

# ARECA™

Fungicide



STATE OF HAWAII  
Department of Agriculture

**ACCEPTED**

LICENSE NO.

**9836.69**

ACTIVE INGREDIENT:	% BY WT.
Aluminum tris (0-ethyl phosphonate) .....	80.0%
OTHER INGREDIENTS: .....	20.0%
<b>TOTAL:</b>	<b>100.0%</b>

EPA Reg. No. 53883-320-59807  
EPA Est. No. 37429-GA-001 (002)

## KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24 hour emergency medical treatment information call 1-800-356-4647.

See booklet accompanying this container for complete labeling including Directions for Use and Warranty.

ESL121212 REV090116

**981145**  
Net Contents: **5 Pounds (2.27 kg)**

Manufactured for:  
**OHP, Inc.**  
PO Box 51230  
Mainland, PA 19451  
(800) 356-4647



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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Harmful if swallowed, absorbed through the skin, or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic and estuarine invertebrates. Drift and runoff may be hazardous to aquatic and estuarine organisms in neighboring areas. 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.

**DIRECTIONS FOR USE**

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

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 agency responsible for pesticide regulation.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in original container and keep tightly closed. Store in a cool dry place.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes 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 HANDLING: Nonrefillable Container (rigid-fifty lbs. or less):** Nonrefillable 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 a mix tank. 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 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.

For complete label, open here. ▶

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CAUTION**

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HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION.** Harmful if swallowed, absorbed through the skin, or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing.

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**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical resistant to this product are butyl rubber, nitrile rubber, and neoprene rubber. If you want more options, follow the instructions for category A 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 waterproof material
- Shoes plus socks
- Protective eyewear

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic and estuarine invertebrates. Drift and runoff may be hazardous to aquatic and estuarine organisms in neighboring areas. 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.

**USER SAFETY RECOMMENDATIONS**

**User should:**

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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.

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## DIRECTIONS FOR USE

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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 agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow entry into treated areas during the restricted entry interval of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of the treated areas until sprays have dried.

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Read entire label before using this product.

**Do not use this product on home or residential sites.**

**ARECA** is a systemic fungicide that will control or suppress listed fungal diseases in a variety of crops when used according to the label directions and as part of good management practices programs.

### COMPATIBILITY

**Turf and Ornamentals:** Some foliar fertilizers and copper-based fungicides are not compatible with **ARECA** and a tank mix of these products with **ARECA** may result in phytotoxicity to various plants. To avoid this phytotoxicity, apply **ARECA** at least 14 days before or after an application of a copper-based fungicide, and in these spray programs, avoid applying with airblast equipment. Stickers, extenders, and wetting agents must not be mixed with **ARECA**. Do not tank mix **ARECA** with the following products because they are not compatible with **ARECA**: Flowable formulations containing chlorothalonil, flowable formulations containing mancozeb, Bayleton® 50W (or other similar registered formulations containing triadimefon), Rubigan™ A.S. (or other registered flowable formulations containing fenamirol), or registered formulations containing thiophanate-methyl and chlorothalonil.

**Physical Compatibility Test:** Before mixing **ARECA** with any other product including but not limited to soluble concentrate or flowable formulations, conduct a physical compatibility test. Use a clear container (1 pint) and mix a small amount of spray solution by adding each component in the order and ratio as required for making large amounts of the tank mix solution. Stir the contents and allow them to settle for 5-15 minutes. Solutions that stay in suspension or can be remixed readily are considered compatible. Increased compatibility may result if a buffering agent is used.

### TOLERANCE

Although **ARECA** has been found to be safe to use with the species listed on this label, it is impossible to test all species or varieties under all types of growing conditions for tolerance to **ARECA**. Always test for plant phytotoxicity on a small scale using the labeled rates before preparing spray solutions or applying to large areas of plants.

### PREPARATION OF SPRAY SOLUTIONS

Only prepare the amount of spray solution required for one day's application.

1. Always use clean water when preparing spray tank solutions. Ensure the spray tank is clean prior to use. Add clean water to fill the tank 1/4 to 1/2 full.
2. With the agitator running, slowly add the required amount of **ARECA** to the tank.

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3. Slowly add an alkaline buffering agent when required (see **TANK MIXES**, below).
4. Fill the spray tank with the remaining amount of water and continue agitation until the application is completed.

### TANK MIXES

Plant phytotoxicity from solubilized copper has been observed under several situations: 1) when products containing copper are tank-mixed with **ARECA, OR 2)** when unbuffered **ARECA** solutions are applied to plant foliage that bear copper residues from prior treatments with copper products. Do not tank-mix **ARECA** with copper compounds.

In situations when copper compounds are applied **prior to** or will be applied **after** applications of **ARECA** increase the pH of the **ARECA** tank solution (see Step 3 under **PREPARATION OF SPRAY SOLUTIONS** above) to 6.0 or above using an alkaline buffer. Examples of alkaline buffers include potassium carbonate (use 3 lbs for every 5 lbs **ARECA**) and diammonium phosphate (use 5 lbs for every 5 lbs **ARECA**). Use caution when using potassium carbonate as the buffer because it reacts during the addition to form carbon dioxide gas (CO<sub>2</sub>). Do not seal the spray tank until all of the CO<sub>2</sub> gas is released, a process that usually takes about 5 minutes.

### APPLICATION DIRECTIONS FOR SPRINKLER IRRIGATION SYSTEMS

Application through sprinkler irrigation systems is not registered for use in California.

Apply this product only through sprinkler irrigation systems including mini-sprinkler or micro-jet, drip, solid set, and center pivot. Do not apply this product through any other type of irrigation system.

**SPRAY PREPARATION:** Remove scale, pesticide residues, and other foreign matter from the chemical tank and the entire injector system. Flush with clean water.

**APPLICATION INSTRUCTIONS:** A suspension of **ARECA** is prepared in a mixing tank by adding 1/2 to 3/4 of the desired amount of water. Start the agitator and then add the required amount of **ARECA** followed by the remaining volume of water. Then set sprinkler to deliver 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of **ARECA** into the irrigation water line to deliver the desired rate per acre. The suspension should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. If you should have any other questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

**NOTE:** For mini-sprinkler, micro-jet, and drip irrigation systems, avoid field irrigation over the treated area for 24 to 48 hours after completion of the **ARECA** treatment. For solid set and center pivot irrigation systems, after completion of the **ARECA** treatment, do not irrigate the treated area until the foliage has dried to prevent wash-off of the chemical from the crop.

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### PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

- Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension.
- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift, when system connection or fittings leak, when nozzles do not provide uniform distribution, or when lines containing the product must be dismantled and drained.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place.

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## ORNAMENTALS AND BEDDING PLANTS

**ARECA** controls diseases caused by:

- *Pythium* and *Phytophthora* in ornamentals and bedding plants grown in field nursery, greenhouse, landscaping and conifer nursery situations, and
- downy mildew and fire blight in ornamentals.
- **ARECA** suppresses bacterial blight caused by certain pathovars of *Xanthomonas campestris*.

Time applications to occur before signs of disease appear. Use **ARECA** in a program with good cultural management practices. To avoid plant injury, follow these label directions and do not apply **ARECA** above the labeled rates or at shorter spray intervals than listed in this label. Use the higher rate when disease pressure is severe.

<b>ORNAMENTALS</b>	
<b>Application Method:</b>	Foliar
<b>Typical Ornamentals:</b>	Aglaonema, Aphelandra, Azalea, Bougainvillea, Boxwood, <i>Cattelya skinneri</i> , Cissus, Dieffenbachia, Hibiscus, Juniper, Leatherleaf Fern, Pittosporum, Philodendron, Pothos, Rhododendron, Spathiphyllum, <i>Taxus media</i>
<b>Rate:</b>	2.5-5.0 lbs. product per 100 gal. water
<b>Specific Directions:</b>	Mix <b>ARECA</b> with water and spray to wet the foliage. Use a rate of 2.5-5.0 lbs. product/A when applying in spray volumes of less than 100 gal./A. Do not exceed 400 gals. of spray solution per acre. Make repeat applications as needed but not more often than every 30 days.
<b>Application Method:</b>	Drench
<b>Typical Ornamentals:</b>	Aphelandra, Azalea, Boxwood, Cissus, Dieffenbachia, Japanese Holly, Juniper, Monterey Pine, Philodendron, Pieris, Pittosporum, Rhododendron, Schefflera, Spathiphyllum, <i>Taxus media</i>
<b>Rate:</b>	0.4-0.8 lbs. product (6.4-12.8 oz.) per 100 gal. water
<b>Specific Directions:</b>	Apply spray solution to 400 sq. ft. (equivalent to 2 pts. solution per sq. ft.) of plants. Make repeat applications as needed but not more often than every 30 days.

(continued)

<b>ORNAMENTALS (continued)</b>	
<b>Application Method:</b>	Soil Incorporation-to control <i>Phytophthora</i> species only
<b>Typical Ornamentals:</b>	Azalea, Pieris, or Rhododendron
<b>Rate:</b>	0.5-0.8 lbs. product (8-12.8 oz.) per cubic yard of soil mix
<b>Specific Directions:</b>	Mix product with soil immediately before potting. Soil incorporate only to plants with an established root system. Foliar or drench applications may be made when disease development is expected but do not apply more often than every 30 days.

<b>BEDDING PLANTS</b>	
<b>Application Method:</b>	Foliar
<b>Typical Ornamentals:</b>	Begonia, Geranium, Impatiens, Marigold, Pansy, Petunia, Vinca, Zinnia
<b>Rate:</b>	1.25-4.0 lbs. product per 100 gal. water
<b>Specific Directions:</b>	Mix <b>ARECA</b> with water and spray to wet the foliage. Do not exceed 400 gals. of spray solution per acre. Make repeat applications as needed but not more often than every 14 days.

### CONIFER NURSERIES\*

**Disease:** Phytophthora Root Rot  
**Application Method:** Dip  
**Typical Conifers:** Douglas firs, spruce, and pines  
**Rate:** 2.5 lbs. product per 100 gal. water  
**Specific Directions:** Thoroughly wet plant and roots by dipping into the **ARECA** solution immediately prior to transplanting.  
**NOTE:** During the dipping process, users must wear chemical-/water-resistant gloves, goggles or face shield, long pants (coveralls), long-sleeved shirt, and shoes plus socks.

**Disease:** Phytophthora Root Rot  
**Application Method:** Foliar  
**Typical Conifers:** Douglas firs, spruce, and pines  
**Rate:** 2.5-5.0 lbs. product per 100 gal. water  
**Specific Directions:** Mix **ARECA** with water and spray to wet the foliage. Use a rate of 2.5-5.0 lbs./A when applying in spray volumes of less than 100 gal./A. Do not exceed 400 gals. of spray solution per acre. Make repeat applications as needed but not more often than every 30 days.  
\*Not registered for use in California.

### ROSES

**Disease:** Downy Mildew (*Peronospora sparsa*)  
**Application Method:** Foliar-Field, container, landscape, miniature varieties  
**Rate:** 2.5 lbs. product per 100 gal. water  
**Specific Directions:** Mix **ARECA** with water and spray to wet the foliage. Use a rate of 2.5-5.0 lbs./A when applying in spray volumes of less than 100 gal./A. Do not exceed 400 gals. of spray solution per acre. Make repeat applications as needed but not more often than every 7 days.  
**NOTE:** Use **ARECA** in combination with a sanitation program designed to prevent the spread of this disease to healthy plants.

### FIRE BLIGHT-SUPPRESSION ONLY

**Typical Ornamentals:** Ornamental pear, pyracantha, hawthorn  
**Application Method:** Foliar  
**Rate:** 2.5 lbs. product per 100 gal. water  
**Specific Directions:** Mix **ARECA** with water and spray to wet the foliage. Use a rate of 2.5-5.0 lbs./A when applying in spray volumes of less than 100 gal./A. Do not exceed 400 gals. of spray solution per acre. Applications must be made early (start at pre-bloom) to prevent Fire Blight infection. Make repeat applications as needed until blooming ends but not more often than every 7 days.  
**NOTE:** Use **ARECA** in combination with a sanitation program designed to prevent the spread of this disease to healthy plants..

**Areca™**

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**See attached booklet for complete label.**