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.

TROUBLE SHOOTING TIPS FOR INJECTION

Problem: Solution is not taking up.

Possible Cause: Connector is put in too deeply in the injection hole preventing the solution from pooling inside tree and/or taking up.

Solution: Follow instructions for removal, and re-insert the connector and connect the device for further uptake. Be sure to leave approximately ½ inch (1.27 cm) of open chamber at the end of connector to allow the solution to collect and be pulled through the vascular system of the tree.

Problem: Solution is not taking up.

Possible Cause: Injection device is not fully inserted on the connector creating a loose connection preventing the solution from pooling inside tree and/or taking up.

Solution: To ensure the injection device is securely inserted, slightly twist and gently force the injection device in an upward motion on to the connector until it snaps snugly into final position.

Problem: Solution is leaking from drilled hole.

Possible Cause: The connector is not fully inserted into the hole in the tree. Alternatively, the connector is inserted deeply enough, but the solution is not moving through the vascular system of the tree due to a variety of issues (injury to vascular system, temperature, lack of moisture, etc.). Alternatively, the hole could be too large of a diameter.

Solution: Ensure the hole is not too large; if for some reason the hole was made too large (too large of a drill bit, faulty chuck in the drill bit etc.) follow instructions for removal, drill a new hole with the proper size drill bit and functional drill, and insert the connector. Ensure the connector is in deep enough by providing a few light taps with a rubber mallet to move the connector slightly deeper into the hole. Finally, be sure that the time of injection is conducive for uptake. (Please refer to label section regarding optimal conditions for tree 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: Wastes resulting from the use of this device may be disposed of on site or at an approved waste disposal facility. Remove connector from injection device prior to disposal.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or dispose of in a sanitary landfill, or by incineration if approved by State and Local authorities. Do not burn unless allowed by State and Local ordinances. If burned, stay out of smoke.

NOTICE OF WARRANTY

To the extent consistent with applicable law, Brandt Consolidated, Inc. 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.

STATE OF HAWAII
Department of Agriculture
ACCEPTED
LICENSE NO.
9093.10

Brandt® enTREE® Dino RTU

Systemic Insecticide | **GROUP 4A INSECTICIDE**

Systemic insecticide for tree injection use

ACTIVE INGREDIENT:	
Dinotefuran*	12%
OTHER INGREDIENTS:	88%
TOTAL	100%

*Contains 0.13 g/mL N-methyl-N′-nitro-N″-[(tetrahydro-3-furanyl)methyl]guanidine

EPA Reg. No. 7946-35-48813 EPA Est. No. 48813-IL-1

NET CONTENTS:

- ☐ 4 RTU devices @ 10 mL (0.34 fl. oz.) each; 40 mL (1.35 fl. oz.) net plus 4 injectors
- ☐ 12 RTU devices @ 10 mL (0.34 fl. oz.) each; 120 mL (4.05 fl. oz.) net plus 12 injectors
- ☐ 24 RTU devices @ 10 mL (0.34 fl. oz.) each; 240 mL (8.12 fl. oz.) net plus 24 injectors
- ☐ 50 RTU devices @ 10 mL (0.34 fl. oz.) each; 500 mL (16.91 fl. oz.) net plus 50 injectors

BRANDT®

Distributed by:
Brandt Consolidated, Inc.
2935 South Koke Mill Road
Springfield, Illinois 62711 USA
www.brandt.co 15108BRN
800 300 6559 2016-06

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

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 by a poison control center or doctor. Do not give anything to an unconscious person.

IF ON SKIN: 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: 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.

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.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

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

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

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow contact with water or oxidizing agents. Hazardous chemical reactions may occur. Do not use or store near heat or open flame.

ENVIRONMENTAL HAZARDS

This pesticide is 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.

This product is toxic to honey bees. The persistence of residues and potential residual toxicity of Dinotefuran in nectar and pollen suggests the possibility of chronic toxic risk to honey bee larvae and the eventual instability of the hive. This product is toxic to bees exposed to treatment for more than 38 hours following treatment.

Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period, unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

Dinotefuran and its degradate, MNG, have the properties and characteristics associated with chemicals detected in ground water. The high water solubility of dinotefuran, and its degradate, MNG, coupled with its very high mobility, and resistance to biodegradation indicates that this compound has a strong potential to leach to the subsurface under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Periodic monitoring of shallow groundwater in the use area is recommended.

Resistance Management

BRANDT enTREE DINO RTU contains a Group 4A insecticide. Insect biotypes with acquired resistance to Group 4A may eventually dominate the insect/mite population if Group 4A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by BRANDT enTREE DINO RTU or other Group 4A pesticides. To delay insecticide resistance, consider: • Avoiding the consecutive use of BRANDT enTREE DINO RTU or other Group 4A insecticides that have a similar target site of action, on the same insect species. • Basing insecticide use on a comprehensive IPM program. • Monitoring treated insect populations for loss of field efficacy. • Contacting your local extension specialist, certified crop advisors, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.

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 5 inches in Diameter at Breast Height (DBH) (15 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 this product more than one time per 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 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 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) and restricted-entry interval. 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: BRANDT enTREE DINO RTU is for use on hardwood or deciduous trees, evergreens and palms grown in forests, woodlands, and ornamental landscapes such as residential and commercial settings, median strips, roadways, Christmas tree farms, cemeteries, parks, and interior and exterior plantscapes.

LISTED PESTS

ADELGIDS
APHIDS
BLACK VINE WEEVIL ADULT
BRONZE BIRCH BORER
COTTONWOOD LONGHORNED BORER
DOUGLAS FIR GALL MIDGE
DOUGLAS FIR CONE MOTH LARVAE
ELM LEAF BEETLE
EUCALYPTUS LONGHORNED BORER
FLATHEADED BORER (including Alder Borer and Birch Borer; excluding Emerald Ash Borer)
JAPANESE BEETLE
LACEBUGS
LEAFHOPPERS
LEAFMINERS
MEALYBUGS
PINE TIP MOTH LARVAE
PSYLLIDS (including Lerp Psyllid)
ROYAL PALM BUGS
SCALE INSECTS (armored and soft, including Asian Cycad Scale)
SPRUCE BUDWORM
THRIPS
WHITEFLIES

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 BRANDT enTREE Ready-To-Use (RTU) Micro Tree Injection Device. 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 BRANDT enTREE DINO RTU 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 the BRANDT enTREE DINO RTU has not started to absorb within two hours, consider removing the device (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 the BRANDT enTREE DINO RTU 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 BRANDT enTREE DINO RTU may be difficult to achieve and subsequent control may be poor. For optimal results, treat at least 2 to 3 weeks before pests historically infest the host tree. As a result of systemic movement and longevity of BRANDT enTREE DINO RTU 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.

BRANDT enTREE DINO RTU 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 BRANDT enTREE DINO RTU-treated tree tissues.

APPLICATION INSTRUCTIONS

Timing of Application: Preventive applications approximately 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. BRANDT enTREE DINO RTU 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 listed pest.

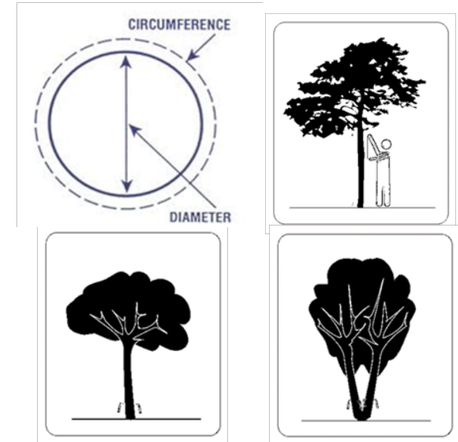
Sequential Treatments: When treating for beetles that carry fungi (ambrosia), an additional treatment of fungicide may improve management strategies. Materials to consider are fungicides labeled for use against vascular-inhabiting fungi.

BRANDT enTREE DINO RTU 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.

Number of BRANDT enTREE RTU Micro Tree Injection Devices Required for Treatment: Injection dosages are based on 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.



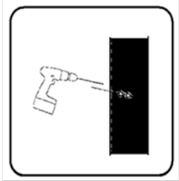
Take the DBH of the tree and divide by five (5) to determine the appropriate number of BRANDT enTREE RTU Micro Tree Injection Devices to adequately treat the tree at the desired application rate. Do not treat newly established trees less than 5 inches DBH or 15 inches in circumference.

In the event the tree has multiple trunks that separate less than three (3) feet from the ground (e.g., avocado, citrus, peach, etc.), each individual trunk must be treated separately to ensure equally homogenous distribution of solution to all parts of the tree. In this instance, each individual trunk must be measured in the same way as if the trunk were standing individually.

Refer to the chart below. Position the number of injection devices evenly around the trunk of the tree. For example, in the case of a 10 inch diameter tree where 2 injection devices are used, place each injection device in directly opposing positions on the trunk to allow for even distribution. DO NOT exceed calculated number of BRANDT enTREE RTU Micro Tree Injection Devices per tree as injury may occur.

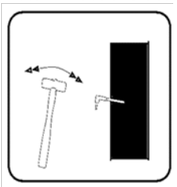
Tree Diameter (DBH inches)	**Circumference** (Inches)	**Number of RTU Injection Devices**	**Application Rate** mLs/grams Active Ingredient
5 to 7	15 to 21	1	15/2.0
8 to 10	24 to 30	2	30/3.9
11 to 13	33 to 39	2	30/3.9
14 to 16	42 to 48	3	45/5.9
17 to 19	51 to 57	3	45/5.9
20 to 22	60 to 66	4	60/7.8
23 to 25	69 to 75	4	60/7.8
26 to 28	78 to 84	5	75/9.8
29 to 31	87 to 93	6	90/11.7
32 to 34	96 to 102	6	90/11.7
35 to 37	105 to 111	7	105/13.7
38 to 40	114 to 120	8	120/15.6
41 to 43	123 to 129	8	120/15.6
44 to 46	132 to 138	9	135/17.6
47 to 49	141 to 147	9	135/17.6
50 to 52	150 to 156	10	150/19.5
53 to 55	159 to 165	11	165/21.5
56 to 58	168 to 174	11	165/21.5
59 to 61	177 to 183	12	180/23.4
62 to 64	186 to 192	12	180/23.4
65 to 67	195 to 201	13	195/25.4
68 to 70	204 to 210	14	210/27.3
71 to 73	213 to 219	14	210/27.3

Preparing the Holes: To ensure an equal and homogenous delivery of active ingredient to all parts of the tree's branching structure, space the required number of holes evenly around the circumference of the tree. Hole placement can range from lowest point at the root flare to highest point at breast height (approximately 4.5 ft [1.4 m] above the ground). Injection holes must be at least 20 inches (51 cm) below the lowest branch on the trunk. The preferred method is to inject at the base of the tree, within 12 inches (310 cm) of the soil. Prepare injection sites in healthy wood free from any defects such as old wounds or decayed areas. Avoid placement of devices in between the root flares where there is tight compression of the bark and cambium tissue.



Using an electric drill, select a ¼ inch (0.635 cm) fast spiral drill bit (for optimal performance, use a high-helix drill bit). It is necessary to drill holes into the tree deep enough to reach the tree's vascular system for translocation of the active ingredient throughout the tree. Make injection holes at least ½ to ¾ inch into healthy xylem (white wood) with actual depth up to 2 inches (5 cm) or more from the outer trunk surface depending upon the tree species and outer bark thickness. For conifer species with high resin pressure, drill holes higher on the trunk (36-48 inches or 91-122 cm) and to a deeper drill depth of 2+ inches (5+ cm).

For optimal device performance and to minimize leakage and improve holding capacity of the injector, be sure to (1) use clean, sharp drill bits; (2) slightly angle depth of hole downwards; and (3) make one clean drill entrance into the tree (i.e., avoid multiple in-and-out motions of drill bit in hole) to reduce residual shavings left inside the hole. Follow good application practices by disinfecting drill bits prior to use on each tree to minimize the spread of disease where known infections occur.



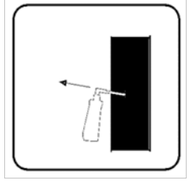
Inserting the Connector: Once the injection site is drilled, insert the longer and thicker part of the connector into the tree hole and secure its placement by pushing and twisting of hand OR by gently tapping the connector with a nylon hammer or rubber mallet. The connector shall only be inserted to the point where it fits snugly in the hole.

DO NOT force the connector too deeply into the hole. Be sure to leave approximately ½ inch (1.3 cm) of open chamber at the end of connector to allow the solution to collect and be pulled through the vascular system of the tree.

Connecting the BRANDT enTREE RTU Micro Tree Injection Device: Remove the colored device cap and connect the injection device to the connector by firmly pushing the connector through the membrane of the injection device top. To ensure the device is securely inserted, slightly twist and gently force the injection device in an upward motion on to the connector until it snaps snugly into final position.

The injection device can be placed upright, sideways, or upside-down on the connector, depending upon placement of the connector on the tree.

> **Resinous Conifers:** In resinous conifers, such as pine and spruce, start the injection immediately after drilling into the sapwood. A prolonged delay may reduce uptake due to resin flow into the opening.



Removing the BRANDT enTREE RTU Micro Tree Injection Device: When the injection device is empty, first remove the injection device from its connector. Any residual solution remaining in the connector will be quickly absorbed by the tree. Then remove the connector from the tree. Note: The injection device membrane will re-seal itself to avoid any leakage or spillage until it is re-penetrated with the connector.

It is not necessary to treat the drill holes with wound paint or other sealing compounds. The hole will heal naturally.