74578-3 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 02/07/2006 1/17

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7511C)
1200 Pennsylvania Avenue NW
Washington, DC 20460

EPA Reg. Number: 74578-3

Date of Issuance: 2/7/06

Term of Issuance: **Unconditional**

Name of Pesticide Product:

Phsopho-Jet

# NOTICE OF PESTICIDE:

__X__ Registration

___ Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**Arborjet, Inc.**
**c/o Delta Analytical Corp.**
**7910 Woodmont Ave.**
**Suite 1000**
**Bethesda, MD 20814**

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention 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 registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation 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 unconditionally registered in accordance with FIFRA Sec. 3(c)(5) provided you:

1. Submit and /or cite all data required for registration/reregistration of your product under FIFRA Sec.3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA Sec.4.

2. Revise the EPA Registration Number to read, "EPA Reg. No. 74578-3.

3. Submit three(3) copies of the revised final printed label for the record.

Signature of Approving Official:
Janet L. Andersen, Director
Biopesticides and Pollution Prevention Division

Date: 2/7/06

CONCURRENCES

| SYMBOL | | | | | | | |
|---|---|---|---|---|---|---|---|
| SURNAME | Peterson | | | | | | |
| DATE | 1/23/06 | 1/27/06 | 2/6/06 | | | | |

EPA Form 8570-6

EPA Form 1320-1A (1/90)

*Printed on Recycled Paper*

OFFICIAL FILE COPY

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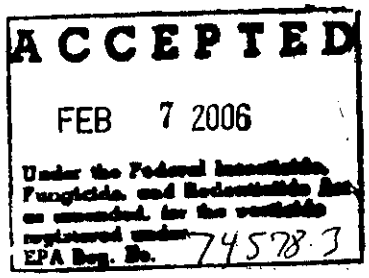
Master label including Sub-label A – Commercial Agricultural Uses and Sub-label B – Residential Uses

Sub-label A – Commercial Agricultural Uses

[company logo]




# PHOSPHO-*jet*

## [ Systemic Fungicide]

Systemic fungicide for the suppression of various plant diseases including black spot, scab, fire blight in apple, root rot in avocado and citrus, bud rot and nut fall in coconut, downy mildew in grape, anthracnose in mango, sycamore, and dogwood, *Phytophthora* in ornamentals, including oak and *Phytophthora* in conifers.

ACTIVE INGREDIENTS: Mono-and di-potassium salts of Phosphorous Acid.....45.8%
OTHER INGREDIENTS:.....54.2%
TOTAL .....100.0%

Contains: 5.17lbs/gallon of the active ingredients, mono- and di-potassium salts of Phosphorous acid
Equivalent to 3.35 lbs Phosphorous acid/gallon

EPA Reg. No. 74578-

EPA Est. No. 74578-MA-001

Manufactured by:

ARBORJET, Inc.
99 Blueberry Hill Road
Woburn, MA 01801
(781) 721-0795

Net Contents: [1 Quart], [1 Gallon], [5 gallons], [20 gallons], [55 gallons]

KEEP OUT OF REACH OF CHILDREN

## CAUTION

| FIRST AID | |
|---|---|
| IF SWALLOWED: | • Call a poison control center or doctor immediately for treatment advice.<br>• Have person sip a glass of water if able to swallow.<br>• Do not induce vomiting unless told to do so by a poison control center or doctor.<br>• 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.<br>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.<br>• Call a poison control center or a doctor for treatment advice. |
| IF ON SKIN OR CLOTHING: | • Take off contaminated clothing.<br>• Rinse skin immediately with plenty of water for 15-20 minutes.<br>• Call a poison control center or a doctor for treatment advice. |
| IF INHALED: | • Move person to fresh air.<br>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth, if possible.<br>• Call a poison control center or a doctor for treatment advice. |
| Have the product container of label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Control Hotline at 1-800-222-1222, 24 hours a day, 7 days a week. | |

# PRECAUTIONARY STATEMENTS
# HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION**. Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear protective eyewear, long pants and long-sleeved shirt, waterproof gloves, shoes plus socks.

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

When handlers use closed systems, aircraft or enclosed cabs 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.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before drinking, eating, chewing gum, using tobacco, or using the toilet.
- Remove PPE 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 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.

Read entire label before using this product.

Do not apply this product in any 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 State or Tribal agency responsible for pesticide registration.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with it's labeling and with the Workers Protection Standard, CFR 40 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 persona 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 worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that are permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soils or water, is: coveralls, waterproof gloves, shoes plus socks, and protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements of 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.

Do not enter treated areas without protective clothing until sprays have dried.

### GENERAL APPLICATION INSTRUCTIONS

This product is for use only with the **ARBORJET TREE INJECTION SYSTEMS** or those systems approved by ARBORJET, INC.

## CALCULATING DOSAGE AND MIXING INSTRUCTIONS

To determine a specific dosage, refer to Tables 3-7. Dosage is based on tree diameter and size class (exception: Coconut Palm). PHOSPHO-*jet* must be diluted with water. Water is added at 5 to 15 times the PHOSPHO-*jet* rate. For example, to calculate the dosage to treat a 10"DBH oak for root rot, (see Table 5) add 20ml of PHOSPHO-*jet* (2ml x 10"DBH) to the tank into 100ml (5x 20ml) water for a Total Injection Volume (TIV) of 120ml. Close the canister and gently agitate to mix. Next pressurize the container and prime. You are now ready to inject. Refer to the Arborjet Training Manual for specific device set-up.

### MIXING INSTRUCTIONS

1. Fill the tank with the volume of water required before adding PHOSPHO-*jet*
2. Add PHOSPHO-*jet* slowly to the tank, close and agitate to mix.

### COMPATIBILITY

PHOSPHO-*jet* is compatible with most products used in agriculture. However, individual crop sensitivity to these mixtures may vary. Mixtures of PHOSPHO-*jet* with copper products are not always compatible or cause phytotoxicity to some plants. If these combinations or others have not been used previously, do not tank mix without first testing the compatibility of the tank mix. Do not apply tank mixture without first assessing its safety to the crop (phytotoxicity). Tank mix PHOSPHO-*jet* with fertilizers only if crop safety has been established and the PHOSPHO-*jet* use rates are followed.

Due to PHOSPHO-*jet's* acidic nature, do not use acidifying-type compatibility agents. If adjuvants are used, test them before use to confirm compatibility with PHOSPHO-*jet*.

Use a jar test to confirm compatibility with PHOSPHO-*jet*. In a clean jar using the same water source that is normally used to fill spray tank, add the appropriate quantity of water and mix thoroughly. Let stand for 3 minutes. If mixture remains in solution or is remixed readily, the tank mixture is compatible.

Spray the solution that results from the above compatibility test onto a few plants until foliage is visibly wet and inspect for visual effects of phytotoxicity (leaf burn) 3-7 days later.

## Restrictions

- ✓ Do not inject trees more than once annually unless otherwise indicated
- ✓ Not recommended for newly planted (non-established) trees.
- ✓ DO NOT inject drought stressed trees.
- ✓ Do not treat trees that are damaged by herbicides.
- ✓ Do not inject trees within two weeks of any other spray or soil chemical treatment.

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# Arborjet Micro-infusion Procedures

Measure the tree **diameter** at chest height (54" from ground) in inches to find the Diameter at Breast Height (DBH). If measuring circumference, divide this number by three to determine Diameter at Breast Height (DBH).

In general, make applications to actively growing trees in full leaf. Conditions that favor transpiration (e.g., high ambient humidity, adequate soil moisture) are optimal for injection uptake.

Inject into tree roots exposing them by shallow excavation or, alternatively into the trunk tissue immediately above the trunk flare, selecting the injection site in the first few xylem elements (i.e., active sapwood). Work around the tree, injecting no closer than 6.0 inches apart. Refer to Tables 1& 2 below to determine the optimum number of injection sites to apply. DO NOT inject trees stressed by drought. Irrigate trees prior to treatment for optimal product uptake.

Basic Arborjet VIPER Procedures: Drill 5/8" deep into the sapwood using the appropriate sized drill bit. Drill at a 90 degree angle to the stem (i.e., straight into the sapwood). Avoid drilling into dead, dying or diseased tissue, or tissue with visible injury or cracks. Use clean and sharp drill bits. Initially apply no pressure to the drill; the bit will naturally cut through the bark. It will stop penetrating when it meets the harder sapwood. Next apply pressure to the drill to cut 5/8" into the sapwood.

A. Set an Arborplug in place using the set tool and mallet. In hardwoods use the #3 (9/32" d) Arborplug; in conifers, use the #4 (3/8" d) Arborplug. Using the VIPER needle, pierce the internal septum to start the micro-infusion process. Remove the VIPER needle upon completion.

B. Alternatively insert the #2 (7/32" d) STINGER (removable injector tip) by gently pushing in with a twisting motion. Remove STINGERS upon completion of infusion process. Refer to Table 2 when selecting the STINGER method.

## Resinous Conifers

In resinous conifers, such as pine and spruce start the micro-infusion process immediately after setting of the Arborplug into the sapwood. A delay may reduce uptake efficacy on account of resin flow.

**Table 1 Tree diameter, range of trunk application sites and Arborplug size selection for VIPER method**

| Tree DBH | Number of Application Sites | Size of Arborplug™ (Hardwoods) 9/32" drill bit | Size of Arborplug™ (Conifers) 3/8" drill bit |
|---|---|---|---|
| 6-16" | 4 | #3 | #4 |
| 17-20" | 6 | #3 | #4 |
| 21-28" | 8 | #3 | #4 |
| 29-32" | 10 | #3 | #4 |
| 33-36" | 12 | #3 | #4 |
| >36" | Use DBH/3 | #3 | #4 |

**Table 2 Tree Diameter, Number of Application Sites using the STINGER tip**

| Tree DBH | Number of Application Sites (Hardwoods) 7/32" drill bit |
|---|---|
| 6-16" | 4 |
| 17-20" | 6 |
| 21-28" | 8 |
| 29-32" | 10 |
| 33-36" | 12 |
| >36" | Use DBH/3 |

### Monocots

In general, make applications into the lower stem, typically within 12" of the soil. **Only one application site is required.**

1. Drill a pilot hole into the vascular bundle using a 3/16" diameter bit one third into the stem (e.g., if the palm is 12" diameter, then drill 4" deep), then drill a wider (7/32" drill bit), shallow hole (5/8" deep) for a #2 Arborplug™, use the VIPER needle to complete the application.
2. Alternatively, insert the STINGER tip to inject.

## When to Treat/Timing of Stem Injection Applications:

### Tree Health and Growing Conditions:

Best results are obtained when treatments are performed prior to infection. Treat trees when foliar symptoms (e.g., spot, defoliation, dieback) affect less than 10% of the canopy. Anticipate early season foliar infections, by treating prior to bud break. An example is anthracnose (*Apiognomia* spp.).

Phytophthora root rot occurs most frequently in poorly drained and compacted soils. Susceptible species are at risk of infection following heavy precipitation or irrigation. Trees growing in low lying areas are also at risk of disease. Treat as early as possible in the infection cycle for best tree response.

Trees may be treated when soil temperatures range from 45-90 degrees F. Treat when there is adequate soil moisture. Do not treat in the heat of day or treat drought stressed trees. DO NOT treat when ambient temperatures exceed 90 degrees F. Treating on excessively hot, humid days may result in foliar burn.

### Time of Day:

Best uptake in trees by trunk injection occurs when trees are actively transpiring. In general, treat early to mid morning throughout the growing season. When temperatures rise and relative humidity drops, the efficiency of uptake is reduced. In arid environments, overcast, cool days result in the most efficient uptake of PHOSPHO-*jet*.

## AGRICULTURAL CROPS

### Table 3 PHOSPHO-*jet* Application Rates for Avocado and Citrus

| Crop Plant | Target Pest | When to Treat | Plant Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Avocado (*Persea Americana* cvs.) | *Phytophthora* root rot (*Phytophthora cinnamomi*), *Phytophthora* canker (*P. citricola*) | Inject trees at spring flush maturity. Repeat treatment in February or March. | <12" | 2 | 10 |
| | | | 12-23" | 4 | 20 |
| | | | 24-35" | 6 | 30 |
| | | | 36"+ | 8 | 40 |
| Citrus (*Citrus* spp.) | Root rot and collar rot (*Phytophthora* spp. *P. nicotiane* and *P. citrophthora)* | When conditions favor disease | <12" | 2 | 10 |
| | | | 12-23" | 4 | 20 |
| | | | 24-35" | 6 | 30 |
| | | | 36"+ | 8 | 40 |

**Table 3a PHOSPHO-*jet* Application Rates for Coconut**

| Crop Plant | Target Pest | When to Treat | Rate per Tree (ml) | Volume of Water in tank (ml) |
|---|---|---|---|---|
| Coconut (*Cocos nucifera*) | Coconut bud rot and premature nut fall (*Phytophthora katsurae*) | When conditions favor disease | 30 | 150 |

**Table 3b PHOSPHO-*jet* Application Rates in Stone Fruit***

| Crop Plant | Target Pest | When to Treat | Plant Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Stone fruits such as, but not limited to cherries, peaches and plums | Root and collar rot (*Phytophthora* spp.) | When conditions favor disease | <12"<br>12-23"<br>24"+ | 2<br>4<br>6 | 10-30<br>20-60<br>30-90 |

***Not for use in California.**

## LANDSCAPE, GOLF COURSE, PLANTATION, FORESTRY AND PARK APPLICATIONS**

Use PHOSPHO-*jet* for effective control of Phytophthora and Pythium diseases associated with stem and Canker Blight (Sudden Oak Death, *Phytophthora ramoram*), Beech Decline, and general tree declines in landscapes, plantation trees, golf courses, forests and parks. Apply PHOSPHO-*jet* to trees such as, but not limited to, Beech, Cedar, Chestnut, Crab Apple, Dogwood, Elm, Fir, Hawthorne, Juniper, Linden, Monterey Pine, Oaks (Coastal, Live, Shreve, Black, Canyon), Ornamental Pear, Sweet Birch, Sweet Gum, White Pine, White Cedar, and Willow.

Make applications before disease development and in conjunction with good cultural management practices. Do not exceed indicated application rates or apply more frequently than stated on label or tree injury may occur. Do not apply to trees that are heat or moisture stressed. Do not apply to trees that are in a state of dormancy.

Table 4 **PHOSPHO-*jet* Application Rates for Oaks in California**

| Landscape, Golf Course, Plantation, Forest, and Park Applications | Target Pest | When to Treat | Tree Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Oak (*Quercus* spp.) including tan oak, coast live oak and black oak trees | *Phytophthora* and *Pythium* spp., and Sudden oak death *Phytophthora ramoram* | When conditions favor disease | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 10<br>20<br>30<br>40 |

**Use in California limited to Oaks (Coastal, Live, Shreve, Black, Canyon) and Tan Oaks.

**Table 5 PHOSPHO-*jet* Application Rates for Hardwood Trees**

| Landscape, Golf Course, Plantation, Forest, and Park Applications | Target Pest | When to Treat | Tree Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Intermediate uptake trees such as, Ash (*Fraxinus* spp.), Maple (*Acer* spp.) | Anthracnose (*Apiognomonia* spp.) including *Gnomonia platani*) | Treat early, prior to bud break or when conditions favor disease (cool, wet) | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 30<br>60<br>90<br>120 |
| | Stem canker, Root rot (*Phytophthora* spp.) | When conditions favor disease | | | |
| Fast uptake trees such as, Beech (*Fagus* spp.), Birch (*Betula* spp.), Elm (*Ulmus* spp.), Linden (*Tilia* spp.), Oak (*Quercus* spp.), and Sycamore (*Platanus* spp.), Willow (*Salix* spp.) | Anthracnose (*Apiognomonia* spp.) including *Gnomonia platani*) | Treat early, prior to bud break or when conditions favor disease (cool, wet) | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 10<br>20<br>30<br>40 |
| | Stem canker, Root rot (*Phytophthora* spp.) | When conditions favor disease | | | |

**Table 6 PHOSPHO-*jet* Application Rates for Ornamental Trees**

| Landscape, Golf Course, Plantation, Forest, and Park Applications | Target Pest | When to Treat | Tree DBH | Rate (ml/DBH") | ***Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Dogwood (*Cornus florida*) | Anthracnose (*Discula Destructiva*) | Treat early Spring, prior to bud break | <12"<br>12-23"<br>24"+ | 2<br>4<br>6 | 10-30<br>20-60<br>30-90 |
| | *Phytophthora* spp. | When conditions favor disease | | | |
| Crabapple (*Malus spp.*), Hawthorne (*Crataegus* spp.), Ornamental Pear (*Pyrus* spp.) | Black Spot (*Diplocarpon rosae*)<br>Scab (*Venturia inaequalis*) | Treat early Spring, prior to bud break | | | |
| | Fireblight (*Erwinia amylovora*) | Treat early Spring, prior to bud break | | | |
| | *Phytophthora* spp. | When conditions favor disease | | | |

***High volume rate is derived by diluting the formulation with up to 15 parts water. Use the highest rate when uptake is slow.

**Table 7 PHOSPHO-*jet* Application Rates for Conifers**

| Landscape, Golf Course, Plantation, Forest, and Park Applications | Target Pest | When to Treat | Tree DBH | Rate (ml/DBH") | ***Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| **Slow uptake trees such as Conifers including, Cedars** (*Thuja occidentalis, Chamaecyparis* spp.), Firs *Abies fraseri,* Hemlock (*Tsuga* spp.), Juniper (*Juniperus* spp.), and Pine (*Pinus strobus*) | Stem canker, root rot (*Phytophthora* spp.) | When conditions favor disease | <12"<br>12-23"<br>24-35"<br>36"+ | 1<br>2<br>3<br>4 | 5-15<br>10-30<br>15-45<br>20-60 |

***High volume rate is derived by diluting the formulation with up to 15 parts water. Use the highest rate when uptake is slow.

## CLEAN-UP

**IMPORTANT!** It is critical to rinse the Arborjet Injection System thoroughly after use. Use **CLEAN-*jet*** or soap and water. Residues left in the device will corrode the internal components and void equipment warranty.

## STORAGE AND DISPOSAL

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

PESTICIDE STORAGE:
Keep this product in containers stored upright and secured with the original closure. Do not store this product near any heat source. Do not store near any strong oxidants. If transfer to another container becomes necessary, ensure that the container is clearly labeled, the container is a type suitable for the product, and is clean and free of other materials. Keep from freezing.

PESTICIDE DISPOSAL:
Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:
Do not reuse empty container. Triple rinse (or equivalent) and 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, keep out of smoke.

## NOTICE OF WARRANTY

ARBORJET, Inc makes no warranty of fitness of this product for any other purpose, beyond its uses under normal conditions in keeping with the statements made on this label.

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Sub-label B – Residential Uses

ARBORjet
A Revolutionary Plant Injection System

# PHOSPHO-*jet*
## Systemic Fungicide

Systemic fungicide for the suppression of various plant diseases including black spot, scab, fire blight in apple, root rot in avocado and citrus, bud rot and nut fall in coconut, downy mildew in grape, anthracnose in mango, sycamore, and dogwood, *Phytophthora* in ornamentals, including oak and *Phytophthora* in conifers.

ACTIVE INGREDIENTS: Mono-and di-potassium salts of Phosphorous Acid.....45.8%
OTHER INGREDIENTS:.....54.2%
TOTAL.....100.0%

Contains: 5.17lbs/gallon of the active ingredients, mono- and di-potassium salts of Phosphorous acid
Equivalent to 3.35 lbs Phosphorous acid/gallon

EPA Reg. No. 74578-

EPA Est. No. 74578-MA-001

Manufactured by:

ARBORJET, Inc.
99 Blueberry Hill Road
Woburn, MA 01801
(781) 721-0795

Net Contents:
- ☐ 1 Quart
- ☐ 1 Gallon
- ☐ 5 Gallons

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

| **FIRST AID** | |
|---|---|
| IF SWALLOWED: | • Call a poison control center or doctor immediately for treatment advice.<br>• Have person sip a glass of water if able to swallow.<br>• Do not induce vomiting unless told to do so by a poison control center or doctor.<br>• 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.<br>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.<br>• Call a poison control center or a doctor for treatment advice. |
| IF ON SKIN OR CLOTHING: | • Take off contaminated clothing.<br>• Rinse skin immediately with plenty of water for 15-20 minutes.<br>• Call a poison control center or a doctor for treatment advice. |
| IF INHALED: | • Move person to fresh air.<br>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth, if possible.<br>• Call a poison control center or a doctor for treatment advice. |
| Have the product container of label with you when calling a poison control center or doctor or going for treatment. You may also contact the National Poison Control Hotline at 1-800-222-1222, 24 hours a day, 7 days a week. | |

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

CAUTION. Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapors or spray mist. . Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### 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. Read entire label before using this product. For use in home gardens and ornamentals.

### GENERAL APPLICATION INSTRUCTIONS

This product is for use only with the **ARBORJET TREE INJECTION SYSTEMS** or those systems approved by ARBORJET, INC.

## CALCULATING DOSAGE AND MIXING INSTRUCTIONS

To determine a specific dosage, refer to Table below. Dosage is based on tree diameter and size class (exception: Coconut Palm). PHOSPHO-*jet* must be diluted with water. Water is added at 5 to 15 times the PHOSPHO-*jet* rate. For example, to calculate the dosage to treat a 10"DBH oak for root rot, (see Table 5) add 20ml of PHOSPHO-*jet* (2ml x 10"DBH) to the tank into 100ml (5x 20ml) water for a Total Injection Volume (TIV) of 120ml. Close the canister and gently agitate to mix. Next pressurize the container and prime. You are now ready to inject. Refer to the Arborjet Training Manual for specific device set-up.

### MIXING INSTRUCTIONS

1. Fill the tank with the volume of water required before adding PHOSPHO-*jet*
2. Add PHOSPHO-*jet* slowly to the tank, close and agitate to mix.

## Arborjet Micro-infusion Procedures

Measure the tree **diameter** at chest height (54" from ground) in inches to find the Diameter at Breast Height (DBH). If measuring circumference, divide this number by three to determine Diameter at Breast Height (DBH).

In general, make applications to actively growing trees in full leaf. Conditions that favor transpiration (e.g., high ambient humidity, adequate soil moisture) are optimal for injection uptake.

Inject into tree roots exposing them by shallow excavation or, alternatively into the trunk tissue immediately above the trunk flare, selecting the injection site in the first few xylem elements (i.e., active sapwood). Work around the tree, injecting no closer than 6.0 inches apart. Refer to Tables 1& 2 below to determine the optimum number of injection sites to apply. DO NOT inject trees stressed by drought. Irrigate trees prior to treatment for optimal product uptake.

Basic Arborjet VIPER Procedures: Drill 5/8" deep into the sapwood using the appropriate sized drill bit. Drill at a 90 degree angle to the stem (i.e., straight into the sapwood). Avoid drilling into dead, dying or diseased tissue, or tissue with visible injury or cracks.. Use clean and sharp drill bits. Initially apply no pressure to the drill; the bit will naturally cut through the bark. It will stop penetrating when it meets the harder sapwood. Next apply pressure to the drill to cut 5/8" into the sapwood.

A. Set an Arborplug in place using the set tool and mallet. In hardwoods use the #3 (9/32" d) Arborplug; in conifers, use the #4 (3/8" d) Arborplug. Using the VIPER needle, pierce the internal septum to start the micro-infusion process. Remove the VIPER needle upon completion.

B. Alternatively insert the #2 (7/32" d) STINGER (removable injector tip) by gently pushing in with a twisting motion. Remove STINGERS upon completion of infusion process. Refer to Table 2 when selecting the STINGER method.

### Resinous Conifers

In resinous conifers, such as pine and spruce start the micro-infusion process immediately after setting of the Arborplug into the sapwood. A delay may reduce uptake efficacy on account of resin flow.

**Table 1 Tree diameter, range of trunk application sites and Arborplug size selection for VIPER method**

| Tree DBH | Number of Application Sites | Size of Arborplug™ (Hardwoods) 9/32" drill bit | Size of Arborplug™ (Conifers) 3/8" drill bit |
|---|---|---|---|
| 6-16" | 4 | #3 | #4 |
| 17-20" | 6 | #3 | #4 |
| 21-28" | 8 | #3 | #4 |
| 29-32" | 10 | #3 | #4 |
| 33-36" | 12 | #3 | #4 |
| >36" | Use DBH/3 | #3 | #4 |

**Table 2 Tree Diameter, Number of Application Sites using the STINGER tip**

| Tree DBH | Number of Application Sites (Hardwoods) 7/32" drill bit |
|---|---|
| 6-16" | 4 |
| 17-20" | 6 |
| 21-28" | 8 |
| 29-32" | 10 |
| 33-36" | 12 |
| >36" | Use DBH/3 |

### Monocots

In general, make applications into the lower stem, typically within 12" of the soil. **Only one application site is required.**

1. Drill a pilot hole into the vascular bundle using a 3/16" diameter bit one third into the stem (e.g., if the palm is 12" diameter, then drill 4" deep), then drill a wider (7/32" drill bit), shallow hole (5/8" deep) for a #2 Arborplug™, use the VIPER needle to complete the application.
2. Alternatively, insert the STINGER tip to inject.

## When to Treat/Timing of Stem Injection Applications:

### Tree Health and Growing Conditions:

Best results are obtained when treatments are performed prior to infection. Treat trees when foliar symptoms (e.g., spot, defoliation, dieback) affect less than 10% of the canopy. Anticipate early season foliar infections, by treating prior to bud break. An example is anthracnose (*Apiognomia* spp.).

Phytophthora root rot occurs most frequently in poorly drained and compacted soils. Susceptible species are at risk of infection following heavy precipitation or irrigation. Trees growing in low lying areas are also at risk of disease. Treat as early as possible in the infection cycle for best tree response.

Trees may be treated when soil temperatures range from 45-90 degrees F. Treat when there is adequate soil moisture. Do not treat in the heat of day or treat drought stressed trees. DO NOT treat when ambient temperatures exceed 90 degrees F. Treating on excessively hot, humid days may result in foliar burn.

### Time of Day:

Best uptake in trees by trunk injection occurs when trees are actively transpiring. In general, treat early to mid morning throughout the growing season. When temperatures rise and relative humidity drops, the efficiency of uptake is reduced. In arid environments, overcast, cool days result in the most efficient uptake of PHOSPHO-*jet*.

**Table 3 PHOSPHO-*jet* Application Rates for Avocado and Citrus**

| Plant | Target Pest | When to Treat | Plant Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Avocado (*Persea Americana* cvs.) | *Phytophthora* root rot (*Phytophthora cinnamomi*), *Phytophthora* canker (*P. citricola*) | Inject trees at spring flush maturity. Repeat treatment in February or March. | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 10<br>20<br>30<br>40 |

**Table 3a PHOSPHO-*jet* Application Rates for Coconut**

| Plant | Target Pest | When to Treat | Rate per Tree (ml) | Volume of Water in tank (ml) |
|---|---|---|---|---|
| Coconut (*Cocos nucifera*) | Coconut bud rot and premature nut fall (*Phytophthora katsurae*) | When conditions favor disease | 30 | 150 |

**Table 3b PHOSPHO-*jet* Application Rates in Stone Fruit***

| Plant | Target Pest | When to Treat | Plant Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Stone fruits such as, but not limited to cherries, peaches and plums | Root and collar rot (*Phytophthora* spp.) | When conditions favor disease | <12"<br>12-23"<br>24"+ | 2<br>4<br>6 | 10-30<br>20-60<br>30-90 |

***Not for use in California.**

## LANDSCAPE APPLICATIONS**

Use PHOSPHO-*jet* for effective control of Phytophthora and Pythium diseases associated with stem and Canker Blight (Sudden Oak Death, *Phytophthora ramoram*), Beech Decline, and general tree declines in landscapes. Apply PHOSPHO-*jet* to trees such as, but not limited to, Beech, Cedar, Chestnut, Crab Apple, Dogwood, Elm, Fir, Hawthorne, Juniper, Linden, Monterey Pine, Oaks (Coastal, Live, Shreve, Black, Canyon), Ornamental Pear, Sweet Birch, Sweet Gum, White Pine, White Cedar, and Willow.

Make applications before disease development and in conjunction with good cultural management practices. Do not exceed indicated application rates or apply more frequently than stated on label or tree injury may occur. Do not apply to trees that are heat or moisture stressed. Do not apply to trees that are in a state of dormancy.

Table 4 **PHOSPHO-*jet* Application Rates for Oaks in California**

| Landscape Plant | Target Pest | When to Treat | Tree Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Oak (*Quercus* spp.) including tan oak, coast live oak and black oak trees | *Phytophthora* and *Pythium* spp., and Sudden oak death *Phytophthora ramoram* | When conditions favor disease | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 10<br>20<br>30<br>40 |

**Use in California limited to Oaks (Coastal, Live, Shreve, Black, Canyon) and Tan Oaks.

**Table 5 PHOSPHO-*jet* Application Rates for Hardwood Trees**

| Landscape Plant | Target Pest | When to Treat | Tree Size Class (DBH") | Rate (ml/DBH") | Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Intermediate uptake trees such as, Ash (*Fraxinus* spp.), Maple (*Acer* spp.) | Anthracnose (*Apiognomonia* spp.) including *Gnomonia platani*) | Treat early, prior to bud break or when conditions favor disease (cool, wet) | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 30<br>60<br>90<br>120 |
| | Stem canker, Root rot (*Phytophthora* spp.) | When conditions favor disease | | | |
| Fast uptake trees such as, Beech (*Fagus* spp.), Birch (*Betula* spp.), Elm (*Ulmus* spp.), Linden (*Tilia* spp.), Oak (*Quercus* spp.), and Sycamore (*Platanus* spp.), Willow (*Salix* spp.) | Anthracnose (*Apiognomonia* spp.) including *Gnomonia platani*); | Treat early, prior to bud break or when conditions favor disease (cool, wet) | <12"<br>12-23"<br>24-35"<br>36"+ | 2<br>4<br>6<br>8 | 10<br>20<br>30<br>40 |
| | Stem canker, Root rot (*Phytophthora* spp.) | When conditions favor disease | | | |

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Table 6 **PHOSPHO-*jet* Application Rates for Ornamental Trees**

| Landscape Plant | Target Pest | When to Treat | Tree DBH | Rate (ml/DBH") | ***Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| Dogwood (*Cornus florida*) | Anthracnose (*Discula Destructiva*) | Treat early Spring, prior to bud break | <12"<br>12-23"<br>24"+ | 2<br>4<br>6 | 10-30<br>20-60<br>30-90 |
| | *Phytophthora* spp. | When conditions favor disease | | | |
| Crabapple (*Malus spp.*), Hawthorne (*Crataegus* spp.), Ornamental Pear (*Pyrus* spp.) | Black Spot (*Diplocarpon rosae*) Scab (*Venturia inaequalis*) | Treat early Spring, prior to bud break | | | |
| | Fireblight (*Erwinia amylovora*) | Treat early Spring, prior to bud break | | | |
| | *Phytophthora* spp. | When conditions favor disease | | | |

***High volume rate is derived by diluting the formulation with up to 15 parts water. Use the highest rate when uptake is slow.

**Table 7 PHOSPHO-*jet* Application Rates for Conifers**

***High volume rate is derived by diluting the formulation with up to 15 parts water. Use the highest rate when uptake is slow.

| Landscape Plant | Target Pest | When to Treat | Tree DBH | Rate (ml/DBH") | ***Dilution (ml water/DBH") |
|---|---|---|---|---|---|
| **Slow uptake trees such as Conifers including, Cedars (*Thuja occidentalis*, *Chamaecyparis* spp.), Firs *Abies fraseri*, Hemlock (*Tsuga* spp.), Juniper (*Juniperus* spp.), and Pine (*Pinus strobus*)** | Stem canker, root rot (*Phytophthora* spp.) | When conditions favor disease | <12"<br>12-23"<br>24-35"<br>36"+ | 1<br>2<br>3<br>4 | 5-15<br>10-30<br>15-45<br>20-60 |

## CLEAN-UP

**IMPORTANT!** It is critical to rinse the Arborjet Injection System thoroughly after use. Use **CLEAN-*jet*** or soap and water. Residues left in the device will corrode the internal components and void equipment warranty.

## STORAGE AND DISPOSAL

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

PESTICIDE STORAGE:
Keep this product in containers stored upright and secured with the original closure. Do not store this product near any heat source. Do not store near any strong oxidants. If transfer to another container becomes necessary, ensure that the container is clearly labeled, the container is a type suitable for the product, and is clean and free of other materials. Keep from freezing.

DISPOSAL:
If empty: Do not reuse empty container. Place in trash and offer for recycling if available. If partly filled: Call your local solid waste agency or 1-800-CLEANUP (1-800-253-2687) for disposal instructions. Never place unused product down any indoor or outdoor drain.

## NOTICE OF WARRANTY

ARBORJET, Inc makes no warranty of fitness of this product for any other purpose, beyond its uses under normal conditions in keeping with the statements made on this label.