

74578-1

03/16/2007

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## IMA-jet

Microinjectable Systemic Insecticide for use with the Arborjet Injection System in the Management of Specific Insect Pests of Forests, Trees, Landscape Ornamentals & Interior Plantscapes

**Active Ingredient:**

Imidacloprid

1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinime.....5.0%

Other Ingredients.....95.0%

Total.....100.0%

EPA Reg. No. 74578-1

EPA Est. No. 74578-MA-001

Net Contents: 250 mL, 500 mL, 1000 mL, 1 quart, 2.5 gallon, 30 gallon, 50 gallon

**ACCEPTED**  
**MAR 16 2007**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Registered under EPA Reg. No. 74578-1

**STOP—read the entire label before use.**

**KEEP OUT OF REACH OF CHILDREN**

### WARNING

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.  
99 Blueberry Hill Road  
Woburn, MA 01801  
[www.arborjet.com](http://www.arborjet.com)

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Harmful if swallowed, inhaled or absorbed through the skin. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear safety glasses. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

<b>FIRST AID</b>	
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call 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 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 5 minutes, then continue rinsing eye.</li> <li>• Call a Poison Control Center or doctor for further treatment advice.</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>
<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 further treatment advice.</li> </ul>
<p>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</p>	
<p><b>Note to Physician:</b> No specific antidote is available. Treat the patient symptomatically.</p>	

### **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. This product is highly toxic to bees exposed to direct treatment or residues on blooming plants or weeds. Do not apply this product or allow it to drift to blooming plants or weeds if bees are visiting the treatment areas.

### **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.

### **APPLICATION TO ORNAMENTALS**

IMA-jet is for use on ornamentals in residential, commercial and interior plantscapes. IMA-jet is a systemic insecticide formulated to translocate in the plant vascular system from the microinjection site(s). To assure optimum effectiveness, this product must be placed into the active sapwood.

**NOTE:** For optimum control, trees should be thoroughly irrigated prior to injection treatment.

### GENERAL DIRECTIONS

IMA-jet is designed for use with the Arborjet Tree Injection Systems, or with other manufacturer's tree injection devices that meet the label and dosage requirements. Follow manufacturer's directions for equipment use.

Measure the tree at chest height (54" from ground) in inches. If measuring circumference, divide this number by three to determine Diameter Breast Height (DBH). Refer to tables below to determine appropriate dose rate.

Best uptake is in trees in full leaf. Conditions that favor transpiration (i.e., warm soil temperatures >45° F, moist conditions) are optimal for injection uptake. In conifers, high humidity and cool temperatures favor transpiration (i.e., early morning, overcast, or rainy days) are optimal for injection uptake. Microinjection of trees stressed by drought or extreme heat may result in poor uptake or foliar injury.

### ARBORJET MICRO-INFUSION™ PROCEDURES

For optimum distribution, inject into tissues at the base of the tree. Basal microinjections are recommended—inject into tree roots exposing them by careful excavation or, alternatively into the trunk flare or tissue immediately above the trunk flare, selecting the injection site in the first few xylem elements (i.e., active sapwood). Microinject around the tree, injecting no closer than 2.0 inches (5.0cm) apart. Refer to Tree Diameter Table below to determine the optimum number of injection sites to apply.

#### 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. Brad point bits are recommended, and all drill bits should be clean and sharp.
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, or

#### Alternative Arborjet STINGER Procedure:

5. Alternatively insert the #2 (7/32" drill bit) STINGER 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. We recommend using a disinfectant such as CLEAN-jet, between trees when using the reusable STINGER tips.

**Tree diameter, number of trunk injection-sites for Arborplug™ and STINGER Methods**

Tree DBH	Minimum Number of Injection Sites Around the Tree Stem	A. Arborplug™ VIPER Method	B. STINGER Method
6-14"	4	3/8" Drill Bit	7/32" Drill Bit
15-20"	6		
21-26"	8		
27-32"	10		
33-38"	12		
39-44"	14		
45-50"	16		
51-56"	18		
57-62"	20		
63-68"	22		
69-74"	24		

**Resinous Conifers**

In resinous conifers, such as pine and spruce, start the injection and/or infusion process immediately following the setting of the Arborplug™ into the sapwood. A prolonged delay may reduce uptake efficacy on account of resin flow.

**Monocots**

Drill a pilot hole into the vascular bundle using a 3/16" diameter bit one third the stem diameter (e.g., if the palm is 12"DBH, then drill a 4" deep pilot hole), then drill a wider, shallow hole to set a #2 Arborplug™, use the VIPER needle to complete the application. Alternatively, insert the #2 STINGER tip to inject. Only one application site is required. Avoid wounding the meristematic tissue located within the crown of the plant. In general, make applications to the lower trunk region, typically within 12" of the soil.

**INJECTION PROCEDURES for M3 INJECTOR**

Root flare injections are recommended—IMA-jet Infusible Insecticide can be used with a variety of refillable tree infusion devices. For all injection devices, read carefully and follow all manufacturer use directions.

**Installation and Application using the Rainbow Treecare Scientific Advancement M3 injector:**

1. Examine the tree for the presence of root flare. If flares are not visible, excavate the root collar. Make Infusion sites 5-10 inches below the top of the root flare.
2. Thoroughly brush all dirt from the tree. A dirty root flare will dull the drill bit and increase uptake time.
3. Lay the injectors around the tree to select injection sites. The application rate is 1 injection site for every 2 diameter inches (approximately 1 injection site every 6 inches) evenly spaced around the root-flares. Using a 1 1/64" or 3/16" (4.5 to 5 cm) HIGH HELIX drill bit, drill a hole at a downward angle into each selected buttress root flare above the soil line. Drill to a depth of 1 to 1.5 cm (3/8 to 1/2") into healthy xylem tissue.
4. Insert the injector tip into the hole and seat firmly with hand pressure.
5. Close the control valve.
6. Inject treatment liquid into the M3 injector reservoir through the black duckbill (filling) valve.
7. Inject air into the M3 injector reservoir through the filling valve. Do not inject more than 25 cc of air.  
Note: Care must be taken when pressurizing the capsule. If the tool used to pressurize the capsule passes all of the way through the duckbill, the duckbill will not close and the capsule will not be pressurized.
8. Open the control valve just to the point where the liquid starts to flow into the tree.

9. Check for leaks. If leaks are found close the valve, seat firmly into the tree and re-open the valve. If leaks persist the problem may be too shallow of a hole, close the valve, remove the injector and re-drill to a deeper depth.
10. Uptake usually occurs within minutes. When all of the treatment liquid is out of the injector, a wash solution of water can be injected into the M3 injector and it can be re-pressurized or the M3 injector can be closed and removed from the tree. Wash solutions are not compatible with all formulations. Check for compatibility prior to rinsing the M3 injector into the tree.
11. Remove the M3 injector from the tree and store properly for reuse.

**Recommended Use in Trees and Ornamentals**

<b>CROP</b>	<b>PEST</b>	<b>DBH Range</b>	<b>DOSE RATE mL/DBH"</b>
Trees	Adelgids (including Hemlock Woolly Adelgid)	2 - 11"	4.0 - 5.0 mL
Shrubs	Aphids	12 - 17"	6.0 - 7.0 mL
Evergreens	Black Vine Weevil larvae	18 - 23"	7.0 - 8.0 mL
Interior Landscapes	Buprestid Borers (including Bronze Birch Borer,	24 - 29"	8.0 - 9.0 mL
Palms	Emerald Ash Borer)	30 - 35"	9.0 - 10.0 mL
	Flatheaded Borers	36 - 41"	10.0-11.0 mL
	Gall Wasps (including Erythrina Gall Wasp)	42 - 47"	11.0 - 12.0 mL
	Japanese Beetle	48 - 53"	12.0 - 13.0 mL
	Leaf Beetles (including Elm and Willow Leaf Beetles)	54 - 59"	13.0 - 14.0 mL
	Lacebugs	60 - 65"	14.0 - 15.0 mL
	Leafhoppers	66 - 71"	15.0 - 16.0 mL
	Leaf miners	72"+	16.0 mL
	Longhorned Borers (including Eucalyptus Longhorned Beetles)		
	Mealybugs		
	Pine Tip Moth larvae		
	Plant Bugs (including Leaf-footed Bugs)		
	Psyllids		
	Royal Palm Bugs		
	Sawfly larvae		
	Soft Scale Insects		
	Thrips		
	Whiteflies		

**RESTRICTIONS**

- Do not treat trees that are suffering from herbicide damage.
- Do not inject trees within two weeks of any other spray or soil chemical treatment.
- This product is not to be used on trees that will produce food within the year following treatment.

**Recommended Use in Forest and Woodland Areas**

IMA-jet microinjectable insecticide may be used for the control of various pests in Forested and Woodland Areas. See application recommendations below.

CROP	PEST	DBH Range	DOSE RATE mL/DBH"
Forest areas: Non-urban Forests, Trees Plantations, Planted Christmas Trees, Parks, Rural Shelter Belts, Rangeland Trees and Woodland Trees including Conifers	Adelgids (including Hemlock Woolly Adelgid)	2 - 11"	4.0 - 5.0 mL
	Aphids	12 - 17"	6.0 - 7.0 mL
	Black Vine Weevil larvae	18 - 23"	7.0 - 8.0 mL
	Buprestid Borers (including Bronze Birch Borer, Emerald Ash Borer)	24 - 29"	8.0 - 9.0 mL
	Flatheaded Borers	30 - 35"	9.0 - 10.0 mL
	Gall Wasps (including Erythrina Gall Wasp)	36 - 41"	10.0-11.0 mL
	Japanese Beetle	42 - 47"	11.0 - 12.0 mL
	Leaf Beetles (including Elm and Willow Leaf Beetles)	48 - 53"	12.0 - 13.0 mL
	Lacebugs	54 - 59"	13.0 - 14.0 mL
	Leafhoppers	60 - 65"	14.0 - 15.0 mL
	Leaf miners	66 - 71"	15.0 - 16.0 mL
	Longhorned Borers (including Eucalyptus Longhorned Beetles)	72"+	16.0 mL
	Mealybugs		
	Pine Tip Moth larvae		
	Plant Bugs (including Leaf-footed Bugs)		
	Psyllids		
	Royal Palm Bugs		
	Sawfly larvae		
	Soft Scale Insects		
	Thrips		
Whiteflies			

**RESTRICTIONS**

Do NOT use on syrup-producing sugar maples where sap is harvested.

To enhance product uptake and efficacy, dilute ONLY with MICRO-jet mixable fertilizer.

Follow label directions.

**For use under USDA Supervision Only:**

CROP	PEST	DBH Range	DOSE RATE mL/DBH"
Host trees including Elm, Maple, Birch, Willow, Box elder, Horsechestnut, Buckeye, European Mountain Ash, Ash, Poplar, Albizia, London Plane, Hackberry and Sycamore	Asian Longhorned Beetle	2 - 23"	4.0 mL
		24" +	8.0 mL
Hardwood and fruit trees	Citrus Longhorned Beetle		

## COMPATIBILITY

IMA-*jet* is compatible with MICRO-*jet* mixable infusible fertilizer. However, the physical compatibility of IMA-*jet* should be tested before use with other products.

To determine the physical compatibility of IMA-*jet* with other products, use a jar test as described below.

1. Using a pint jar, add the proportionate amounts of the two products to 1 pint of water.
2. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed, it is physically compatible. If precipitates form, the combination is incompatible.
3. Once compatibility has been proven acceptable, use the same procedure for adding required ingredients to the formulation tank.

**NOTE:** The safety of all potential tank mixes on all trees listed on this label may not have been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target tree should be tested. It is not advisable to apply pesticides via trunk injection or infusion applications that do not completely dissolve or disperse in solution. Application of liquid flowables, suspension concentrates, or dispersible granules that do not completely dissolve is NOT recommended.

## STORAGE AND DISPOSAL

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

**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 may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse. Then offer for recycling or reconditioning or puncture and dispose of empty bottles in a sanitary landfill, or by incineration if approved by State and Local authorities. If burned, stay 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.