at any time of day. As no drilling or implants are required, you can treat trees every two years, with no threat of long-term or permanent damage to the tree.

Indications

Flurprimidol Solution is a plant growth regulator (PGR) [tree growth regulator] [TGR] intended for the management, reduction or regulation of shoot growth and overall canopy growth of a wide variety of ornamental trees in utility rights-of-way, urban environments, residential areas and non-crop areas. Flurprimidol Solution has demonstrated desirable growth regulation in many woody ornamental plants and deciduous tree species, without phytotoxic effects. Use Flurprimidol Solution to control canopy growth, pruning volume/frequency and for the associated benefits of stimulated root development, increased drought tolerance, increased stress tolerance and stabilizing trees in mild decline.

Growth reduction is beneficial for trees planted under and near utility [power] lines, close to homes, decks, patios and sidewalks, in areas with restricted space for canopy and/or root development, or in areas where excessive growth may block a scenic view. Utility arborists look to growth reduction treatments to provide benefits such as reduced vegetation-related power outages, more efficient trimming operations, lengthened trim cycles and reduced biomass of tree trimmings. The shortening of internodal growth also results in increased density of the tree canopy, enhancing shade and screening benefits. Flurprimidol Solution may suppress "dbh" (diameter at breast height) growth which can benefit trees growing in municipal vaults and other confined areas.

In commercial and residential areas, Flurprimidol Solution is an option for trees planted too close together, close to homes, in tightly landscaped areas, near foundations, under power lines, in interior spaces or when a wrong tree for the site cannot be removed. Flurprimidol Solution applications result in a reduction of canopy growth and can increase the root-to-canopy ratio.

In municipal applications, Flurprimidol Solution regulates and reduces growth on trees planted under and near power lines or along rights-of-way, on trees near streetlights, intersections or municipal/commercial signage, in airport approach

Flurprimidol Solution: Page 3 of 7

areas and in areas where vista control is desired. Applications of Flurprimidol Solution may result in extended pruning/trimming cycles and reduce the need for pruning in dangerous locations.

Tree Species	Application Rate
	1 ml per 4" of trunk circumference measured
Black Walnut, Boxelder, Cottonwood, Dogwood, Elms (American,	within 12" of the ground. Dosage may be
Chinese, Siberian, Winged), Blue Gum Eucalyptus, Hackberry,	increased to 2 ml per injection site for trees with
Maples (Norway, Red, Silver, Sugar), Melaleuca, Oaks (Laurel,	diameters over 12".
Live, Pin, Post, Red, Southern Red, Water, Willow), Pine	Application rates vary by tree species and local
(Australian), Sugarberry, Sweetgum, Sycamore, Tallowtree	conditions.
(Chinese) and Willow (Black)	

Note: A single Flurprimidol Solution application provides tree growth regulation for three to five years. Do not inject this product more than once every two years as more frequent application is known to cause adverse effects on trees, such as stacking of leaves.

Shoot growth is most common between April and June. Flurprimidol Solution applications in the preceding fall or early spring provide more first-year growth control than applications made at other times. Inject Flurprimidol Solution at any time during the spring, summer or fall, as long as transpiration is occurring. [Inject Flurprimidol Solution any time between bud swell in the spring and the beginning of fall coloration.] Tree bark must be pliable enough to accept the injection; this depends on local weather conditions. Make treatments in the summer or fall, prior to dormancy for deciduous trees, to regulate growth the following spring. Regardless of application timing, growth reduction within the first year of treatment may not be as noticeable as in subsequent years.

The growth varies based on species, location, climatic factors, environmental conditions, etc. Before large-scale tree injection programs are pursued, establish by testing on a limited number of trees, the best rates to produce the desired results under local growing conditions. Treatment may cause bark damage; check bark before repeating treatments.

Do not inject a tree showing one or more of the following conditions:

- 1. The tree is hollow or decayed in an area equal to one-half or more of its diameter.
- 2. The tree is heavily decayed in the crown. Heavy decay is indicated by dead or decayed limbs and branches over most of the crown, or one or two major limbs over 6" in diameter showing signs of decay.
- 3. The tree is missing bark from the main trunk one-half way around or more.
- 4. The tree shows other signs of poor condition;
 - a) Heavy, deep cracking of the bark on a main branch showing interior wood.
 - b) Deformed or misshapen twigs and branches.
 - c) Size or color of leaves inappropriate for the season of the year.
 - d) Tree under stress from insect infestation.

How to Use SePRO Direct-Inject™ Chemicals with SePRO Direct-Inject™ Tree Injection Units

- 1. Use only SePRO's Direct-Inject™ chemicals with your Unit as they have been formulated specifically for the Direct-Inject™ systems. Use of other chemicals will invalidate warranty.
- 2. Attach the chemical bottle or pack to the Direct-Inject™ Unit and prepare the Unit to make injections.
- 3. Set the delivery volume on the Unit.
- 4. Follow the label directions on this insert to determine the amount of chemical and number of injection sites.
- 5. Determine where to make injections in the bark. Generally, the Injection Tip is inserted into the fissure (valley) of the tree bark. Inject thin-barked trees in the thicker part of the tree bark. Thick-barked trees require a longer Injection Tip.
- 6. Make injections working around the circumference of the tree. For Wedgle™ Direct-Inject™ Units make injections within 12" of the ground. For Portle™ Direct-Inject™ Units the injection height varies depending on type of tree and location
- 7. With a smooth motion, firmly squeeze the Injection Unit trigger or handles. This releases a pre-measured chemical dose to the tree.
- 8. Slowly withdraw the Injection Tip. The WedgleTM WedgeChek or PortleTM Injection Sleeve [PortChek] plugs the hole, keeping the chemical in the tree.
- 9. Continue making injections moving around the tree until the entire tree trunk has been treated.
- 10. During use, periodically clean the Direct-Inject™ Unit to prevent clogging.

Flurprimidol Solution: Page 4 of 7

Storage and Disposal

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

Pesticide Storage: Store in a tightly closed container in a cool, dry place. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Disposal: Triple rinse, or equivalent, then dispose of in an incinerator or landfill approved for pesticide containers. [Return the used 1 qt. 2 fl. oz. (1000 ml) chemical pack to SePRO, in the provided pre-paid mailer, for disposal.]

Notice of Warranty

SePRO warrants that this product conforms to the chemical description on the label and is reasonably fit for use under average conditions when used strictly in accordance with the directions on the labeling. SePRO does not make or authorize any agent or representative to make any other warranty, guarantee or representation, express or implied, concerning this product.

For assistance contact

SePRO Corporation

Carmel, IN 46032 USA Phone: (317) 580-8282 www.sepro.com

Direct-Inject[™], Wedgle[™] and WedgeChek[™] are trademarks of ArborSystems Wedgle[™] Tip is protected by U.S. Patent #5,239,773 WedgeChek[™] is protected by U.S. Patent #5,797,215

(Box Label)

FLURPRIMIDOL SOLUTION SePRO Direct-Inject™ Chemical

For management, reduction or regulation of shoot growth and overall canopy growth of a wide variety of ornamental trees in utility rights-of-way, urban environments, residential areas and interior plantscapes

(such as those in domestic landscape/garden areas, public display plantings, recreation areas, highway and other transportation rights-of-way, scenic corridors, storage areas, forest areas, campgrounds, and other uncultivated, nonagricultural areas)

For Use By Professional Arborists/Applicators, Grounds Maintenance Professionals,
City Foresters, Electric Utility Foresters/Contractors and Landscapers
To be used only with the SePRO Direct-Inject™ Tree Injection Systems
• Easy • No Drilling • No Posting •

Active Ingredient:

Flurprimidol* (CAS No. 56425-91-3)	48.1%
Other Ingredients	
	100.0%

*α-(1-methylethyl)-α-[4-(trifluromethoxy) phenyl]-5-pyrimidinemethanol Contains 2.3 oz. (65.6 grams) active ingredient per 4 fl. oz. (120 ml) bottle [Contains 19.4 oz. (547 grams) active ingredient per 1 qt. 2 fl. oz. (1000 ml) pack]

Keep Out of Reach of Children CAUTION

See insert for additional precautionary statements and complete Directions for Use.

Net Contents 4 fl. oz. (120 ml) [Net Contents 1 qt. 2 fl. oz. (1000 ml)]

DIRECTIONS FOR USE

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

Flurprimidol Solution: Page 5 of 7

SePRO Direct-Inject™ Tree Injection Systems: The SePRO Direct-Inject™ Units are designed to be used only with SePRO's pre-bottled [pre-packed] chemicals. Tampering with bottles [packs] or contents may cause non-warrantied damage to your injection system.

Storage and Disposal

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

Pesticide Storage: Store in a tightly closed container in a cool, dry place. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Disposal: Triple rinse, or equivalent, then dispose of in an incinerator or landfill approved for pesticide containers. [Return the used 1 qt. 2 fl. oz. (1000 ml) chemical pack to SePRO, in the provided pre-paid mailer, for disposal.]

EPA Reg. No. 67690-____

EPA Est. 69117-NE-1

Manufactured by SePRO Corporation www.sepro.com

(Container Label)

FLURPRIMIDOL SOLUTION SePRO Direct-Inject™ Chemical

For management, reduction or regulation of shoot growth and overall canopy growth of a wide variety of ornamental trees in utility rights-of-way, urban environments, residential areas and interior plantscapes

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*α-(1-methylethyl)-α-[4-(trifluromethoxy) phenyl]-5-pyrimidinemethanol Contains 2.3 oz. (65.6 grams) active ingredient per 4 fl. oz. (120 ml) bottle [Contains 19.4 oz. (547 grams) active ingredient per 1 qt. 2 fl. oz. (1000 ml) pack]

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Flurprimidol Solution: Page 6 of 7

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Storage and Disposal

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

Pesticide Storage: Store in a tightly closed container in a cool, dry place. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Disposal: Triple rinse, or equivalent, then dispose of in an incinerator or landfill approved for pesticide containers. [Return the used 1 qt. 2 fl. oz. (1000 ml) chemical pack to SePRO, in the provided pre-paid mailer, for disposal.]

EPA Reg. No. 67690-_

EPA Est. 69117-NE-1

Manufactured by SePRO Corporation

www.sepro.com

{Note: Portle[™] may be universally substituted for Wedgle[™]}

Denotes alternate/optional language

{ } Denotes language that does not appear on market labeling

{Additional Selling/Marketing Copy for use in conjunction with other label elements; on the website; and in promotional materials, displays, etc.}

General Information

Flurprimidol Solution is a plant growth regulator [PGR] [tree growth regulator] [TGR] developed for the management, reduction or regulation of shoot growth and pruning volume of a wide variety of ornamental trees in utility rights-of-way, urban environments, residential areas and non-crop areas. Flurprimidol Solution has been shown to effectively reduce the growth rate of trees which 1) reduces the frequency of maintenance pruning, saving on labor time and expenses [costs] and 2) reduces the biomass removed when treated trees are pruned, reducing pruning time and hauling/disposal expenses.

Flurprimidol Solution is a SePRO Direct-Inject™ chemical developed by SePRO for use with the SePRO Direct-Inject™ Tree Injection System. Flurprimidol Solution is intended for use by arborists, grounds maintenance professionals, city foresters, electric utility foresters/contractors and landscapers.

Flurprimidol, the active ingredient in Flurprimidol Solution, inhibits the production of the plant growth hormone [compound] gibberellin [gibberellic acid]. Gibberellin promotes cells' elongation within tree tissues. When gibberellin levels are lowered cells still divide but do not elongate as much as those in untreated trees. The reduction in gibberellin reduces shoot growth resulting in shorter, more compact internodes in shoots. Flurprimidol Solution reduces the production of gibberellin resulting in shorter, compact shoot growth.

Some growth regulators slow the rate of growth by inhibiting cell division. Flurprimidol Solution is a growth regulator with a different mode of action. Cell division is not suppressed, but individual cells will not elongate as much as untreated cells. By reducing the production of gibberellins, Flurprimidol Solution applications result in shortened internodal growth. Overall tree [plant] size is more condensed. Growth reduction within the first year of treatment may not be as noticeable as in subsequent years.

Growth reduction is beneficial for trees planted under and near utility [power] lines, close to homes, decks, patios and sidewalks, in restricted vaults, [municipal trees planted in restricted vaults,] or in areas where excessive growth may block a scenic view. Utility arborists site PGR [TGR] benefits such as reduced vegetation-related power outages, more efficient trimming operations, lengthened trim cycles and reduced biomass of tree trimmings. The shortening of internodal growth also results in the thickening of the tree canopy, enhancing shade and screening benefits. Leaves often exhibit a darker green color. The reduction in growth may allow extension of trim cycles.

A 1993 report on flurprimidol¹ concluded that "shoot regrowth suppression and biomass reduction averaged 63% and 75%, respectively, in the four species tested" (Silver Maple, Willow Oak, Water Oak and Norway Maple) and "the reduction in trim and chip time was directly related to these reductions in growth, averaging 55% for the four species tested."

Flurprimidol Solution: Page 7 of 7

Condensed vegetative growth results in a higher root-to-crown [root-to-shoot] [root-to-canopy] ratio. In locations where the root area is limited, a smaller canopy may be desirable enabling the root system to adequately support the canopy. Locations with limited root space include parking lots, urban commercial-area plantings, areas surrounded by sidewalks, container plantings and some urban yards. A high ratio between the root system and the canopy can benefit trees in dry locations by helping prevent dehydration stress. A high ratio between the root system and the canopy offers potential for improved stress resistance or damage resulting from drought, air pollution and temperature extremes.

With a single Flurprimidol Solution application, vegetative growth can be reduced by 40% to 90% over a three-year period. Results vary depending upon tree species and local growing conditions.

Flurprimidol Solution reduces tree growth and has been associated with a variety of "pre-stress conditioning" benefits including: more tree tolerance to unfavorable conditions such as drought and high temperature, an increased tree tolerance to stress-related disease, stimulation of fibrous root systems in newly transplanted and established trees, and observed stabilization/regained health of overly mature trees and trees in mild decline.

¹Tree growth reduction following application of flurprimidol tree growth regulator, by K.D. Redding, P.L. Burch and K.C. Miller, in <u>Down to Earth</u>, Vol. 48, No. 2, Fall/Winter 1993.

SePRO Direct-Inject[™] Tree Injection System

The Direct-Inject™ systems are effective. Chemicals are injected directly into the tree. Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased. Also, because no chemical is lost in non-active wood, the Direct-Inject™ systems allow you to use less chemical to achieve high levels of effectiveness; this saves money and reduces chemical waste. With no holes to drill, no air or pathogens are allowed to enter the tree, potential decay never starts and long term wounding is prevented. The tree's ability to move water and nutrients, and to store food, is not compromised.

Pre-mixed chemicals are supplied in self-sealing containers. After injections have been made, you have only one small container of which to dispose. Concerns you may have had when spraying will be eliminated. And with a closed system there is no mixing.

With no drilling required the SePRO Direct-Inject™ Systems:

- Minimize wounding to keep out fungi, bacteria, and insects.
- Prevent air from getting into the tree. When air is allowed into a tree's vascular system, it cuts off the flow of water and nutrients.
- Require no drills, power supply or other bulky equipment.

With these systems and chemicals, tree care professionals effectively combat and manage many of the most devastating environmental plant threats.

The SePRO Direct-Inject™ Systems are designed to preserve and protect treated trees. Many trees can be treated in five minutes or less. The SePRO Direct-Inject™ Systems are among the most efficient chemical delivery systems available. You achieve control with less chemical because chemical is placed precisely where the tree can best use it. No chemical is lost in dead wood.

SePRO Direct-Inject™ chemicals are integral parts of the Direct-Inject™ Tree Injection Systems. Use only SePRO's Direct-Inject™ chemicals with the Direct-Inject™ Units. Using unauthorized chemicals with the SePRO Direct-Inject™ Systems constitutes a violation of Federal law.

Chemical Selection

Your distributor can advise you on the best chemical selections for trees in your area. See our website (www. sepro.com) for additional information.

Flurprimidol Solution

Common name: Cutless® (Flurprimidol)

Chemical: α -(1-methylethyl)- α -[4-(trifluromethoxy) phenyl]-5-pyrimidinemethanol

Cutless® is a registered trademark of Sepro Corporation.