

Mantra[®] 1G

Greenhouse and Nursery Insecticide

For systemic insect control on ornamental plants in greenhouses, nurseries and interior plantscapes.

ACTIVE INGREDIENT:

Imidacloprid 1.0%

OTHER INGREDIENTS: 99.0%

TOTAL: 100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL
PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-523

Net Weight

50 Lbs. (22.68 Kg)

Manufactured for
Nufarm Americas Inc.
11901 S. Austin Ave.
Alsip, IL 60803

12778000 [1]



Nufarm

Grow a better tomorrow.

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

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves made of waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton.
- Shoes plus socks.
- Protective eyewear.

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

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users Should:

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

FIRST AID

IF ON SKIN OR CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF IN EYES

- Hold eye open and flush slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for 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 1-877-325-1840 for emergency medical treatment information.

NOTE TO PHYSICIAN

No specific antidote is available. Treat the patient symptomatically.

ENVIRONMENTAL HAZARDS

This product 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** contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

DIRECTIONS FOR USE

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

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the **restricted-entry interval (REI) of 12 hours**. Exception: If this product is applied by drenching, the Worker Protection Standard, under certain circumstances allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Chemical-resistant gloves made of waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks
- Protective eyewear

USE INFORMATION

This product is for insect control in grassy areas in nurseries and on ornamental plants in nurseries, greenhouses and interior plantscapes. This product is a systemic product and will be translocated upward within the plant. To assure optimum effectiveness, the product must be placed by incorporation where the roots of the plant can absorb the active ingredient. Irrigate modestly but thoroughly after application, allowing no runoff from treated area and no leaching and runoff from containers for at least three irrigations or 10 days whichever is longer.

Resistance: Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area. Consult your Cooperative Extension Service for resistance management strategies and recommended pest management practices for your area.

Incorporation: Incorporation of this product can be achieved by cultivation, irrigation, rainfall, mechanical placement or by using mechanical soil or media mixing equipment.

Woody Perennials: Onset of protection is slower than in herbaceous species. A delay of 2 or more weeks should be expected. Longer delays may be expected with larger plants. Application should therefore be made in advance of expected insect activity.

Bark Media: Media with 30% or more bark content when treated with this product may confer a shorter period of protection.

APPLICATION TO GRASSY AREAS IN NURSERIES AND NURSERY GROWN ORNAMENTALS

Use this product on grassy areas in nurseries, around nursery grown ornamentals, and between planting rows in nurseries to control listed pests. Make application prior to anticipated pest infestation to maximize control. Rainfall, irrigation and mechanical incorporation after application will aid in maximizing control.

The active ingredient in this product has sufficient residual activity so that applications can be made preceding the egg laying activity of the target pests. High levels of control can be achieved when applications are made preceding or during the egg laying period. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods.

| GRASSY AREAS IN NURSERIES | |
|---|--|
| PEST | DOSAGE |
| For control of: Annual bluegrass weevil Asiatic garden beetles (<i>Maladera</i> spp.) Billbugs Black turfgrass ataenius European chafer European Crane Fly Green June beetle Japanese beetle May or June beetles Northern masked chafer Oriental beetle (<i>Phyllophaga</i> spp.) Southern masked chafer | 30 to 40 lb per acre or 0.7 to 0.9 lb per 1000 sq ft |
| For control of: Mole crickets | 40 lb per acre or 0.9 lb per 1000 sq ft |
| For suppression of: Chinchbugs Cutworms | 40 lb per acre or 0.9 lb per 1000 sq ft |
| Remarks | |
| For control of grubs, billbugs, European crane fly and annual bluegrass weevil, make application prior to egg hatch of the target pest. For control of mole crickets make application prior to or during the peak egg hatch period. When adults or large nymphs are present and actively tunneling, accompany this product with a remedial insecticide. For suppression of chinchbugs, make application prior to the hatching of the first instar nymphs. Consult your local State Agricultural Experiment Station, or State Extension Turf Specialists for more specific information regarding timing of application. Irrigation or rainfall is required within 24 hours after application to move the active ingredient through the thatch. | |
| Restrictions | |
| DO NOT apply more than 40 lb (0.4 lb of active ingredient) per acre per year. DO NOT mow grassy area until after irrigation or rainfall has occurred so that uniformity of application will not be affected. DO NOT allow runoff or puddling of irrigation water following application. DO NOT apply this product to water-logged or saturated areas. Application of this product to water-logged or saturated areas will not allow penetration into the root zone of the plant. DO NOT graze treated areas or use clippings from treated areas for feed or forage. | |

| NURSERY GROWN ORNAMENTALS (in Field and Forest Nurseries) | |
|---|---|
| PEST | DOSAGE |
| For control of: White grub larvae (including Japanese beetle, Masked Chafer, European Chafer, Oriental beetle, Asiatic Garden beetle) | Use 2.8 lbs per 1000 linear row ft. or per 3000 sq. ft. |
| Remarks | |
| Apply as a uniform band on either side of planting rows using a band six (6) inches wider than the actual root ball diameter to be dug. DO NOT allow bands in adjacent rows to overlap. Vegetation in the area to be treated should be mowed to a height of 3 inches or less prior to application. Mowing to the lowest possible height will insure greater consistency of control. Apply May through July. Irrigation or rainfall is required within 24 hours after application. | |
| Restrictions | |
| DO NOT apply more than 40 lb (0.4 lb of active ingredient) per acre per year. DO NOT allow runoff or puddling of irrigation water following application. DO NOT apply this product to water-logged or saturated areas. Application of this product to water-logged or saturated areas will not allow penetration into the root zone of the plant. DO NOT exceed an application frequency of more than once each 16 weeks on nursery ornamentals with a production cycle of less than one (1) year. DO NOT exceed one (1) application per year on nursery ornamentals with a production cycle of greater than one year, Rotational Crops: Food Crops: Treated areas may be replanted with any crop specified on an imidacloprid label, or with any crop for which a tolerance exists for the active ingredient. For crops not listed on any imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12 month plant-back interval must be observed. | |

APPLICATION TO GREENHOUSE AND NURSERY ORNAMENTALS GROWN IN FLATS, ON BENCHES, IN BEDS, AND IN CONTAINERS

To control listed pests, incorporate this product into potting mix prior to planting or for topical applications to greenhouse and nursery ornamentals grown in flats, on benches, in beds, and in containers.

| |
|--|
| GREENHOUSE and NURSERY GROWN ORNAMENTALS (in Flats, on Benches, in Beds, and in Containers) |
|--|

PESTS

For control of: Adelgids, Aphids, Fungus gnat (larvae)¹, Japanese beetles (adults), Lacebugs, Leaf beetles (including Elm and Viburnum leaf beetles), Leafhoppers (including glassy-winged sharpshooter), Leafminers, Mealybugs, Psyllids, Root weevil complex (such as Black vine weevil, Apopka weevil, Citrus root weevil²), Soft scale, Whiteflies, White grub larvae (such as Japanese beetle, Chafer, European chafer, Oriental beetle, Asiatic garden beetle)

For suppression of: Armored scale, Thrips³

¹Fungus gnat larvae in the soil will be controlled by incorporation. No adult Fungus Gnat control. Other foliar insect control is achieved by the uptake of this product from a healthy root system translocating the active ingredient up into the plant.

²Citrus Root Weevil: Only for use on non-bearing citrus nursery stock.

³Thrips suppression on foliage only. Thrips in buds and flowers will not be suppressed.

USE RATES

1 level teaspoon (tsp) = 4.1 grams
3 tsp = 1 tablespoon (TBSP)

| TREATMENT | Container size (inches) | | Bulk Application | | | | Topical Application | | | |
|--|--------------------------|------|---------------------------------|------|-----------------------|-----|---------------------|-------|-------------|-----|
| | | | # pots / yd ³ of mix | | lbs / yd ³ | | level tsp | | grams / pot | |
| Herbaceous Species (1 or 2 plants per pot) | 2.0 | 3.0 | 4500 | 3200 | 7.0 | 3.5 | 1/8 | 1/4 | 0.5 | 1.0 |
| | 3.5 | 5.0 | 1600 | 1300 | 3.9 | 3.0 | 1/4 | 1/3 | 1.0 | 1.4 |
| | 5.5 | 7.0 | 900 | 400 | 1.8 | 1.2 | 1/3 | 1/2 | 1.4 | 2.0 |
| | 8.0 | 10.0 | 200 | 160 | 1.0 | 0.8 | 1/2 | 2/3 | 2.0 | 2.7 |
| | 11.0 | 12.0 | 80 | 60 | 0.8 | 0.5 | 2/3 | 1 | 2.7 | 4.1 |
| Woody Perennial and Herbaceous Species (3 or more plants per pot) | 2.0 | 3.0 | 4500 | 3200 | 9.0 | 7.0 | 1/4 | 1/3 | 1.0 | 1.3 |
| | 3.5 | 5.0 | 1600 | 1300 | 6.0 | 4.0 | 1/3 | 1/2 | 1.3 | 2.0 |
| | 5.5 | 7.0 | 900 | 400 | 2.5 | 2.0 | 1/2 | 2/3 | 2.0 | 2.7 |
| | 8.0 | 10.0 | 200 | 160 | 1.5 | 1.0 | 2/3 | 1 | 2.7 | 4.1 |
| | 11.0 | 12.0 | 80 | 60 | 1.0 | 0.8 | 1 | 1-1/2 | 4.1 | 6.1 |
| Containerized Plants | 1 Gallon | | 260 | 230 | 5.0 | 2.5 | 1-1/4 | 2-1/2 | 5 | 10 |
| | 2 Gallon | | 125 | 100 | 4.4 | 2.2 | 2-1/2 | 6 | 10 | 20 |
| | 3 Gallon | | 70 | 60 | 3.3 | 1.7 | 3-2/3 | 7-1/3 | 15 | 30 |
| | 5 Gallon | | 50 | 30 | 2.0 | 1.0 | 4-1/2 | 9 | 18.5 | 37 |
| Ornamentals grown in flats, benches, or beds | 15 ounces per 1000 sq ft | | | | | | | | | |

Remarks

Bulk Rate Application: Mix the required amount of this product per cubic yard of medium. Mix thoroughly before filling pots and transplanting.

Topical Application: May be made at transplanting, repotting, or on established containerized plants. Irrigate moderately after application to move the active ingredient into the root zone. **DO NOT** allow significant leaching and runoff for at least 3 irrigations or 10 days, whichever is longer.

Ornamentals grown in flats, benches, or beds: Apply as a broadcast treatment and incorporate into the soil or media before planting, irrigate moderately after application to move the active ingredient into the root zone. Minimize leaching and runoff for at least 3 irrigations or 10 days, whichever is longer.

All Treatments: For optimum control, make applications prior to egg hatch of the target pest. Irrigate moderately after application to move the active ingredient into the root zone.

Restrictions

DO NOT exceed an application frequency of more than once each 16 weeks on nursery ornamentals with a production cycle of less than one (1) year.

DO NOT exceed one (1) application per year on nursery ornamentals with a production cycle of greater than one year.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, or feed. Store in original containers and out of the 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. Improper disposal of excess pesticide is a violation of Federal law.

CONTAINER DISPOSAL: Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty container into application equipment. Then offer for recycling if available or place empty container in the trash.

SPILLS: If the container is leaking or material is spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material.

DO NOT walk through spilled material. Dispose of as directed for pesticides above, or apply uncontaminated product according to Directions For Use. Keep unauthorized people away. For chemical spill, leak, fire, or exposure, you may contact CHEMTREC at 800-424-9300.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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