

SPECIMEN LABEL

EMAMECTIN BENZOATE

GROUP

6

INSECTICIDE

ARBORMECTIN®

Injected insecticide for two year control of listed insect and mite pests in deciduous, coniferous, and palm trees

DISTRIBUTED by:
ALBAUGH, LLC
- Rotam North America
Division
1525 NE 36th Street
Ankeny, IA 50021

Active Ingredient:	By Wt.
Emamectin Benzoate ¹	4.0%
Other Ingredients:	96.0%
Total:	100.0%

¹CAS No. 155569-91-8. Contains 0.36 lb. emamectin per gallon.

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 label booklet for complete First Aid, Precautionary Statements, Directions For Use, and Storage and Disposal.



EPA Reg. No. 83100-35-83979

AD102019

FIRST AID

IF SWALLOWED:

- Call poison control center or doctor immediately for treatment advice.
- Have person sip glass of water if able to swallow.
- 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 ON SKIN:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

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.

NOTE TO PHYSICIAN:

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (<15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

HOTLINE NUMBER

For 24-Hour Medical Emergency Assistance (Human or Animal),
call **1-800-222-1222**.

For Chemical Emergency Assistance (Spill, Leak, Fire or Accident),
call **CHEMTREC at 1-800-424-9300**.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate; butyl rubber ≥ 14 mils; nitrile rubber ≥ 14 mils; or neoprene rubber ≥ 14 mils
- Shoes and socks
- Protective eyewear

ENVIRONMENTAL HAZARDS

This product is highly toxic to fish, mammals and aquatic invertebrates. 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 washwater. This product is highly toxic to bees exposed to direct treatment or residues on blooming trees. Do not apply this product to blooming trees if bees are foraging the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame. Do not mix or allow to come into contact with an oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

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

IMPORTANT: Read entire label before using this product. Failure to follow label instructions may result in poor control or tree injury. Failure to follow label directions may cause injury to people, animals, and environment.

PRODUCT INFORMATION

ARBORMECTIN® is for control of mature and immature insect and mite pests of deciduous, coniferous, and palm trees including, but not limited to, those growing in residential and commercial landscapes, parks, plantations, seed orchards, and forested sites (in private, municipal, State, Tribal and national areas). **ARBORMECTIN®** contains the active ingredient emamectin benzoate and is formulated to translocate in the tree's vascular system when injected. This product must be placed into active sapwood and will actively control pests for up to two years.

USE DIRECTIONS

ARBORMECTIN® is designed for use with tree injection devices that meet the label and dose requirements for the control of listed pests of trees. Follow manufacturer's directions for equipment use.

Dosages are based on the Diameter (in inches) of the tree at Breast Height ("DBH"). DBH is the outside bark diameter of the trunk at 4.5 feet (1.37m) above the ground on the uphill side of the tree. For the purposes of determining breast height, the ground includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

The diameter is determined by measuring the circumference of the tree at DBH, and dividing circumference (in inches) by three (3). To determine DBH for multi-stemmed woody ornamentals, measure the DBH for each stem or branch and add together for the total DBH per tree.

Placement of Application/Injection Sites: Inject at the base of the tree. Inject into the stem within 12 to 24" of the soil, into the trunk flare or into tree roots exposing them by shallow excavation. Make applications into intact, healthy sapwood. Do not inject into injured areas or areas with decay.

Number of Injection Sites: Work around the tree, spacing injection sites approximately every 4 to 8 inches of tree's circumference or according to the manufacturer's recommendation for the application device.

Drill Depth: Drill through the bark then 5/8" to 1-5/8" (hardwoods) or 1-5/8" to 2" (conifers) into the sapwood with the appropriate sized drill bit. Use clean, sharp drill bits. Precautions should be taken to avoid diseased areas and transferring infected tissues to other injection sites.

Resinous Conifers: In resinous conifers, such as pine and spruce, start the injection immediately after drilling into the sapwood. A prolonged delay may reduce uptake on account of resin flow into opening.

Palms

Make applications into palms 2-3 feet from the soil level, above the lignified tissues. One (typical) to 4 injection points may be installed. Drill into the palm tissue 4" deep, or up to 1/3 trunk diameter.

WHEN TO TREAT

ARBORMECTIN® contains the active ingredient emamectin benzoate which is a glycoside insecticide. It is active against immature and adult stages of arthropods. The primary route of toxicity is through ingestion.

ENVIRONMENTAL CONDITIONS: Uptake of **ARBORMECTIN®** is dependent upon the tree's transpiration. Transpiration is dependent on a number of abiotic and biotic factors, such as soil moisture, soil and ambient temperature, and time of day. For uptake, apply when soil is moist, soil temperatures are above 45°F, ambient temperatures are between 40° to 90°F, and during the 24 hour period when transpiration

is greatest, typically before 2:00 PM. Applications to drought or heat stressed trees may result in injury to tree tissue, poor treatment and subsequent control. Avoid treating trees that are moisture stressed or suffering from herbicide damage.

MONITOR TREE HEALTH and PEST INFESTATIONS: Effective injection treatment is favored by a full canopy (i.e., leaves) and healthy vascular system. Once these tissues are compromised by pest damage (larval galleries, defoliation, leaf mining, etc.) an effective and uniform application of **ARBORMECTIN®** may be difficult to achieve and subsequent control may be poor. For optimum results, treat at least 2 to 3 weeks before pests historically infest the host tree. As a result of systemic movement and longevity of **ARBORMECTIN®** in trees, this interval may be extended much earlier to 6 months should tree dormancy, adverse weather, management, asynchronous life cycle of pests, etc., allow earlier application timing.

ARBORMECTIN® may also be effective as a remedial treatment against some pests, such as those with slower development or if multiple life stages are susceptible to **ARBORMECTIN®**. Pests that attack the stem and branches such as clearwing borers may disrupt vascular tissue, resulting in poor distribution in an infested tree. This includes the initial larval stages of pests, such as flat-headed borers and clearwing borers, that attack the stem and branches, which may disrupt vascular tissue resulting in poor distribution of the product in an infested tree. However, control may be achieved if larvae come into contact or feed on **ARBORMECTIN®** treated tissues.

USE RATES¹

Use as formulated or dilute with equivalent 1 to 9 volumes of water.

Tree Diameter (DBH) (Inches)	Low* mL product/tree	Medium mL product/tree	High mL product/tree
4 to 6	10 - 20	20 - 45	45 - 60
7 to 9	20 - 30	30 - 65	65 - 90
10 to 12	25 - 35	35 - 90	90 - 120
13 to 15	30 - 45	45 - 110	110 - 150
16 to 18	40 - 55	55 - 135	135 - 180
19 to 21	50 - 60	60 - 160	160 - 210
22 to 24	55 - 70	70 - 180	180 - 240
25 to 27	65 - 80	80 - 200	200 - 270
28 to 30	70 - 90	90 - 225	225 - 300
31 to 33	80 - 100	100 - 250	250 - 330
34 to 36	85 - 110	110 - 270	270 - 360
37 to 39	90 - 120	120 - 290	290 - 390
≥40	120 - 240	240 - 300	300 - 400

¹Not for use in the State of California.

*In Palms always use the low ml. product/tree.

CALIFORNIA USE RATES

Use as formulated or dilute with equivalent 1 to 9 volumes of water.

Tree Diameter (DBH) (Inches)	Low* mL product/tree	Medium mL product/tree	High mL product/tree
4 to 6	15 - 20	20 - 45	45 - 60
7 to 9	20 - 30	30 - 65	65 - 90
10 to 12	30 - 35	35 - 90	90 - 120
13 to 15	35 - 45	45 - 110	110 - 150
16 to 18	42 - 55	55 - 135	135 - 180
19 to 21	50 - 60	60 - 160	160 - 210
22 to 24	-	115 - 180	180 - 240
25 to 27	-	130 - 200	200 - 270
28 to 30	-	145 - 225	225 - 300
31 to 33	-	160 - 250	250 - 330
34 to 36	-	175 - 270	270 - 360
37 to 39	-	190 - 290	290 - 390
≥40	-	205 - 300	300 - 400

*In Palms always use the low ml. product/tree.

The use of low, medium, and high rates are based on the professional judgment of the applicator as to what constitutes a low, medium or high infestation. Higher rates tend to provide longer residual and control of more difficult to control insects. See **Target Pest** table for additional information in choosing the amount of product to apply.

If the tree canopy has been significantly reduced, i.e., excessive tree pruning or turning trees into a hedge, reduce dose accordingly.

ADDITIONAL DIRECTIONS FOR APPLICATION IN TREES

Tree Tissue	Target Pest	Application Rate Range¹	Comments
Seed and Cone	Pine Coneworm <i>(Dioryctria spp.)</i> Cone Beetle² <i>(Conophthora spp.)</i> Pine Cone Seed Bug (suppression of <i>Leptoglossus</i> and <i>Tetyra</i> spp. in the year of treatment)	Medium to High	For optimal control, apply in the fall for early season pests or at least 30 days before insect attack.

(continued)

¹Use medium to high rates for remedial and longer residual control.

²Not registered for use in California.

ADDITIONAL DIRECTIONS FOR APPLICATION IN TREES (cont.)

Tree Tissue	Target Pest	Application Rate Range ¹	Comments
Bud and Leaf	Aphid² Bagworm Cankerworm Casebearer² Conifer Mites² Eastern Oak Looper Elm Spanworm Fall Webworm Japanese Beetle Gypsy Moth Honeylocust Plant Bug Leafminers (such as <i>Lepidoptera</i> , <i>Coleoptera</i> , <i>Hymenoptera</i>) Linden Looper Mimosa Webworm Oak Worm Pine Needle Miner² Pine Needle Scale Poplar Tentmaker² Red Palm Mite Sawfly (such as Elm, Pine) Tussock Moth Variable Oakleaf Caterpillar² Yellownecked Caterpillar²	Low to High	Apply at least 2-3 weeks before the pest has historically been present. Consult with local extension agent for when this will occur in your area. For more uniform distribution in the canopy (foliage), dilute product with equivalent 1 to 9 volumes of water prior to application.
	Tent Caterpillars (such as Eastern, Forest, Pacific, and Western) Western Spruce Budworm Winter Moth	Low to Medium	

(continued)

¹Use medium to high rates for remedial and longer residual control.

²Not registered for use in California.

ADDITIONAL DIRECTIONS FOR APPLICATION IN TREES (cont.)

Tree Tissue	Target Pest	Application Rate Range ¹	Comments
Shoot, Stem Trunk and Branch	Flatheaded Borers (such as adult and larvae of Bronze Birch Borer ² , Emerald Ash Borer, and Two-lined Chestnut Borer ²)	Medium to High	For optimal control, apply at least 30 days before historical egg hatch or adult flight and to trees whose vascular tissue is not damaged.
	Carpenterworm² Clearwing Borers (such as Ash and Sequoia Pine Pitch Tube Moth) Cottonwood Twig Borer Zimmerman Moth	Low to High	For more uniform distribution in the canopy (foliage), dilute product with equivalent 1 to 9 volumes of water prior to application.
	Ambrosia Beetles (such as Polyphagous Shot Hole Borer, Euwallacea fornicatus) ³ Cynipid Gall Wasp² (such as Banyan Stem Gall Wasp) Pinewood Nematode Roundheaded Borers (excluding Asian Longhorn Beetles)	Medium to High	If vascular tissue is damaged or plugged by insect galleries, nematodes or fungi, uniform treatment and control may not be achieved.

¹Use medium to high rates for remedial and longer residual control.

²Not registered for use in California.

³Use of **ARBORMECTIN®** to control this insect may not result in the control of diseases vectored by the insect.

COMPATIBILITY

Do not mix **ARBORMECTIN**[®] before injection with other products such as insecticides, fungicides, plant growth regulators, surfactants, adjuvants, and fertilizers whose labels indicate that it should not be mixed with **ARBORMECTIN**[®]. If applicator has no prior experience with a particular tank mix; check physical compatibility by making a small clear jar test using correct proportions to be tank mixed.

RESTRICTION

Do not apply to trees that may be harvested for food consumption by humans or used in animal feed.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place, away from children and pets. Keep from freezing.

Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, if allowed by State and local authorities Stay out of smoke from burning container.

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.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ALBAUGH, LLC – Rotam North America Division or Seller.

To the extent permitted by applicable law, Buyer and User agree to hold ALBAUGH, LLC – Rotam North America Division and Seller harmless for any claims relating to such factors.

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