



Imidacloprid 2F T&O

ACTIVE INGREDIENT:

 Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-
N-nitro-2-imidazolidinimine 22.6%

OTHER INGREDIENTS: 77.4%

TOTAL: 100.0%

Contains 2 pounds imidacloprid per gallon.

STOP: READ THE LABEL BEFORE USE KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
 (If you do not understand the label, find someone to explain it to you in detail.)

SHAKE WELL BEFORE EACH USE

FIRST AID

If inhaled:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If swallowed:	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 do so 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 doctor for treatment advice.
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 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. **For MEDICAL Emergencies Call CHEMTREC at telephone no. 1-800-424-9300. For PRODUCT USE Information Call telephone no. 901-761-0050.**

NOTE TO PHYSICIAN – No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if inhaled. Harmful if swallowed. Avoid breathing spray mist. Remove and wash contaminated clothing before use. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or before using the toilet.

ENVIRONMENTAL HAZARDS

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 wash waters. This product is highly toxic to bees exposed to direct treatment or residues in blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging in the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

DIRECTIONS FOR USE

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

See individual crops for specific pollinator protection application restrictions.

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, and feed. Store in original container and out of reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If the container is leaking or material is spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticide below. In spill or leak incidents, keep unauthorized people away.

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: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

EPA Reg. No. 38167-37-5905

AD 120213

EPA Est. No. First Letters of Product Batch Code Indicate Producing Establishment: 5905-GA-1=CG • 5905-IA-1=DI

Manufactured For
HELENA CHEMICAL COMPANY
 225 SCHILLING BOULEVARD, SUITE 300
 COLLIERSVILLE, TENNESSEE 38017

NET CONTENTS:

PEEL BACK BOOK HERE AND RESEAL AFTER OPENING

OPM #123319



Imidacloprid 2F T&O

INSECTICIDE FOR FOLIAR AND SYSTEMIC INSECT CONTROL IN TURFGRASSES (INCLUDING SOD FARMS), ORNAMENTALS, FRUIT AND NUT TREES, VEGETABLE PLANTS, GREENHOUSES, NURSERIES AND INTERIOR PLANTSCAPES

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FIRST AID	
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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 do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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SHAKE WELL BEFORE EACH USE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled. Harmful if swallowed. Avoid breathing spray mist. Remove and wash contaminated clothing before use. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or before using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

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

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems 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 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.

ENVIRONMENTAL HAZARDS

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 wash waters.

This product is highly toxic to bees exposed to direct treatment or residues in blooming crops, plants or weeds. Do not apply this product or allow it to drift to blooming crops, plants or weeds if bees are foraging in the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.



PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators. This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- o Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- o Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- o Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- o Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov.

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

TAKE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Spray Drift Management

The responsibility of avoiding spray drift is with the applicator. The applicator is responsible for considering the weather related factors and the interaction of application equipment when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Importance of Droplet Size:

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, make applications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

Wind Speed Restrictions:

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

(continued)

Restrictions During Temperature Inversions

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

Mixing and Loading Requirements

The use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sink-holes, or tiled drains.

No-Spray Zone Requirements for Soil Applications

Do not apply within 25 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic area to allow growth of a vegetative filter strip. When using IMIDACLOPRID 2F T&O on erodible soils, employ the best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

Resistance Management

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.

This product contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

The active ingredient in this product belongs to the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to this product. To maintain susceptibility to this class of chemistry in insect species with high resistance development potential (1. make only a single, soil application of this product; (2. foliar applications of products from this same class can be made following a long residual, soil application of this product, or other neonicotinoid products.

Examples of other Group 4A, neonicotinoid products used as foliar treatments include: Actara, Assail, Calypso, Centric, Clutch, Couraze, Gallant, Impulse, Intruder, Leverage, Pasada, Provado and Trimax Pro and Venom.

Examples of other Group 4A, neonicotinoid products used as soil treatments include: Admire, Admire Pro, Advise, Alias, Couraze, Cruiser, Gaucho, Macho, Macho Max, Platinum, Venom and Widow.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management instructions. Also, for more information on Insect Resistance Management (IRM), visit the insecticide Resistance Committee (IRAC) on the web at <http://www.irac-online.org/>.

DIRECTIONS FOR USE

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

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed & commercially grown ornamentals that are attractive to pollinators (and non-agricultural use sites):



FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that bees can be removed, covered or otherwise protected prior to spraying.



FOR FOOD/FEED CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of planned application so that the bees can be removed, covered or otherwise protected prior to spraying.
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.



NON-AGRICULTURAL USE SITES:

Do not apply IMIDACLOPRID 2F T&O while bees are foraging. Do not apply IMIDACLOPRID 2F T&O to plants that are flowering. Only apply after all flower petals have fallen off.

Do not apply this product in a way that will contact worker or other persons, either directly or through drift. Only protected handlers or protected supervisors may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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 the product is soil-injected or soil-incorporated, 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 any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes plus socks

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 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.

Keep children and pets off treated area until dry.

RESTRICTIONS

DO NOT graze treated areas or use clippings from treated areas for feed or forage. Avoid runoff or puddling of irrigation water following application. Keep children and pets off treated area until dry. Do not apply IMIDACLOPRID 2F T&O to areas which are water logged or saturated, which will not allow penetration into the root zone of the plant. **DO NOT** apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year.

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

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 an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, there is a 12-month plant-back interval.

APPLICATION INSTRUCTIONS

SHAKE WELL BEFORE USING

Direct applications of IMIDACLOPRID 2F T&O into the seed or root-zone of crop. Failure to place this product into root-zone may result in loss of control or delay in onset of activity. This product may be applied with ground or chemigation application. Do not apply with aerial application equipment. Broadcast, foliar applications are only recommended to seedling flats or trays, or where product is intended to be washed from foliage to soil prior to drying on foliage.

Optimum activity results from applications to the root-zone of plants to be protected. The earlier this product is available to a developing plant, the earlier the protection begins. This product is continuously taken into the roots over a long period of time and the systemic nature of this product allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate applied affects the length of the plant protection period. Use the higher rate specified when infestations occur later in crop development, or where pest pressure is continuous. This product will generally not control insects infesting flowers, blooms or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts and for insects not listed in the crop-specific, pests controlled sections of this label.

Suppression or less than complete control of certain diseases and insect pests including reduced feeding may also result from applications of this product. Complete control of these pests/diseases may require supplemental control measures.

Do not use IMIDACLOPRID 2F T&O on crops grown for production of true seed intended for private or commercial planting unless allowed under state-specific, 24(c) labeling. As with any insecticide, care should be taken to minimize exposure of the product to honey bees and other pollinators. Additional information on IMIDACLOPRID 2F T&O uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Helena Chemical representatives.

Pre-mix this product with water or other appropriate diluent prior to application. Keep this product and water suspension agitated to avoid settling.

Do not apply more than 0.4 lb active ingredient per acre, per year, regardless of formulation or method of application, unless specified within a crop-specific Application section.

Mixing Instructions

To prepare the application mixture, add a portion of the required amount of water to the tank and with agitation add IMIDACLOPRID 2F T&O. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. This product may also be used with other pesticides and/or fertilizer solutions. Please see **Compatibility Note** below. When tank mixtures of IMIDACLOPRID 2F T&O and other pesticides are involved, prepare the tank mixture as specified above and follow suggested **Mixing Order** below.

Mixing Order

When pesticide mixtures are needed, add wettable powders first, then this product and other flowable (suspension concentrate) products second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility Note

Test compatibility of the intended mixture before adding this product to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily redispense indicates an incompatible mixture that should not be used. For further information, contact your local Helena Chemical Company representative.

CHEMIGATION – DIRECTIONS FOR USE

Types of Irrigation Systems

Chemigation applications of IMIDACLOPRID 2F T&O may only be made to crops through chemigation systems as specified in crop-specific Application sections and only through low-pressure systems unless specifically instructed for a given crop. Do not apply IMIDACLOPRID 2F T&O through any other type of irrigation system.

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Drift

Do not apply when wind speed favors drift beyond the area intended for treatment.

Required System Safety Devices

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located in the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

(continued)

APPLICATION THROUGH IRRIGATION SYSTEMS

This product may be applied at rates specified on the label either alone or in tank mixtures with pesticides and chemicals registered for application through irrigation systems. The normal dilution ratio is 1:100 to 1:200, depending on the system. Always meter the product into the irrigation water during the first part of the irrigation cycle. The product may be mixed separately prior to injection. Agitation may be necessary if the mixture is allowed to stand more than 24 hours.

Remove scale, pesticide residue and other foreign matter from the tank and entire irrigation system.

Only use this product through micro irrigation (individual spaghetti tubes), drip irrigation, overhead irrigation, ebb and flood, or hand-held or motorized calibrated irrigation equipment.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non-uniform distribution. Sufficient irrigation or rainfall is needed to allow the movement of the active ingredient through the thatch. If you have any questions about calibration, contact your State Extension Service specialist, equipment manufacturers or other experts in this area.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or a person who is under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

SAFETY DEVICES FOR IRRIGATION SYSTEMS CONNECTED TO PUBLIC WATER SUPPLIES

If the source of water for your irrigation system is a public water supply, follow the instructions below:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the injection diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SAFETY DEVICES FOR IRRIGATION SYSTEMS NOT CONNECTED TO PUBLIC WATER SUPPLIES

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where the pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

TURF & ORNAMENTAL APPLICATIONS

For Foliar and Systemic Insect Control in Turfgrass (Including Sod Farms), Ornamentals, Fruit and Nut Trees, Vegetable Plants, Greenhouses, Nurseries and Interior Landscapes

Application Instructions

APPLICATION TO TURFGRASS

IMIDACLOPRID 2F T&O can be used for the control of the following soil inhabiting pests of turfgrass: Northern & Southern masked chafers, *Cyclocephala borealis*, *C. immaculata*, and/or *C. lurida*; Asiatic garden beetle, *Maladera castanea*; European chafer, *Rhizotroqus majalis*; Green June beetle, *Cotinis nitida*; May or June beetle, *Phyllophaga* spp.; Japanese beetle, *Popillia japonica*; Oriental beetle, *Anomala orientalis*; Billbugs, *Sphenophorus* spp.; Annual bluegrass weevil, *Listronotus* spp.; Black turfgrass ateniens, *Atenius spretulus* and *Aphodius* spp.; European Crane Fly, *Tipula paludosa*; and mole crickets, *Scapteriscus* spp. This product can also be used for suppression of cutworms and chinch bugs. It can be used as directed on turfgrass in home lawns, business and office complexes, shopping complexes, golf courses, airports, cemeteries, parks, playgrounds, athletic fields and sod farms.

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. Optimum control will be achieved when applications are made prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

Do not make applications when turfgrass areas are waterlogged or the soil is saturated with water. Adequate distribution of the active ingredient cannot be achieved when these conditions exist. The treated turf area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile. Do not apply more than 1.6 pints (0.4 lb of active ingredient) per acre per year.

APPLICATION EQUIPMENT FOR USE ON TURFGRASS

Apply this product in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for the application of turfgrass insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

APPLICATION TO ORNAMENTALS & VEGETABLE PLANTS

This product is for use on indoor and outdoor ornamentals (including both greenhouse and interior landscapes) and ornamentals grown in flats, benches or beds and in commercial landscapes. It is a systemic product and will be translocated upward into the plant system from root uptake. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer, where applicable, into the solution may enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications; including soil injection, drenches, and broadcast sprays. Foliar applications offer locally systemic activity against insect pests.

When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. In some cases, this translocation delay could take 60 days or longer. For this reason, make applications prior to anticipated pest infestation to achieve optimum levels of control.

For outdoor ornamentals, do not apply more than 1.6 pints (0.4 lb of active ingredient) per acre per year.

Do not allow this product to contact plants in bloom if bees are foraging the treatment area.

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

RESISTANCE: Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product must conform to resistance management strategies established for the use area. Because the development of resistance cannot be predicted, the use of this product must conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

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APPLICATION EQUIPMENT FOR ORNAMENTALS AND VEGETABLE PLANTS

IMIDACLOPRID 2F T&O mixes readily with water and may be used in many types of application equipment. Mix product with the required amount of water and apply as desired dependent upon the selected use pattern.

When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended. If concentrate or mist type spray equipment is used, use an equivalent amount of product on the area sprayed, as would be used in a dilute application.

This product has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers, and other commonly used insecticides. The physical compatibility of this product may vary with different sources of pesticide products and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of pesticides and water to ensure the physical compatibility of the mixture.

APPLICATION INSTRUCTIONS FOR GRASSY AREAS IN NURSERIES

IMIDACLOPRID 2F T&O can be used for the control of the following soil inhabiting pests of grassy areas of nurseries:

PEST	SCIENTIFIC NAME
Annual bluegrass weevil	<i>Hyperodes</i> spp.
Asiatic garden beetle	<i>Maladera castanea</i>
Billbugs	<i>Spherophorus</i> spp.
European chafer	<i>Rhizotrogus majalis</i>
European Crane Fly	<i>Tipula paludosa</i>
Green June beetle	<i>Cotinis nitida</i>
Japanese beetle	<i>Popillia japonica</i>
May or June beetle	<i>Phyllophaga</i> spp.
Mole crickets	<i>Scapteriscus</i> spp.
Northern and Southern masked chafers	<i>Cyclocephala borealis</i> , <i>C. immaculata</i> , and/or <i>C. lurida</i>
Oriental beetle	<i>Anomala orientalis</i>

IMIDACLOPRID 2F T&O will suppress cutworms and chinchbugs.

Use IMIDACLOPRID 2F T&O as labeled on nursery grass in sites under or around field or container grown plants, on roadways or other grassy areas in or around nurseries.

IMIDACLOPRID 2F T&O has adequate residual activity that applications can be made preceding the egg laying activity of the target pests. Best control is achieved when applications are made prior to egg hatch of the pests. Sufficient irrigation or rainfall is required to move the active ingredient through the thatch.

Do not apply when infested turfgrass areas are waterlogged or soil beneath turf is saturated with water. These conditions prevent thorough and consistent distribution. Best results are achieved when rainfall or irrigation after application will penetrate vertically in the soil column carrying the active ingredient into the zone where insects are normally located.

Do not apply more than 1.6 pints (0.4 lb. of active ingredient) per acre per year.

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APPLICATION EQUIPMENT FOR USE ON GRASSY AREAS IN NURSERIES

Dilute IMIDACLOPRID 2F T&O with enough water to provide adequate volume to promote thorough distribution into the pest zone. Use only accurately calibrated equipment for application to turfgrass. Apply a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Perform calibration on a regular basis to ensure that equipment is distributing product properly.

APPLICATION INSTRUCTIONS			
For use on Turf Grasses, Grassy Areas of Field & Forest Nurseries			
SITE	PESTS	DOSAGE	REMARKS
Turf Grasses, Grassy areas of field & forest nurseries	Larvae of: Annual bluegrass weevil Asiatic garden beetle Billbugs Black turfgrass atenius Cutworms (suppression) European chafer European Crane Fly Green June beetle Japanese beetle Northern masked chafer Oriental beetle <i>Phyllophaga</i> spp. Southern masked chafer	19.2 to 25.6 fl. oz. per acre or 0.45 to 0.6 fl. oz. (13 to 17 mL) per 1,000 sq ft	For optimum control of grubs, billbugs and annual bluegrass weevil, and European Crane Fly make application prior to egg hatch of the target pest. Be sure to read " APPLICATION EQUIPMENT " Section of this label.
	Chinchbugs (suppression) Mole crickets	25.6 fl. oz. per acre or 0.6 fl. oz. (17 mL) per 1,000 sq ft	For suppression of chinch bugs, make application prior to the hatching of the first instar nymphs. 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 IMIDACLOPRID 2F T&O applications with a remedial insecticide. Follow label instructions for other insecticides when tank-mixing.
Consult your local turf, State Agricultural Experiment Station, or State Extension Service Specialists for more specific information regarding timing of application.			
Restrictions: Irrigate within 24 hours if rainfall does not occur after application to move the active ingredient through the thatch. DO NOT apply more than 1.6 pt (0.4 lb of active ingredient) per acre per year. Do not mow turf or lawn areas until after sufficient irrigation or rainfall has occurred so that uniformity of application will not be affected.			

APPLICATION INSTRUCTIONS

For foliar and systemic insect control in field-grown nursery and containers stock, indoor and outdoor ornamentals (including both greenhouse and interior plantscapes) and ornamentals grown in flats, benches or beds. Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

CROP	PESTS	DOSAGE	REMARKS
Trees (including non-bearing fruit & nut) Shrubs Evergreens Flowers Foliage plants Ground covers Interior Plantscapes Vegetable plants ¹	Adelgids Aphids Japanese beetles Lace bugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharp-shooter) Leafminers Mealybugs Psyllids Sawfly larvae Thrips (suppression) Whiteflies	1.7 fl. oz. (50 mL) per 100 gal of water	Foliar Applications: Start treatments prior to establishment of high pest populations and reapply on an as needed basis.
	White grub larvae (such as Japanese beetle larvae, Chafers, <i>Phyllophaga</i> spp. Asiatic garden beetle, Oriental beetle)	0.45 to 0.6 fl. oz. (13 to 17 mL) per 1,000 sq. ft.	Broadcast Applications: Mix required amount of product in sufficient water to uniformly and accurately cover the area being treated. DO NOT use less than 2 gallons of water per 1,000 sq. ft. For optimum control, irrigate thoroughly to incorporate this product into the upper soil profile. Refer to use directions specific for FLOWERS and GROUND COVERS concerning additional use directions. ¹ Only for use on vegetable plants intended for resale including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussel Sprouts, Cabbage, Chinese Cabbage, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

**APPLICATION INSTRUCTIONS - TREE, SHRUBS, FLOWERS,
GROUNDCOVERS, AND INTERIORESCAPE PLANTS**

For use around industrial and commercial buildings, and state, national, and private wooded forested areas for the insect pests listed below. Do not apply this product, by any application method, to linden, basswood or other Tilia species in the State of Oregon.

PESTS

Adelgids	Leafhoppers (including glassy-winged sharpshooter)
Aphids	Leafminers
Armored scales (suppression)	Mealybugs
Asian longhorned beetle	Pine Tip moth larvae
Black vine weevil larvae	Psyllids
Emerald ash borer	Royal Palm bugs
Eucalyptus longhorned borer	Sawfly larvae*
Flathead borers (including bronze birch and alder borer)	Soft scales
Japanese beetles	Thrips (suppression)
Lace bugs	White grub larvae
Leaf beetles (including elm and viburnum leaf beetles)	Whiteflies

CROP	DOSAGE	REMARKS
Trees	<p>0.1 to 0.4 fl. oz. (3 to 12 mL) per inch of trunk diameter (D.B.H.)</p> <p>You may use the higher rate (0.3-0.4 fl. oz.) only for trees >15 inches (DBH) to control Asian longhorned beetle, Emerald ash borer, Eucalyptus longhorned borer, Bronze birch borer and Alder borer.</p> <p>Diameter at Breast Height (DBH) is measured at 4.5 feet from the ground.</p>	<p>Soil Injection: GRID SYSTEM: Space holes on 2.5 foot centers, in a grid pattern, extending to the drip line of the tree. CIRCLE SYSTEM: Apply in holes evenly spaced in circles, (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line. BASAL SYSTEM: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.</p> <p>Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. For optimum control, keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes per tree.</p> <p>No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York.</p> <p>Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1,000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.</p> <p>For Control of Specified Borers: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress.</p>

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**APPLICATION INSTRUCTIONS – TREE, SHRUBS, FLOWERS,
GROUNDCOVERS, AND INTERIOESCAPE PLANTS (cont.)**

For use around industrial and commercial buildings, and state, national, and private wooded forested areas for the insect pests listed below. Do not apply this product, by any application method, to linden, basswood or other Tilia species in the State of Oregon.

PESTS

Adelgids	Leafhoppers (including glassy-winged sharpshooter)
Aphids	Leafminers
Armored scales (suppression)	Mealybugs
Asian longhorned beetle	Pine Tip moth larvae
Black vine weevil larvae	Psyllids
Emerald ash borer	Royal Palm bugs
Eucalyptus longhorned borer	Sawfly larvae*
Flathead borers (including bronze birch and alder borer)	Soft scales
Japanese beetles	Thrips (suppression)
Lace bugs	White grub larvae
Leaf beetles (including elm and viburnum leaf beetles)	Whiteflies

CROP	DOSAGE	REMARKS
Shrubs	0.1 to 0.2 fl. oz. (3 to 6 mL) per foot of shrub height	Soil Injection: Apply to individual plants using dosage indicated. Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Keep the treated area moist for 7 to 10 days. DO NOT use less than 4 holes per shrub. No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York. Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1,000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.
Flowers & Ground Covers	0.46 to 0.6 fl. oz. (14 to 17 mL) per 1,000 sq. ft.	Apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. If application is made to established plants, optimum control will be attained if area is irrigated thoroughly after application. Apply prior to bloom or after all the petals have fallen off.

*Sawfly larvae feed on mature foliage beginning in early spring. Make treatments in the fall before sawfly emergence in spring to allow adequate time for imidacloprid translocation into mature foliage.

RESTRICTION: DO NOT apply more than 25.6 fl. oz. (0.4 lb. AI) per acre per year.

EBB & FLOOD APPLICATION			
PESTS			
Adelgids			Psyllids
Armored scales			Root mealybugs ²
Aphids			Root Weevil Complex (such as Apopka Weevil, Black vine Weevil, Citrus Root Weevil ³)
Fungus Gnats ¹ (larvae only)			Soft Scale
Japanese Beetles (adults)			Thrips (suppression) ⁴
Lace bugs			Whiteflies
Leaf beetles (including elm and viburnum leaf beetles)			White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)
Leafhoppers (including glassy-winged sharpshooter)			
Leafminers			
Mealybugs			
USE PATTERN	DOSAGE		REMARKS
Herbaceous Species-including vegetable plants ⁵ (one or two plants per pot)	Container size (inches)	mL per 100 plants	This product may be applied through Ebb and Flood applications. To assure accurate uptake it is recommended that prior to treatment, a minimum of 10 plants be brought up to a known field capacity and allowed to dry out for one or two days. Re-wet these plants to determine how much water on average each plant will absorb to bring it back at field capacity. Use the volume absorbed per plant (keeping pot sizes uniform) multiplied by the number of pots being treated. Add to this volume a required minimum to flood your smallest treatment area. This should minimize the return back to the storage tank. Re-use the returned volume with subsequent irrigation or nutrients on the same plants.
	2	1.6	
	3	2.5	
	4	3.3	
	5	4.2	
	6	5.0	
	7	5.9	
	8	6.6	
	9	7.4	
	10	8.3	
	11	9.0	
	12	10.0	
Herbaceous Species-including vegetable plants ⁵ (three or more plants per pot)	2	2.5	
	3	3.7	
	4	5.0	
	5	6.3	
	6	7.7	
	7	9.1	
	8	10.0	
	9	11.1	
	10	12.5	
	11	14.3	
	12	16.7	
	¹ Fungus gnat larvae in the soil will be controlled by drench or 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. ² Root Mealybug control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate: 1.7 fluid ounces (50 mL) in 150 gallons water. ³ Citrus Root Weevil: For use on non-bearing citrus nursery stock. ⁴ Thrips suppression on foliage only. Thrips in buds and flowers will not be suppressed. ⁵ Note: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.		

DRENCH AND IRRIGATION APPLICATION INSTRUCTIONS

For use only in greenhouse and nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment. Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

PESTS

Adelgids	Root mealybugs ²
Aphids	Root Weevil Complex (such as Apopka Weevil, Black vine Weevil, Citrus Root Weevil ³)
Fungus Gnats ¹ (larvae only)	Soft Scale
Japanese Beetles (adults)	Thrips (suppression) ⁴
Lace bugs	Whiteflies
Leaf beetles (including elm and viburnum leaf beetles)	White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)
Leafhoppers (including glassy-winged sharpshooter)	
Leafminers	
Mealybugs	
Psyllids	

USE PATTERN		DOSAGE		REMARKS
Plants in containers	Herbaceous Species-including vegetable plants ⁵ (one or two plants per pot)	Container size (inches)	No. pots treated with 1.7 fl. oz. (50 mL)	Use sufficient volume to wet most of the potting medium without loss of liquid from the bottom of the container. Apply according to label directions. Follow application with moderate irrigation. Irrigate carefully during the next 10 days in order to avoid loss of active ingredient due to leaching.
		2	3000	
		3	2000	
		4	1500	
		5	1200	
		6	1000	
		7	850	
		8	750	
		9	675	
		10	600	
		11	550	
		12	500	
Woody perennials		2	2000	
		3	1350	
		4	1000	
		5	800	
		6	650	
		7	550	
		8	500	
		9	450	
		10	400	
		11	350	
		12	300	
		Herbaceous Species-including vegetable plants ⁵ (three or more plants per pot)		Use the above woody perennial rates.

(continued)

DRENCH AND IRRIGATION APPLICATION INSTRUCTIONS (cont.)

For use only in greenhouse and nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment. Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

PESTS

Adelgids	Root mealybugs ²
Aphids	Root Weevil Complex (such as Apopka Weevil, Black vine Weevil, Citrus Root Weevil ³)
Fungus Gnats ¹ (larvae only)	Soft Scale
Japanese Beetles (adults)	Thrips (suppression) ⁴
Lace bugs	Whiteflies
Leaf beetles (including elm and viburnum leaf beetles)	White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)
Leafhoppers (including glassy-winged sharpshooter)	
Leafminers	
Mealybugs	
Psyllids	

USE PATTERN	DOSAGE	REMARKS
Ornamental grown in flats, benches, or beds.	1.7 fl. oz. (50 mL) per 3,000 square feet	Mix required amount in sufficient water to uniformly cover the area being treated. Do not use less than 2 gallons of mixture per 1,000 square feet. Apply as a broadcast treatment and incorporate into the medium before planting or apply after plants are established. Apply prior to bloom or after all the petals have fallen off. To optimize control lightly water the treated areas if applications are made to established plants. Allow no leaching or runoff for 10 days after application.

For use only in greenhouse and nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment.

Application Instructions: Use 1.7 fluid ounces (50 mL) of product in an appropriate amount of water to avoid leaching to treat the number of pots based on pot size in the table below.

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DRENCH AND IRRIGATION APPLICATION INSTRUCTIONS (cont.)

For use only in greenhouse and nursery ornamentals, vegetable plants, and interiorscape plants using soil drenches, micro-irrigation, drip irrigation, overhead irrigation, ebb and flood irrigation, or hand-held or motorized calibrated irrigation equipment. Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

PESTS

Adelgids	Root mealybugs ²
Aphids	Root Weevil Complex (such as Apopka Weevil, Black vine Weevil, Citrus Root Weevil ³)
Fungus Gnats ¹ (larvae only)	Soft Scale
Japanese Beetles (adults)	Thrips (suppression) ⁴
Lace bugs	Whiteflies
Leaf beetles (including elm and viburnum leaf beetles)	White Grub larvae (such as Japanese Beetle, Masked Chafers, European Chafer, Oriental Beetle, Asiatic Garden Beetle)
Leafhoppers (including glassy-winged sharpshooter)	
Leafminers	
Mealybugs	
Psyllids	

USE PATTERN**DOSAGE**

Plants in Containers	Container Size	No. pots treated with 1.7 fl. oz. (50 mL)
	1 gallon	340 to 244
2 gallon	280 to 210	
3 gallon	220 to 185	
5 gallon	160 to 110	
7 gallon	100 to 75	
10 gallon	60 to 45	
15 gallon	40 to 30	
20 gallon	20 to 15	

Apply in sufficient water to wet the potting medium. For optimum control, make applications prior to egg hatch of the target pest. Irrigate moderately after applications to move the active ingredient into the root zone.

White Grub Larvae: (such as Japanese Beetle, Masked Chafers, European Chafers, Oriental Beetle, Asiatic Garden Beetle)

Field and Forest Nurseries	Apply as a uniform band on either side of the row using a band width six (6) inches wider than the actual root ball diameter to be dug. Do not allow bands in adjacent rows to overlap. Use 1.7 fluid ounces (50 mL) per 1,000 feet of row or 3,000 square feet. For grub control in areas of turf, apply as a broadcast application using 1.35 to 1.70 fluid ounces (40 to 50 mL) per 3,000 square feet.
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Mowing of the vegetation in the area to be treated to a height of 3 inches or less prior to application will improve the consistency of control.

Apply May through July. For optimum control rainfall or irrigation must follow treatment. Do not use less than 2 gallons of spray volume per 1,000 square feet.

¹Fungus gnat larvae in the soil will be controlled by drench or 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.

²Root Mealybug control will require a thorough drenching of containerized media. Coverage is essential for control while minimizing the amount of leachate. Rate: 1.7 fluid ounces (50 mL) in 150 gallons water.

³Citrus Root Weevil: For use on non-bearing citrus nursery stock.

⁴Thrips suppression on foliage only. Thrips in buds and flowers will not be suppressed.

⁵Note: For use on vegetable plants intended for resale only including: Broccoli, Chinese Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Eggplant, Ground Cherry, Kale, Kohlrabi, Lettuce, Mustard Greens, Pepinos, Peppers, Potatoes, Rape Greens, Sorghum, Sugarbeets, Tomatillo, and Tomato.

APPLICATION INSTRUCTIONS			
CROP	PEST	DOSAGE	REMARKS
Pome Fruits Apple Crabapple Loquat Mayhaw Pear Pear (Oriental) Quince	Aphids (except Woolly apple aphid) Leafhoppers (including glassy-winged sharp-shooter) Leafminer Mealybugs* San Jose scale*	1.5 fl. oz. (45 mL) per 100 gal	6.0 fl. oz./A ¹
<p>Apply specified dosage (not to exceed 0.4 lb a.i. per acre per year) as foliar spray as needed after petal-fall is complete. For control of rosy apple aphid, apply prior to leaf rolling caused by the pest.</p> <p>For first generation leafminer control, make first application as soon as petal-fall is complete. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, optimal control is obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. IMIDACLOPRID 2F T&O won't control late stage larvae.</p> <p>For San Jose Scale, time applications to the crawler stage. Treat each generation.</p> <p>For late season (preharvest) control of leafhopper species, apply this product while most leafhoppers are in the nymphal stage.</p> <p>For optimal control of mealybug, ensure good spray coverage of the trunk and scaffolding limbs or other resting sites of the mealybug.</p> <p>RESTRICTIONS: DO NOT apply more than 6.0 fluid ounces per acre in a single application. DO NOT make more than 4 applications. The minimum retreatment interval is 10 days. Allow at least 7 days between last application and harvest.</p> <p>*Not for use in California for control on pears.</p>			
Pecan*	Yellow pecan aphid Black margined aphid Pecan leaf phylloxera Pecan spittlebug Pecan stem phylloxera	1.5 fl. oz. (45 mL) per 100 gal of water	6.0 fl. oz./A ¹
<p>Make foliar applications as pests begin to build before populations become extreme. Two applications at a 10 to 14 day interval may be required to achieve control. Scout and retreat if needed.</p> <p>Thorough uniform coverage of foliage is necessary for optimal control. Addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's specified use rate may improve coverage.</p> <p>RESTRICTIONS: DO NOT apply more than a total of 18.0 fluid ounces of this product per acre per year. DO NOT make more than 3 applications. The minimum retreatment interval is 10 days.</p> <p>*Use not permitted in California unless directed by state-specific 24(c) labeling.</p>			
<p>¹ The amount of this product required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees.</p>			

APPLICATION INSTRUCTIONS

CROP	PESTS	RATE PER APPLICATION	
Grapes	Leafhoppers (including glassy-winged sharpshooter) Mealybugs	1.5 fl. oz. (45 mL) per 100 gal of water	3.0 fl. oz./A (90 mL/A)

Apply specified dosage as a foliar spray using 200 gallons of water per acre. **DO NOT** apply more than a total of 6.0 ounces of this product per acre per year. Allow at least 14 days between applications. Applications may be applied up to and including day of harvest.

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, and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking, invert to prevent leakage. If the container is leaking or material is spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to **Precautionary Statements** on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticide below. In spill or leak incidents, keep unauthorized people away.

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: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND DISCLAIMER

NOTICE: Read the entire **Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability** before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **Conditions, Disclaimer of Warranties and Limitations of Liability**.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Helena Chemical Company. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, HELENA CHEMICAL COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. NO AGENT OF HELENA CHEMICAL COMPANY IS AUTHORIZED TO MAKE ANY WARRANTIES BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN. HELENA CHEMICAL COMPANY DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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