

IMIDACLOPRID GROUP 4A INSECTICIDE



IMICIDE®

SYSTEMIC INSECTICIDE
FOR TREE INJECTION USE
IN READY TO USE CAPSULES

MFG. BY: J.J. MAUGET CO.
ADDRESS: 129 Growth Center Dr NE #A
TOWN, STATE: Floyd, VA 24091
EPA REGISTRATION NO: 7946-16
EPA ESTABLISHMENT NO: 7946-VA-1

ACTIVE INGREDIENT:

Imidacloprid*

1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.....10.0%

OTHER INGREDIENTS:.....90.0%

Total 100.0%

*Contains 1.11 g/mL active ingredient.

Net Contents:

Includes: 24 capsules plus 24 feeder tubes per carton/quarter flat.

_____ 24 capsules @ 0.06 fl. oz. (2 ml) ea., 1.44 fl. oz. (48 ml) net

_____ 24 capsules @ 0.09 fl. oz. (3 ml) ea., 2.16 fl. oz. (72 ml) net

_____ 24 capsules @ 0.14 fl. oz. (4 mL) each, 3.25 fl. oz. (96 mL) net

Shipping box: 12 cartons/quarter flats as above.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

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

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not dispose equipment washwaters or rinsate into a natural drain or water body.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

NOTICE OF WARRANTY

To the extent consistent with applicable law, J.J. Mauget Co. makes no warranty of merchantability, fitness for any purpose or otherwise expressed or implied concerning this product or its uses which extends beyond the use of the product under normal conditions in accord with the statements made on this label.

KEEP OUT OF REACH OF CHILDREN

CAUTION

	FIRST AID
IF SWALLOWED	<ul style="list-style-type: none">• Call a 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF IN EYES	<ul style="list-style-type: none">• 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.• Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible• Call a poison control center or doctor for further treatment advice
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-535-5053 for emergency treatment information.	
NOTE TO PHYSICIAN	
There is no specific antidote available. Treat patient symptomatically.	

PERSONAL PROTECTIVE EQUIPMENT

APPLICATORS AND OTHER HANDLERS MUST WEAR:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made out of polyethylene, butyl rubber ≥ 14 mils, or Viton ≥ 14 mils.
- Protective eyewear such as goggles, face shield or safety glasses.

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands 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 the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

RESISTANCE MANAGEMENT

For resistance management, IMICIDE contains imidacloprid, a Group 4A insecticide, and is classified in the neonicotinoid chemical class, nicotinic acetylcholine receptor (nAChR) competitive modulator. Any insect population may contain individuals naturally resistant to IMICIDE and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of IMICIDE or other Group 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Adopt an integrated pest management program for insecticide 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.
- For further information or to report suspected resistance contact J.J. MAUGET CO. at (626) 444-1057.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Restrictions

- Do not inject trees that are less than two inches in diameter at breast height (DBH) (6 inches in circumference).
- This product is NOT to be used on trees which will produce food within the year (365 days) following treatment unless food crop on treated tree is discarded and destroyed.
- Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.
- Do not apply more than once a year.

Read entire label, use strictly in accordance with precautionary statements and directions, and with applicable state and federal regulations. Failure to follow label directions may result in poor control or tree injury.

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 requirement specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and the 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). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

There are no reentry or Personal Protective Equipment requirements for this product.

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 (WPS) 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.

There are no reentry or protective clothing requirements for this product.

USE SITES

IMICIDE insecticide is for use on hardwood or deciduous trees, evergreens, palms and other monocotyledons grown in forests, ornamental landscapes, conifer seed orchards, and seed production areas.

FACTORS AFFECTING APPLICATION

Applications are most effective when made prior to insect infestation and in conjunction with good cultural management practices. The species and health of the tree, as well as local environmental conditions, will determine the rate of uptake when using the Mauget system. Uptake time in the tree usually occurs within several minutes to over an hour, but trees in advanced stages of insect infestation may not respond to treatment. If IMICIDE is not absorbed within 24 hours (barring any applicator error or malfunction of injection device, or environmental factors affecting tree transpiration), the tree may be considered high risk with a possible poor chance of survival.

Environmental Conditions

This technology relies on the natural uptake rate of the tree; and thus, factors that affect the transpiration rate can greatly affect the uptake rate. Transpiration is dependent upon a number of factors, such as soil moisture, soil and air temperatures, and time of day. For optimum uptake, apply when soil moisture is adequate and soil temperatures are above 45°F. Preferred conditions for injections are morning to early afternoon hours, with warm temperatures (55-85°F /13-30°C), accompanied by low humidity, clear skies and a slight breeze. Sunny conditions along with moist soil and a well-hydrated tree will also increase the transpiration rate and will therefore improve uptake. Conversely, cool temperatures, cloudy and/or evening skies and trees under moisture stress will slow down the rate of uptake. Extreme heat and cold temperatures will adversely affect rates as well.

Trees that have healthy vascular systems will have correspondingly higher uptake rates. Trees in advanced stages of pest development may not respond to treatment, as vascular plugging caused by disease inhibits transpiration. If IMICIDE has not started to absorb within two hours, consider removing the capsule (following the proper sequence provided in the removal instructions) and; drill a new hole in a different area of the trunk and inject again. The injection devices need to be evenly spaced at points on the trunk free of visible decay areas and wounds from the point of injection to where branching begins. If IMICIDE has not started to absorb within one hour after the second attempt, the vascular system of the tree may be too compromised for treatment or there is significant decay in that local injection area.

DO NOT inject trees that are drought stressed. Applications to drought or heat stressed trees may result in injury to tree tissue, poor treatment and subsequently poor control. Avoid treating trees that are moisture stressed or suffering from herbicide damage.

Monitor Tree Health and Pest Infestations

Preventative application is more effective than therapeutic treatment in trees showing insect infestation symptoms. Effective injection treatment is favored by a full canopy (i.e., leaves) and a healthy vascular system. Once these tissues are compromised by pest damage (larval galleries, defoliation, leaf mining, etc.), an effective and uniform application of IMICIDE may be difficult to achieve and subsequent control may be poor. For optimal results, treat at least 2 to 4 weeks before pests historically infest the host tree. As a result of systemic movement and longevity of IMICIDE in trees, the interval may be extended much earlier to 6 months should tree dormancy, adverse weather, management, asynchronous life cycle of pests, etc., allow earlier application timing.

IMICIDE may also be effective as a remedial treatment against some pests, such as those with slower development or if multiple life stages are susceptible to the active ingredient. Pests that attack the stem and branches may disrupt vascular tissue resulting in poor distribution in an infested tree. However, control may be achieved if larvae come into contact or feed on IMICIDE-treated tree tissues.

APPLICATION INSTRUCTIONS

Timing of Application:

Preventive applications 2 to 4 weeks prior to the anticipated feeding damage will provide better management, but rescue treatments will also perform well with acceptable minimal damage. IMICIDE can also be used after damage has occurred against listed insect pests that produce large amounts of feeding debris. Focus timing and treatment on the most susceptible stage of the target pest.

TARGET PESTS		
ADELGIDS	JAPANESE BEETLE	
APHIDS	LACEBUGS	
ASIAN LONGHORNED BEETLE	LEAFHOPPERS	
BLACK VINE WEEVIL LARVAE	LEAFMINERS	
BRONZE BIRCH BORER	MEALYBUGS	
COTTONWOOD LONGHORNED BORER	PINE TIP MOTH LARVAE	
CITRUS LONGHORNED BEETLE	PSYLLIDS (including Lerp Psyllid)	
DOUGLAS FIR GALL MIDGE	ROYAL PALM BUGS	
DOUGLAS FIR CONE MOTH LARVAE	SCALE INSECTS (including Asian Cycad Scale)	
ELM LEAF BEETLE	THRIPS	
EUCALYPTUS LONGHORNED BORER	WHITEFLIES	
FLATHEADED BORER (including Emerald Ash Borer and Alder and Birch Borer)		
FOR USE IN SEED ORCHARDS AND SEED PRODUCTION AREAS		
CROP	PESTS	RATE
CONIFERS	DOUGLAS FIR GALL MIDGE DOUGLAS FIR CONE MOTH LARVAE	One 3 mL capsule per 4 inches of tree circumference at breast height.
FOR USE ON PALMS AND OTHER MONOCOTYLEDONS		
Use the following rate as a function of tree diameter at breast height (DBH); 1 mL per diameter inch. Alternate depths if multiple drill sites are chosen, but the depth of any one site must be less than 1/3 the diameter of the tree. Capsules are available at 2, 3, and 4 mL. For heavier infestation and/or more persistent insects, use 1.5 or 2 mL per diameter inch.		

**THE FOLLOWING RATES ARE FOR USE ONLY UNDER U.S.D.A. SUPERVISION
U.S.D.A. RATE SPECIFICATIONS FOR ASIAN and CITRUS LONGHORNED BEETLE PROGRAMS IN U.S.D.A.
QUARANTINE AREAS ONLY.**

Use the following rates as a function of tree diameter at breast height (DBH). **Do not apply more than once a year.**

- 2 to 23 inches DBH – 2 mL per diameter inch.
- 24 inches DBH and above – 4 mL per diameter inch.

Minimum horizontal spacing on injection sites: 3 inches.

Minimum vertical spacing on injection sites: 6 inches.

Stagger vertical spacing and do not align.

Use 4 mL capsules on all trees 2 inches DBH and above.

Sequential Treatments:

When treating for beetles that carry fungi (ambrosia), an additional treatment of fungicide may improve management strategies. Materials to consider are fungicides labeled for use against vascular-inhabiting fungi.

IMICIDE may be sequentially applied with other insecticides, such as abamectin, for a more broad-spectrum treatment.

Application Tips:

To account for trunk flare, place injection sites evenly around the base of the root flare within 6 to 8 inches of the root crown. For pines and other resinous conifer species, injection sites may be higher up on the trunk (see Step 5 below). Follow good injection practices. Disinfect drill bit prior to use on each tree.

Tree measurement guidance

Dosages are based on the circumference OR the diameter (inches or centimeters) of the tree at breast height ("DBH"). DBH is the outside bark diameter of the trunk at 4.5 feet (1.4 m) above the ground on the uphill side of the tree. For the purposes of determining breast height, the ground includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

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

1. The MAUGET SYSTEM

(A) Mauget compressible capsule with insert hole

(B) Feeder tube with flanged gun-sight and opposite tapered beveled end

2. TOOLS

(A) Portable electric drill

(B) 11/64 in. (0.4 cm) drill bit

(C) Optional soft headed mallet or hammer

(D) Tape measure

(E) Insertion tool (optional)

3. NUMBER OF CAPSULES

Measure the tree at breast height in inches. If measuring the circumference, divide this number by six (6) to determine the number of capsules needed. If measuring the diameter at breast height (DBH), divide this number by 2 (two) to determine the number of capsules needed. If the number of capsules results in a fraction, round down to the lower whole number.

The following dosage, per capsule, depends on tree diameter:

2mL capsules – 2 to 10 inches DBH

3mL capsules – 11 to 36 inches DBH

4mL capsules – 37 inches DBH and above.

For heavier infestation and/or more persistent insects use 4 mL capsules. Trees in advanced stages of insect infestation may not respond to treatment.

The health, species of the tree and the environmental conditions will determine the rate of uptake.

Tree Diameter (DBH inches)	Circumference (Inches)	2 mL/DBH Rate (Number of capsules; grams of Active Ingredient)	3 mL/DBH Rate (Number of capsules; grams of Active Ingredient)	4 mL/DBH Rate (Number of capsules; grams of Active Ingredient)
2 to 4	6 to 12	1 to 2 capsules/2.2 to 4.4 g	---	1 to 2 capsules/4.4 to 8.9 g
5 to 7	15 to 21	2 to 3 capsules/4.4 to 6.7 g	---	2 to 3 capsules/8.9 to 13.3 g
8 to 10	24 to 30	4 to 5 capsules/8.9 to 11.1 g	---	4 to 5 capsules/17.8 to 22.2 g
11 to 13	33 to 39	---	5 to 6 capsules/16.6 to 20.0 g	5 to 6 capsules/22.2 to 26.6 g
14 to 19	42 to 57	---	7 to 9 capsules/23.3 to 30.0 g	7 to 9 capsules/31.1 to 40.0 g
20 to 22	60 to 66	---	10 to 11 capsules/33.3 to 36.6 g	10 to 11 capsules/44.4 to 48.8 g
23 to 28	69 to 84	---	11 to 14 capsules/36.6 to 46.6 g	11 to 14 capsules/48.8 to 62.2 g
29 to 31	87 to 93	---	14 to 15 capsules/46.6 to 50.0 g	14 to 15 capsules/62.2 to 66.6 g
32 to 34	96 to 102	---	16 to 17 capsules/53.3 to 56.6 g	16 to 17 capsules/66.6 to 75.5 g
35 to 37	105 to 111	---	17 to 18 capsules/56.6 to 59.9 g	17 to 18 capsules/75.5 to 79.9 g
38 to 40	114 to 120	---	---	18 to 20 capsules/79.9 to 88.8 g
41 to 43	123 to 129	---	---	20 to 21 capsules/88.8 to 93.2 g
44 to 46	132 to 138	---	---	22 to 23 capsules/97.7 to 102.1 g

47 to 49	141 to 147	---	---	23 to 24 capsules/102.1 to 106.6 g
50 to 52	150 to 156	---	---	25 to 26 capsules/111.0 to 115.5 g
53 to 58	159 to 174	---	---	26 to 29 capsules/115.4 to 128.8 g
59 to 61	177 to 183	---	---	29 to 30 capsules/128.8 to 133.2 g
62 to 64	186 to 192	---	---	31 to 32 capsules/137.6 to 142.1 g
65 to 67	195 to 201	---	---	32 to 33 capsules/142.1 to 146.5 g
68 to 70	204 to 210	---	---	34 to 35 capsules/151.0 to 155.4 g
71 to 73	213 to 219	---	---	35 to 36 capsules/155.4 to 159.8 g

4. PRESSURIZING THE CAPSULE

Apply the appropriate amount of pressure on the top of the capsule in order to compress.

5. DRILLING THE TREE HOLE

Predrill spaced injection sites at a slight downward angle at the root flair/butress area (approximately 6.0 to 8.0 in., 15 to 20 cm) above ground level, using a clean 11/64 in. (0.4 cm) drill bit (except monocotyledons, conifers, etc.). Drill the hole deep enough to allow the vascular system to transport IMICIDE throughout the tree. Make injection holes at least 3/8 to 1/2 inch (0.95 to 1.3 cm) into healthy xylem (white wood) under the bark, up to a depth of 2 inches (5 cm) from the outer trunk surface depending upon the tree species and outer bark thickness. For conifer species with high resin pressure during the growing season, place injection sites higher on the trunk (36 – 48 inches) and to a depth of up to 2 inches where tree diameter allows. Disinfect drill bit and insertion tool (if used) prior to use on each tree.

6. TREE HOLE DEPTH

It is important that the feeder tube be set to the proper depth in the conductive xylem tissue. If set too deeply, flow is restricted by blockage in the heartwood; if set too shallow, leakage may occur. The feeder tube dispensing end is beveled to allow for a 1/4 in. plus tolerance.

7. COMBINING CAPSULE AND FEEDER TUBE

Several methods of combining the capsule with the feeder tube are acceptable including placing by hand, the feeder tube's flange end, with the flange notch upward, into the capsule insert hole of a compressed upright capsule. Push the flange end of the feeder tube flush with the membrane located at the inner end of the insert hole.

8. PLACING THE FEEDER TUBE IN THE TREE

Firmly seat the beveled, dispensing end of the feeder tube, with the attached upright capsule, into the predrilled tree injection hole. Tap the rear side, opposite the insert hole of the capsule either with an optional mallet, hammer or push forward with the palm of your hand. This action will simultaneously seat the feeder tube in the injection hole while breaking the capsule membrane for releasing the capsule contents into the feeder tube and into the tree. Another method is to place the feeder tube in the predrilled hole of the tree using the optional insertion tool. Then place the compressed capsule onto the feeder tube in place.

9. REMOVAL

Uptake in the tree usually occurs within several minutes. Capsules may be temporarily rotated in place to see if any liquid is left. When empty, turn the capsules upside down for one minute before removal. Applicators must remove capsules promptly after treatment. Empty capsules must not be left on the tree. The health and species of the tree, and local environmental conditions will determine the rate of uptake. If the capsule does not completely empty within a few hours, invert and carefully remove the capsule and enclose it in a heavy duty plastic bag for disposal in accordance with state and local regulations.

Retreatment

At time of initial application, make note of the health level of each tree. Reevaluate health level in treated trees at 12-month intervals to determine the need for retreatment. Consider preventive applications 12-36 months after the initial treatment. Evaluate trees in high pest pressure areas or highly valued trees for retreatment if symptoms progress or 12 months after each treatment. Repeat treatment after 12 months, if needed. Follow application procedures described above for repeat injections; new drill holes will be required for subsequent treatments. Stagger the holes equally in subsequent applications to ensure proper uptake.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep pesticide in original container. Store in a cool (45°F-90°F), dry place out of direct sunlight and out of reach of children and animals.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may 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 dispose of empty capsules in a sanitary landfill, or by incineration if approved by State and Local authorities.