



IMIDACLOPRID GROUP 4A INSECTICIDE

Systemic Insecticide for Micro-Infusion®

## SYSTEMIC INSECTICIDE

**Systemic Microinjection Insecticide for use with Arborjet Injection Systems and Other Specified Systems in the Management of Listed Insect Pests of Trees in Ornamental Landscapes, Forest and Woodland Areas & Interior Plantscapes**

### ACTIVE INGREDIENT:

Imidacloprid, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine ..... **10.0%**

**OTHER INGREDIENTS** ..... **90.0%**

**TOTAL** ..... **100.0%**

EPA Reg No. 74578-6 • EPA Est. No. 74578 - MA-001

**STOP - READ THE ENTIRE LABEL BEFORE USE**

## KEEP OUT OF REACH OF CHILDREN CAUTION

Precaución al usuario: Si usted no puede leer o entender inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente. To the user: If you cannot read or understand English, do not use this product until the label has been fully explained to you.

Manufactured by: Arborjet Inc. 781-935-9070 99 Blueberry Hill Road, Woburn, MA 01801

### FIRST AID

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a Poison Control Center or a doctor for further treatment advice.

#### IF SWALLOWED:

- Call 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 by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a Poison Control Center or a doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Infotrac Chemical Emergency Response System at 1-800-535-5053

**Note to Physician:** No specific antidote is available. Treat the patient symptomatically.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

**CAUTION:** Harmful if absorbed through skin. Harmful if swallowed. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Keep children and pets away from treatment area until injection and uptake are complete.

#### Personal Protective Equipment (PPE):

Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse. Wear protective eyewear.

#### ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to fish 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 or rinsate. This product is highly toxic to honeybees. Do not apply this product to pollen-shedding or nectar producing plants visited by honeybees while plant is in bloom.

#### 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.*

**IMPORTANT:** Read the entire label before use. Failure to follow label directions may result in poor control or plant injury. Failure to follow label directions may cause injury to people, animals and environment. The buyer accepts and understands that failure to follow label directions is the responsibility of the buyer.

**Do not apply this product, by any application method, to linden, basswood or other Tilia species in the State of Oregon.**

### APPLICATION TO TREES AND ORNAMENTALS

IMA-jet 10® is a systemic insecticide used to control a variety of insect pests of ornamental trees and forest trees as listed in the table, "Applications for Use in Trees in Ornamental Landscapes & Forest and Woodland Areas". Use IMA-jet 10 as directed in trees in residential, business and commercial areas, golf courses, airports, cemeteries, parks, street trees, playgrounds, athletic fields, commercial forestry production, seed orchard trees, nurseries, and in private, municipal, state, federal, county and local recreational forests.

#### When to Treat

For optimum results, apply IMA-jet 10 prior to infestation. Also apply when insects are infesting and feeding upon the tree. IMA-jet 10 insecticide moves upward into the tree's canopy from the application sites. Systemic activity occurs only after the active ingredient is translocated upward in the tree. This product must be applied below the bark into the sapwood (i.e., the vascular) tissues. Use rates are based on tree diameter for small, intermediate, and large (<12", 12-23" and >23" DBH, respectively) trees and for severity of infestation. The use of low to high rates is based on the professional judgment of the applicator as to what constitutes a light, moderate or severe infestation. Higher rates tend to provide longer residual and control of more difficult to control insects. In the case of severe infestation, use the highest label rate for the targeted pest. In trees larger than 23" use the highest rate listed for that insect pest. Dosages are designed for insect control and retreatment is generally not necessary during the year after initial treatment. Monitor insect activity to establish a damage threshold for treatment.

The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping and other methods. Due to potential foliar injury or poor (i.e., slow) uptake, do not apply to trees stressed by drought or extreme heat.

#### Basic Injection Procedure

For insect control, this product must be placed into the tree's sapwood, the conductive tissue that moves water to the canopy. Make applications around the base of the tree. Inject into tree roots exposing them by careful excavation or, alternatively into the trunk flare or tissue immediately above the trunk flare, locating the injection site in the first few xylem (i.e., sapwood) elements. Drill holes through the bark and into the sapwood a minimum of 3/8" deep. When using the Arborjet Arborplug, drill a minimum of 5/8" deep into the sapwood.

#### Calculating Application Rate

The dosages and number of application sites are based on tree diameter.

To determine the application/dose rate per tree:

- 1) Measure the tree diameter in inches at chest height (4½ feet from ground) to find the Diameter at Breast Height (DBH). (If measuring tree circumference, divide circumference by 3 to obtain the DBH in inches.)
- 2) Calculate the number of injection sites by dividing the DBH in inches by 2.
- 3) Multiply the tree DBH by the dosage rate (see table below for appropriate dosage rate) to calculate the total dose in milliliters per tree.
- 4) Divide the total dose by the number of injection sites to determine required dosage per injection site.

**Example:** For a tree with a DBH of 12 inches (or circumference of 36 inches) and 2 mL dosage rate:

- 1) DBH = 12" (circumference 36" ÷ 3 = 12")
- 2) Divide DBH of 12" by 2 = 6 injection sites.
- 3) Multiply DBH of 12 by 2 mL = 24 mL total dose per tree.
- 4) Divide 24 mL by 6 injection sites = 4 mL per injection site to deliver the required dosage.

To apply the highest dosage rate to trees as specified in the table, "Applications for Use in Listed Trees in Ornamental Landscapes & Forest and Woodlands Areas," it may be necessary to increase the number of injection sites applied. In the example given in "Calculating Application Rate," if the total dose per tree applied is less than the calculated 24 mLs, place the remaining dosage into a new injection site. Do not place injection sites closer than 2" apart. Treat Cycads (i.e., gymnosperms) using this method of application. In resinous conifers (such as pine and spruce), start the injection immediately after drilling. A prolonged delay may reduce uptake on account of resin flow. In palms (i.e., monocots), only one injection site is required: locate the application site 1-3' from the soil level and drill 4" deep into the stem.

#### Application Equipment

IMA-jet 10 is designed for use with the Arborjet Tree Injection Systems or with other tree injection devices that meet the label requirements and are chemically resistant. For all injection systems, read carefully and follow manufacturer's directions for use.

#### Use of IMA-jet 10

Use as formulated. Do not mix with water.

#### Compatibility

Test the physical compatibility of IMA-jet 10 before use with other products.

**IMPORTANT:** Before applying any tank mixture not specifically on this label, it is best to test the safety to the target tree. Do NOT apply liquid flowables, suspension concentrates, or dispersible granules that do not completely dissolve.

## APPLICATIONS FOR USE IN TREES IN ORNAMENTAL LANDSCAPES & FOREST AND WOODLAND AREAS

Use Sites	Pest	Low Rate for Light to Moderate Infestation++	High Rate for Moderate to Severe Infestation++	Comments
<b>Trees</b> Including shade trees, ornamental trees, evergreens and palms  <b>In the following sites:</b> Interior Plantscapes, Non-urban Forests, Tree Plantations, Parks, Planted Christmas Trees, Rural Shelter Belts, Rangeland Trees, Woodland Trees including Conifers	Adelgids (including Hemlock Woolly Adelgid*), Aphids, Gall Wasps (including Erythrina Gall Wasp), Lacebugs, Leafhoppers, Leaf miners, Mealybugs, Psyllids, Soft scales, Thrips, Whiteflies	For trees <12" DBH,** apply 1.0 - 2.0 mL per inch trunk diameter ++  For trees 12-23" DBH,** apply 2.0 - 4.0 mL per inch trunk diameter ++	For trees <12" DBH,** apply 2.0 - 4.0 mL per inch trunk diameter ++  For trees 12-23" DBH,** apply 3.0 - 6.0 mL per inch trunk diameter ++  For trees >23" DBH,** apply 3.0 - 6.0 mL per inch trunk diameter ++	Space injection holes approximately 6" apart, around the base of the tree.  In trees < 6" DBH, apply a minimum of three injection holes around the base of the tree.
	Flatheaded Borers (including Bronze birch borer, Emerald ash borer) adults, Japanese Beetles (adults), Leaf Beetles (including elm leaf beetle) Leaf bugs (including leaf footed seed bugs), Pine tip moth larvae, Round-headed Borers (including Eucalyptus longhorned borer), Royal palm bug, Sawfly larvae	For trees <12" DBH,** apply 2.0 mL per inch trunk diameter.  For trees 12-23" DBH,** apply 4.0 mL per inch trunk diameter	For trees <12" DBH,** apply 4.0 mL per inch trunk diameter.  For trees 12-23" DBH,** apply 6.0 mL per inch trunk diameter  For trees >23" DBH,** apply 6.0 mL per inch trunk diameter	For trees <12" DBH,** apply 4.0 mL per inch trunk diameter.  For trees 12-23" DBH,** apply 6.0 mL per inch trunk diameter  For trees >23" DBH,** apply 6.0 mL per inch trunk diameter
<b>Host Trees:</b> including Tree of Heaven, Birch, Black Walnut, Willow, Black Gum, Oak, Maple, Beech, Dogwood, Sassafras, Sweetgum, Elm, Serviceberry, Pine, Poplar, Tulip Poplar, Crabapple, Hickory, White Ash & Sycamore  <b>Landscape &amp; Forest Areas:</b> Urban & Non-urban Forests, Trees in Plantations, Parks, Rural Shelter Belts, Rangeland Trees and Woodlands	Spotted Lanternfly <sup>1</sup>	For trees <12" DBH,** apply 2.0 mL per inch trunk diameter.  For trees 12-23" DBH,** apply 4.0 mL per inch trunk diameter	For trees <12" DBH,** apply 4.0 mL per inch trunk diameter.  For trees 12-23" DBH,** apply 6.0 mL per inch trunk diameter  For trees >23" DBH,** apply 6.0 mL per inch trunk diameter	Space injection holes 4 to 6" apart, around the base of the tree.  In trees < 6" DBH, apply a minimum of three injection holes around the base of the tree.

<sup>1</sup>NOT for use in California

\*IMA-jet 10 provides 1-2 years of residual control of Hemlock Woolly Adelgid. Trees infested with Hemlock Woolly Adelgid might require two applications before significant control is seen.

\*\*diameter breast height = 4½ feet from the ground.

++The use of low to high rates is based on the professional judgment of the applicator as to what constitutes a light, moderate or severe infestation. Higher rates tend to provide longer residual and control of more difficult to control insects. Dosage rates are designed for insect control and retreatment is generally not necessary during the year after initial treatment, however, a second application may be required within the same year in warmer climate states for the following insects with multiple or overlapping generations: aphids, leafhoppers, mealybugs, psyllids, soft scales, thrips and whiteflies.

### Restrictions

- Do not make applications when trees are in flower to protect pollinating insects.
- This product is not to be used on trees that will produce food within 1 year (365 days) following treatment.
- Do not use on syrup-producing sugar maples where sap is harvested.

FOR USE UNDER USDA SUPERVISION ONLY			
Host Trees	Pest	DBH Range	Dose Rate mL/DBH <sup>1</sup>
Elm, Maple, Birch, Willow, Box elder, Horsechestnut, Buckeye, European Mountain Ash, Ash, Poplar, Albizia, London Plane, Hackberry, Sycamore and Katsura tree, including ALB host species as annotated and specified in contract documents by USDA-APHIS-PPQ.	Asian Longhorned Beetle	2 - 23" 24" +	2.0 mL 4.0 mL

## INFUSION PROCEDURES for ARBORJET MICRO-INFUSION®

### Basic Arborjet Micro-Infusion® Procedures:

1. Determine the dosage based on target pest and tree diameter.
2. Pour concentrate into the medicament bottle and cap.
3. **For Tree I.V.:** pressurize the contents from 25 to 60 PSI and prime the lines by opening each injector valve slowly to purge the air; close the valve when liquid begins to flow, or **For Hydraulic Device:** pressurize the contents to 15 PSI and prime the lines by depressing the trigger and pulling back slowly on the dose-sizer.
4. Determine the number and placement of injection sites around the base of the tree. Drill through the bark then 5/8" into the sapwood using the appropriate sized drill bit. For best results, use clean and sharp Brad point drill bits.
5. Insert the Arborplug™ using the set tool and mallet. Use the #4 Arborplug (3/8" d) for most applications, including conifers. In hardwoods, you may also use smaller diameter Arborplugs including the #3 (9/32" d). Insert the VIPER needle into the Arborplug. To start the Tree I.V. infusion, open the needle valve. Close the valve and remove the VIPER needle upon completion of infusion. To inject with the Hydraulic Device, depress the trigger to apply the dose.

### Alternative Arborjet STINGER and USDA tip Procedure:

6. Alternatively, insert the #2 (7/32" drill bit) STINGER or USDA injector tip 5/8" deep into the sapwood in the predrilled hole with a hand push or by gently tapping the injector tip into the sapwood with a mallet. Remove STINGERS upon completion of infusion process by pulling and twisting out counter-clockwise. Use a cleaner or an EPA registered disinfectant between trees when using the reusable STINGER tips.

## INSECTICIDE RESISTANCE MANAGEMENT

For resistance management, IMA-jet 10 contains a Group 4A insecticide. Any insect population may contain individuals naturally resistant to IMA-jet 10 and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same sites. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of IMA-jet 10 or other Group 4A insecticide within a growing season, or among growing seasons, with different groups that control the same pests.
- Adopt an integrated pest management program for insecticides use that includes scouting, uses historical information related to pesticide use, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store bottles in a cool, dry place above 45° F. Store in original container out of reach of children, preferably in a locked storage area.

**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:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of empty bottle in a sanitary landfill.

## NOTICE OF WARRANTY

Arborjet 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.

