



P.O. Box 34645 • Omaha, NE 68134 • Toll-Free: 800-698-4641 • Phone: 402-339-4459 • Fax: 402-339-5011 • www.ArborSystems.com

An ArborSystems™ Direct-Inject™ Chemical

For systemic fungicide suppression of selected diseases in ornamental trees.

For use by professional arborists/applicators with the ArborSystems Wedgle® Direct-Inject™ Tree Injection System. To be used only with the ArborSystems Direct-Inject Tree Injection System.

ACTIVE INGREDIENT:

Propiconazole (CAS No. 60207-90-1)	14.3%
OTHER INGREDIENTS	85.7%
Total	100.0%

Container Size	Net Contents	AI/Container
120 ml pack	4 fl oz (120 ml)	0.5 oz (14 g)
1000 ml pack	1 qt 2 fl oz (1000 ml)	4.2 oz (116.7 g)

EPA Reg. No. 69117-3 EPA Est. 69117-NE-1

Keep Out of Reach of Children **WARNING**

See below for additional Precautionary Statements and complete Directions for Use.

PRECAUTIONARY STATEMENTS

Hazards to Humans & Domestic Animals

WARNING: Causes substantial but temporary eye injury. Wear goggles or face shield. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing vapor. Wear rubber or neoprene gloves when handling this product. Thoroughly wash with soap and water after handling. Remove and wash contaminated clothing before reuse.

FIRST AID

Have the product container, label, or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment.

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. Immediately rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If Swallowed: Immediately call a poison control center or doctor 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 Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Notes to Physician: If ingested, induce emesis or lavage stomach; treat symptomatically.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

GENERAL INFORMATION

ARBORSYSTEMS WEDGLE DIRECT-INJECT TREE INJECTION SYSTEM

The ArborSystems Wedgle Direct-Inject Tree Injection System is a no-drill trunk injection method and is easy to use. Most trees are treated in as little as five minutes or less with no drilling required. Chemical is injected into the cambial area of the tree (the active vascular system). There is no need to wait for absorption (translocation). Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased. Use in sunny or overcast conditions, rainy or dry, at any time of day. As no drilling or implants are required, you can treat trees year after year, with no threat of long-term or permanent damage to the tree. Direct-Inject Systems minimize wounding and promote long-term tree vigor.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate; butyl, nitrile and neoprene rubber; polyvinyl chloride (PVC); or Viton
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate; do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Immediately remove clothing if pesticide gets inside; then thoroughly wash and put on clean clothing.



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INDICATIONS AND TREATMENT TIMING

Shepherd Fungicide is a systemic fungicide for use as an injection for prevention and treatment of:

- (1) Oak Wilt (*Ceratocystis fagacearum*) of Oaks (*Quercus* spp.)
- (2) Dutch Elm Disease (*Ophiostroma ulmi*) of Elms (*Ulmus* spp.)
- (3) Plane Anthracnose (*Apiognomonia veneta*) of Sycamores (*Platanus* spp.)
- (4) Leaf Diseases (*Gymnosporangium juniperi-virginianae*, *Pucciniastrum goeppertianum* and *Venturia inaequalis*, etc.) in non-bearing ornamental Crabapple.

Wood Ornamentals		Nonbearing Fruits and Nuts (Nurseries and Landscape Plantings)
Ash (4c)	Oaks (3p)	Apple (3q, 4d, 5a)
Azalea (2c, 4b)	Pines (1b, 1c)	Cherry (2b, 3d)
Crabapple (3c, 3q, 4c, 5a)	Poplars (5b)	Citrus (3m)
Crape Myrtle (4a)	Pyracantha (3o) (Outdoor Uses Only)	Nectarine (2b)
Dogwood (3h, 4c)	Shasta Fir (5e)	Peach (2b)
Douglas Fir (5b)		Pecan (3b, 3c, 3f, 3l, 3n, 4e)
Hawthorn (5a)		Plum (2b)
Juniper (1a)		Walnut (3j)
Lilac (4c)		

OAK WILT AND DUTCH ELM DISEASE

Use Shepherd Fungicide **only** as a preventative for Oak Wilt and Dutch Elm Disease. These fungi infect the vascular system and cause plugging throughout the tree; treatment of infected trees is rarely successful.

Symptomless trees immediately adjacent to a diseased tree should be considered infected and may not respond to treatment. Symptomless trees separated by a primary plow line from diseased trees may be uninfected and can be treated. Do not use on trees weakened by extreme environmental conditions such as heat, drought, flooding, etc. It is recommended that Shepherd Fungicide be administered by applicators trained in injection techniques and in the identification of Oak Wilt and Dutch Elm Disease.

In the upper Midwest, treat oaks after June 15. Wounds in oaks in the upper Midwest between May 15 and June 15 attract insects that transmit the oak wilt pathogen. Applications to oaks in other areas and to elms may be made at any time during the growing season, spring through fall, provided the bark is pliable enough to accept the chemical injections. One application provides season-long protection. Reevaluate disease conditions annually, particularly in high disease-risk areas or for high-value trees – retreatment can be made 12-months after initial treatment and annually thereafter. Inject Shepherd Fungicide into the flare, or base of the tree, to ensure even distribution throughout the vascular system.

Table 2. Diseases

1. Conifer Blights	j. <i>Gnomonia leptostyla</i> (Anthracnose)
a. <i>Phomopsis juniperovora</i> (Phomopsis Blight)	k. <i>Heterosporium echinulatum</i>
b. <i>Sirococcus strobolinus</i> (Tip Blight)	l. <i>Mycosphaerella caryigena</i> (Downy Spot)
c. <i>Sphaeropsis sapinea</i> (Diplodia Tip Blight)	m. <i>Mycosphaerella fructicola</i> (Greasy Spot)
2. Flower Blight	n. <i>Septoria</i> spp. (Leaf Scorch)
a. <i>Ascochyta chrysanthemi</i> (Ray Blight)	o. <i>Spilocaea pyracanthae</i>
b. <i>Monilinia</i> spp.	p. <i>Tubakia dryina</i>
c. <i>Ovulinia</i> spp.	q. <i>Venturia inaequalis</i> (Scab)
3. Leaf Blights/Spots	4. Powdery Mildew
a. <i>Alternaria</i> spp.	a. <i>Erysiphe</i> spp.
b. <i>Cercospora</i> spp. (Brown Leaf Spot)	b. <i>Microsphaera</i> spp.
c. <i>Cladosporium</i> spp. (Scab)	c. <i>Oidium</i> spp.
d. <i>Coccomyces hiemalis</i>	d. <i>Podosphaera</i> spp.
e. <i>Colletotrichum</i> spp.	e. <i>Sphaerotheca pannosa</i>
f. <i>Cristulariella</i> spp. (Zonate leafspot)	5. Rust
g. <i>Diplocarpon rosae</i> (Blackspot)	a. <i>Gymnosporangium juniperi-virginianae</i>
h. <i>Discula</i> spp. (Anthracnose)	b. <i>Melampsora occidentalis</i>
i. <i>Fabraea maculata</i> (syn. <i>Entomosporium maculata</i>)	c. <i>Phragmidium</i> spp.
	d. <i>Puccinia</i> spp.
	e. <i>Pucciniastrum goeppertianum</i>
	f. <i>Uromyces dianthi</i>

Note: (1) Accurate diagnosis of Oak Wilt and Dutch Elm Disease is important, since Shepherd Fungicide provides only suppression of the diseases listed on this label. (2) Shepherd Fungicide will be most effective when used in conjunction with other cultural practices recommended for management of Oak Wilt and Dutch Elm Disease (removal of dead elm trees, pruning of diseased tree limbs and branches, control of bark beetles, etc.).

ANTHRACNOSE AND LEAF DISEASES

For these diseases, preventative applications of Shepherd Fungicide are most effective when applied in the late summer, around one month prior to the typical first frost. This allows the chemical to translocate into the bud before leaf drop. Next spring when the tree leafs out, the chemical will be in place to protect the leaf. Annual treatments are required for prevention.

Note: Before using on trees or diseases which are not listed, test on a small scale basis. Apply the recommended rate for a particular type of disease and evaluate for phytotoxicity and disease control prior to widespread use.



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Treatments: The number of injection sites is based on 1 injection for every 3" – 5" of trunk circumference.	Dosage per Injection Site
Oak Wilt Disease for an uninfected Live Oak (not including Red Oak)	3-5 ml
Dutch Elm Disease for an uninfected Elm	5-10 ml
Anthracnose in Sycamore	2 ml
Leaf diseases in Oaks and non-bearing ornamental Cherry, Citrus, Crabapple, Pecan, Pyracantha and Walnut	1-2 ml
Powdery Mildew in Ash, Crape Myrtle, Dogwood, Lilac and non-bearing ornamental Crabapple and Pecan	1-2 ml
Conifer Blights such as Tip Blight and Diplodia Tip blight of Pines and Junipers	4 ml
Flower Blight of non-bearing ornamental Cherry, Peach, Plum	1-2 ml
Rust on Douglas Fir, Hawthorn, Poplars, Shasta Fir, and non-bearing ornamental Crabapple	1-2 ml

Note: Because some treatments require large amounts of chemical per site, there may be occasions where it is difficult to keep all of the chemical dose in the injection site. If this is experienced, two options are possible:

- 1) Reduce dosage volume by half and double the number of injection sites, or
- 2) Inject half the dose at each site, mark the tree, continue treating other trees, then return to the marked tree and inject remaining dosage in each site.

HOW TO USE ARBORSYSTEMS DIRECT-INJECT CHEMICALS WITH ARBORSYSTEMS WEDGLE DIRECT-INJECT TREE INJECTION SYSTEM

1. Use only ArborSystems Direct-Inject chemicals with your unit as they have been formulated specifically for the Direct-Inject systems. Use of other chemicals will invalidate warranty.
2. Attach the container to the Wedgle Direct-Inject unit and prepare the unit to make injections.
3. Set the delivery volume on the unit.
4. Follow the label directions to determine the amount of chemical and number of injection sites.
5. Determine where to make injections in the bark. Generally, the injection tip is inserted into the fissure (valley) of the tree bark. Inject thin-barked trees in the thicker part of the tree bark. Thick-barked trees require a longer injection tip.
6. Make injections working around the circumference of the tree. Make Wedgle® Tip injections within 6" to 12" off the ground. Use the Portle® Tip for injecting Sycamores or thick-barked hardwoods such as elms at the base or flare of the tree.
7. With a smooth motion, firmly squeeze the injection unit handles. This releases a pre-measured chemical dose into the tree.
8. Continue making injections moving around the tree until the entire tree trunk has been treated.
9. During use, periodically clean the Direct-Inject unit to prevent clogging.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original container in a cool, dry place.

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: Non-refillable container; do not reuse or refill this container. Completely empty pack into application equipment, then offer for recycling, if available, or dispose of empty pack in a sanitary landfill or by incineration.

NOTICE OF WARRANTY

ArborSystems warrants that this product conforms to the chemical description on the label and is reasonably fit for use under average conditions when used strictly in accordance with the directions on the labeling. ArborSystems does not make or authorize any agent or representative to make any other warranty, guarantee or representation, express or implied, concerning this product.

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Direct Inject™ unit is protected by U.S. Patent #5,901,498

Wedgle® Tip is protected by U.S. Patent #5,239,773

WedgeChek™ is protected by U.S. Patent #5,797,215

Portle® Tip is protected by U.S. Patent #7,178,286