

Cambistat[®]

Tree Growth Regulator

Available in:

1 gallons
(3785ml)

2 Liters
(2000ml)

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Side/Back Panel for Additional Precautionary Statements, First Aid and Directions for Use

Cambistat[™] is a plant growth regulator that slows the vegetative growth of plants by inhibiting gibberellin biosynthesis. Cambistat[™] is designed to gently and predictably slow the growth of trees. A single application provides a long lasting reduction of vegetative growth, effectively extending the trimming cycle of trees and reducing the amount of woody growth that must be removed. In addition, use of Cambistat[™] may cause other plant growth effects that are beneficial for trees such as increased root density, improved drought and heat resistance, and higher tolerance to insects and diseases. Cambistat will also benefit trees that are too large for their growing site and increase the longevity of trees growing in stressful environments.

Active Ingredient

Pacllobutrazol (R*, R*)-(?)-?-[4-chlorophenyl) Methyl]-?-(1,1-dimethylethyl)- 1H-1,2,4-triazole-1-ethanol	22.3%
Other Ingredients.....	77.7%
Total	100%

EPA Reg. No. 74779-3

EPA Est. No. 63416-MN-001

Distributed by:



Rainbow Treecare Scientific Advancements

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Minnetonka, MN 55343

1-877-272-6747

www.treescience.com

FIRST AID:

IF SWALLOWED	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or a doctor. • Do not give anything by mouth to an unconscious person
IF IN EYES	<ul style="list-style-type: none"> • 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 poison control center or doctor immediately for treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call poison control center or doctor immediately for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
HOT LINE NUMBER	
For 24 hour medical emergency assistance (human or animal), or chemical emergency assistance (spill, leak or accident). Call CHEMTREC at 1-800-424-9300.	
NOTES TO PHYSICIAN	
No specific antidote is available. Treat the patient symptomatically.	

PRECAUTIONARY STATEMENT

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any water proof material
- Shoes plus socks

Applicators and other handlers are also recommended to wear protective eyewear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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 cleaning equipment or disposing of equipment wash water.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR LESS THAN OPTIMAL GROWTH REDUCTION.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

General Information

Cambistat™ is a plant growth regulator that slows the vegetative growth of plants by inhibiting gibberellin biosynthesis. Cambistat™ is designed to gently and predictably slow the growth of trees. A single application provides a long lasting reduction of vegetative growth, effectively extending the trimming cycle of trees and reducing the amount of woody growth that must be removed. In addition, use of Cambistat™ may cause other plant growth effects that are beneficial for trees such as increased root density, improved drought and heat resistance, and higher tolerance to insects and diseases. Cambistat will also benefit trees that are too large for their growing site and increase the longevity of trees growing in stressful environments. Cambistat™ may be applied by soil injection or basal soil drench.

Cambistat™ may be used on utility rights-of-way, residential areas, urban areas, and other non-crop areas.

Indications of Tree Response:

Cambistat™ is readily absorbed by plant roots and is translocated to the actively growing points. Initially, an intense greening of the foliage may occur in response to Cambistat™ treatment. Long-term effects include: shortened internodes and smaller, thicker leaves. Visible results may be seen in as little as 2 months but measurable growth reduction may take as long as a year to occur.

General Use Precautions

- Apply at recommended rates and follow safety precautions.
- Non-fruit or nut bearing trees that are not specified on this label may be treated if all other label directions are followed.
- The degree and duration of Cambistat™ applications can be affected by local soil and environmental conditions. Carefully read and follow label instructions to ensure effectiveness.
- Retreat every 3 years or wait until the effects from the previous application subside.
- Heavily compacted soils around trees may need to be vertical mulched, aerated or receive other remedial soil compaction treatments for Cambistat™ to effectively promote root growth.

General Use Precautions -continued

- Localized stunting or injury of turfgrass or other non-target plants immediately adjacent to the treatment site may occur if Cambistat flows off of the application site.
- Avoid Cambistat™ basal drench applications on inclines and other areas where treated soil is likely to be washed away from the base of the tree by rainfall or irrigation.
- Shrubs and/or herbaceous ornamentals next to treated trees may be affected if their roots extend into the treatment zone.
- Do not treat sugar maple trees or any other trees if they could be or will be tapped for sugar.
- Do not treat fruit or nut trees that will be harvested within one year.
- Do not treat severely stressed trees or trees in rapid decline.
- Do not apply Cambistat™ through any irrigation system.

DOSING

It is important to apply the proper dose to the tree you are treating. Use the following steps to determine the required dose:

- 1) Correctly identify the tree species.
- 2) Measure tree diameter at breast height (DBH). (See determining DBH)
- 3) Locate the correct dosage rate category for your species (See tables 2 and 3).
- 4) Locate the amount of material to use based on the category and DBH of your species (See tables 4 and 5).
- 5) Determine if any rate reductions are necessary (See Dosage Reduction Considerations).

DETERMINING DBH

Single Stem: Measure the standard DBH of the tree at 4' 6" above the soil.

Multiple Individual Trees Growing in Close Proximity: For trees that have grown close together, measure the DBH of each stem and treat each tree individually. You may need to make rate reductions due to the overlapping canopies (See Dosage Reduction Considerations). Also, because of close proximity of trees, it may be necessary to apply Cambistat to outer perimeter of clumped trees.

Multi-stem Split Below DBH: For a tree that has multiple stems splitting below DBH, measure the tree at the narrowest point between the root flare and the split.

Stem Clusters: For trees that are grown too close together to be treated as individual trees, measure the DBH of each stem and add the measurements together. You may need to make rate reductions due to overlapping canopies (see Dosage Reduction Considerations). Also, because of close proximity of trees, it may be necessary to apply Cambistat to outer perimeter of clumped trees.

Tree Splits at DBH: For a tree that splits into two or more stems at DBH, measure and add the diameter of the stems and measure the narrowest point below the split. Take the average of these values.

DOSAGE REDUCTION CONSIDERATIONS

Canopy Missing: Look at the canopy of the tree and compare it to a "normal" canopy for that trunk diameter. For example, if a tree is missing large branches from storm damage or utility line clearance pruning it is necessary to estimate the percentage of canopy missing and subtract this percentage from the dosage amount. i.e. subtract 30% from dosage if 30% is missing from the canopy.

Canopy Suppression: Trees growing in close proximity to other trees, multi-stemmed trees, and trees growing in clusters may have overlapping canopies. Your judgment is required to compare the canopies of these trees to the "normal" canopy for trees with similar trunk diameter. It may be necessary to reduce the dosage amount based on the percent of suppression and canopy overlap

DOSAGE REDUCTION CONSIDERATIONS - continued

Stressed or Declining Trees: Dosage rates for trees that have lost canopy from construction damage, storm damage, insects, disease, girdling roots and/or other types of stress must be reduced to minimize the risk of over-regulation. A full dose of Cambistat applied to a tree with small, thin, or declining canopy may result in smaller leaves and a sparse canopy.

- Reduce the dosage rate on highly stressed trees by 25% or more
- Trees that show significant stress and are in rapid decline are NOT good candidates for treatment.
- For stressed trees, consider that additional canopy may decline before treatment response begins so you may need to reduce the dose by more than what is presently missing.

Trees with Confined or Compromised Root Systems: Trees in sidewalk boxes, above ground planters, and new transplants may absorb Cambistat from the treatment area in a higher proportion than a tree with a full root system. Reduce the dosage rate by 25% or more.

MIXING PROCEDURE

Dilute 1 part Cambistat with 11 parts water. To make a large Ready to use solution, combine 1 quart of Cambistat with 11 quarts of water to make 3 gallons of solution. See table 1 for additional examples. When mixing large amounts of Cambistat, mix only the amount that will be used within that day. Cambistat is best applied with equipment that has constant agitation.

Table 1. Examples of the volumes of Cambistat and Water needed to make Ready-to-Use solution.

Volume of Cambistat	Volume of Water	Makes
1 qt	11 quarts	3 gallons
1 gallon	11 gallons	12 gallons
4 gallons	44 gallons	48 gallons

If applying mixture to compacted soils, high clay content soils, or other hard-to-wet soils, use a nonionic, organosilicone wetting agent (surfactant) to increase penetration of the soil. Mix approximately ½ ounce surfactant per 3 gallons or 1 pint surfactant per 100 gallons. Follow all label directions and precautions on the surfactant product label.

APPLICATION METHODS

Soil Injection

Inject the Ready to Use solution approximately 2-6 inches deep at 50-200 psi using the volumes in Table 5. Orient injection orifices to release the diluted product horizontally at the point of injection. Divide the required dose evenly among injection sites spaced as uniformly as possible around the base of the tree. Position the injection sites to release the diluted Cambistat™ as close as possible to the point of contact between the soil and the tree beneath the soil so that the solution is readily absorbed by the tree (Figure 1). Locate injection sites next to buttress roots (Figure 1). For trees less than 6 inches DBH, use at least 4 injection sites evenly spaced around the tree.

Soil Basal Drench

Carefully dig a shallow furrow 2 – 6 inches deep around the base of the tree. If treating an individual tree, use the volumes determined in Table 4. If treating multiple trees, a Ready-To-Use solution can be created by using the volumes in Table 5. Carefully pour the Ready-To-Use solution evenly around the tree into the furrow using an applicator that provides a controlled flow. Make the application at the point of contact between the soil and the tree trunk (Figure 2). After the diluted product has been absorbed by the soil, refill the furrow with untreated soil. Note: If making an application on a slope, a soil dam may be created to contain the application within the furrow.

APPLICATION TIMING

For a more manicured look, apply Cambistat™ to trees 30 to 180 days before they are pruned. To allow some regrowth and a more natural look, apply Cambistat™ at the time of pruning.

Soil applications can be made throughout the year, except when the soil is frozen or saturated with water. Note: When applied to the soil, Cambistat™ is absorbed by tree roots and translocated to the growing points (sub-apical meristems) in response to evaporative water loss (transpiration). If applications are made after leaf drop, uptake of Cambistat™ will not occur until development of new leaves and resumption of transpiration.

For questions, contact Rainbow Treecare Scientific Advancements at 877-272-6747.

Table 6. Partial hole volumes for soil injection (based on 250 ml delivered per hole)

Partial hole	Volume
.1	25 ml
.2	50 ml
.3	75 ml
.4	100 ml
.5	125 ml
.6	150 ml
.7	175 ml
.8	200 ml
.9	225 ml

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide Storage: Keep container closed when not in use. Do not store near food or feed. Protect from freezing. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Notice: Read the entire Directions For Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

Follow the Directions For Use carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Tree injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or tree conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS or seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS and Seller harmless for any claims relating to such factors.

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