

69117-3

7/27/2012

1/10



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

ArborSystems  
% Kim Davis  
RegWest Company LLC  
8203 West 20<sup>th</sup> St Suite A  
Greeley CO 80634 4696

JUL 27 2012

Product Name            SHEPHERD® Fungicide  
EPA Reg No             69117 3  
Subject                 Your amendment dated May 25 2012  
OPP Decision Number   466250

Dear Ms Davis

The amended label referred to above submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made

- 1 On page 4 in column 3 third paragraph from the top of the page change into the bud to before leaf drop to into the bud before leaf drop
- 2 On page 9 in the last paragraph delete the sentence Using unauthorized chemicals with the ArborSystems Direct Inject System constitutes a violation of Federal law

One copy of the label stamped Accepted with comments is enclosed for your records This label supersedes all labels previously accepted for this product Please submit one copy of the final printed label that incorporates the required changes before the product is released for shipment

If you have any questions please contact Robert Westin by phone at (703) 305 5721 or via email at westin.robert@epa.gov

Sincerely

Marcel Howard  
Acting Product Manager (20)  
Fungicide Branch  
Registration Division (7504P)

Enclosure

2/10

# SHEPHERD® Fungicide

{Affixed Booklet – Front Panel}

**SHEPHERD® Fungicide**  
**An ArborSystems™ Direct Inject™ Chemical**

**For Systemic Fungicide Suppression of Selected Diseases in Ornamental Trees**

**Active Ingredient**

Propiconazole (CAS No 60207 90 1) 14.3%

**Other Ingredients**

85.7%

Total

100.0%

Contains 0.5 oz (14 grams) active ingredient per 4 fl oz (120 ml) pack  
[Contains 4.25 oz (117 grams) active ingredient per 1 qt 2 fl oz (1000 ml) pack]

**Net Contents 4 fl oz (120 ml)**  
**[Net Contents 1 qt 2 fl oz (1000 ml)]**

**Keep Out of Reach of Children**

### WARNING

See inside for First Aid additional Precautionary Statements and complete Directions for Use

{Affixed Booklet – Inside Pages}

**SHEPHERD® Fungicide**  
**An ArborSystems™ Direct Inject™ Chemical**  
**Easy • No Drilling • Saves Time and Money**

**For Systemic Fungicide Suppression of Selected Diseases in Ornamental Trees**

**Intended for use by professional arborists/applicators, foresters,  
grounds maintenance professionals and landscapers**

**To be used only with the ArborSystems Wedgle® Direct Inject Tree Injection System**

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

**JUL 27 2012**

Under the Federal Insecticide  
Fungicide and Rodenticide Act  
as amended for the pesticide  
registered under EPA Reg No

**ArborSystems™**  
**The No Drill Injection Solution**  
800 698 4641 • Fax 402 339 5011  
P O Box 34645 • Omaha NE 68134

**Net Contents 4 fl oz (120 ml)**  
**[Net Contents 1 qt 2 fl oz (1000 ml)]**

**69117-3**

EPA Reg No 69117 3

EPA Est 69117 NE 1

**First Aid**

<b>If in Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 20 minutes</li> <li>• Remove contact lenses if present after the first 5 minutes then continue rinsing eye</li> <li>• Call a poison control center or doctor for treatment advice</li> </ul>
<b>If on Skin or Clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing</li> <li>• Immediately rinse skin with plenty of water for 15 20 minutes</li> <li>• Call a poison control center or doctor for treatment advice</li> </ul>
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice</li> <li>• Have person sip a glass of water if able to swallow</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor</li> <li>• Do not give anything by mouth to an unconscious person</li> </ul>
<b>If Inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air</li> <li>• If person is not breathing call 911 or an ambulance then give artificial respiration preferably by mouth to mouth if possible</li> <li>• Call a poison control center or doctor for further treatment advice</li> </ul>
Have the product container or label with you when calling a poison control center or doctor or going for treatment	
<b>Note to Physician</b> If ingested induce emesis or lavage stomach treat symptomatically	

{Note The First Aid statements grid format will be used if market label space permits otherwise a paragraph format will be used }

**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 the skin Avoid breathing vapor Thoroughly wash with soap and water after handling Remove and wash contaminated clothing before reuse

**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

**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

4/10

**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 labeling

**Intended for use by professional arborists/applicators, foresters,  
grounds maintenance professionals and landscapers**

**Product Information**  
**Do Not Inject Food Bearing Plants**  
**The No Drilling Injection Solution**

**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 allowing applicators to treat trees quickly. There is no need to wait for absorption (translocation). Chemical is injected into the cambial area (the active vascular system) of the tree. 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. This system minimizes wounding and promotes long term tree health and vigor.

**Indications and Treatment Timing**

<p><b>Table 1 Overview of Diseases and Treatments</b> See Table 2 and Table 3 for additional information</p>		
<p><b>Note</b> Apply the recommended rate for a particular type of disease and evaluate for phytotoxicity and disease control prior to widespread use. Before using on trees or diseases which are not listed test on a small scale basis.</p>		
<p><b>Treatments</b> Make 1 injection for every 3 to 5" of trunk circumference</p>	<p><b>Dosage per injection site</b> Higher dosages generally provide longer control</p>	<p><b>Treatment timing</b></p>
<p><b>Conifer Blights</b> (See additional notes below)</p>		
<p><b>Diplodia Tip Blight</b> and other Conifer Blights such as Tip Blight in Pines and Junipers</p>	<p>2-4 ml</p>	<p>Use for curative or preventive treatment</p> <p>Treatments can be made any time during the growing season including in the fall <b>providing protection for up to two years</b></p>
<p><b>Wilt Diseases</b> (See additional notes below)</p>		
<p><b>Oak Wilt Disease</b> for an uninfected Oak (not including Red Oak)</p>	<p>3-5 ml</p>	<p>Apply only to uninfected trees. Wilt diseases can only be prevented not cured</p>
<p><b>Dutch Elm Disease</b> for an uninfected Elm</p>	<p>5-10 ml</p>	<p>Applications should be made only during the growing season: spring</p>



5/10

		through late summer <b>providing a minimum of 12 month protection</b>	
<b>Anthracnose and Leaf Diseases in Hardwoods</b>			
<b>Anthracnose in Sycamore</b>	2 ml	For these diseases use for prevention only Applications are most effective when applied in late summer around one month prior to the typical first frost to suppress/prevent leaf disease in the following year  Late summer applications allow chemical to translocate into the bud to before leaf drop Next spring when the tree leafs out the chemical will be in place to protect the leaf  Trees with leaf disease symptoms can be treated to prevent recurrence for the following year <b>Annual treatments are required for prevention</b>	
<b>Leaf diseases</b> in Oaks Crabapple and non bearing ornamentals including Cherry Citrus Pecan Pyracantha and Walnut	1 2 ml		
<b>Powdery Mildew</b> in Ash Dogwood Lilac and non bearing ornamental Crabapple and Pecan	1 2 ml		
<b>Flower Blight</b> of non bearing ornamental Cherry Peach Plum	1 2 ml		
<b>Rust</b> 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 several options are possible

- 1 Use the Portle or WedgePlus Injection Tips which have a check valve in the hub of each tip which keeps chemical in the tree until it is absorbed
- 2 Reduce dosage volume by half and double the number of injection sites
- 3 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

**Wilt Diseases 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

**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

6/10

- 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 )

**Conifer Blights**

**Diplodia Tip Blight** affects a variety of pines and kills current year shoots major branches and ultimately entire trees The most conspicuous symptom of diplodia blight is brown stunted new shoots with short brown Needles on infected new shoots often become discolored (tan brown) while still encased in fascicle sheaths Presence of resin droplets and one or a few very short needles are usually the first indications that a new shoot is infected Entire new shoots are killed rapidly by the fungus Trees repeatedly infected have some branches killed back to the main stem Repeated infections reduce growth deform trees and ultimately kill them

**Treatment will not cure already affected areas of the tree but will prevent the spread of infection** Removal of dead branches cones and fallen debris will reduce the amount of fungal spores available to cause new infections Wait for dry fall weather to prune to avoid spreading spores on pruning equipment Between cuts sanitize tools by dipping in 70% alcohol or a 10% solution of household bleach in water

Table 2 Ornamentals – Plant Species (Numbers in parentheses refer to diseases controlled See Table 3 )		
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)	Nectarine (2b)
Dogwood (3h 4c)	(Outdoor Uses Only)	Peach (2b)
Douglas Fir (5b)	Shasta Fir (5e)	Pecan (3b 3c 3f 3l 3n 4e)
Hawthorn (5a)		Plum (2b)
Juniper (1a)		Walnut (3j)
Lilac (4c)		

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

7/10

Table 3 Diseases	
i <i>Fabraea maculata</i> (syn <i>Entomosporium maculata</i> )	d <i>Puccinia</i> spp
j <i>Gnomonia leptostyla</i> (Anthracnose)	e <i>Pucciniastrum goeppertianum</i>
	f <i>Uromyces dianthi</i>

**How to Use the 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 system
- 2 Attach the chemical pack to the Direct Inject unit and prepare the unit to make injections
- 3 Set the delivery volume on the unit
- 4 Follow the label directions in this booklet 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 to the tree
- 8 Continue making injections moving around the tree until the entire tree trunk has been treated
- 9 During use periodically clean the Wedgle® 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

*{Per PR Notice 2007-4 Batch Code/Lot Number will appear either on the label or the container }*

**Notice of Warranty**

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

**ArborSystems™**

**The No Drill Injection Solution**

**800 698 4641 • Fax 402 339 5011**

**P O Box 34645 • Omaha, NE 68134**

Shepherd® and Wedgle® are registered trademarks of ArborSystems™  
ArborSystems™ Direct Inject™ and WedgeChek™ are trademarks of ArborSystems  
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

8/10

{Box Label}

**SHEPHERD® Fungicide**  
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**For Systemic Fungicide Suppression of Selected Diseases in Ornamental Trees**

Intended for use by professional arborists/applicators foresters  
grounds maintenance professionals and landscapers

**Active Ingredient**

Propiconazole (CAS No 60207 90 1) 14 3%

**Other Ingredients**

85 7%

Total 100 0%

Contains 0 5 oz (14 grams) active ingredient per 4 fl oz (120 ml) pack  
[Contains 4 25 oz (117 grams) active ingredient per 1 qt 2 fl oz (1000 ml) pack ]

**Keep Out of Reach of Children**

**WARNING**

See booklet for First Aid additional Precautionary Statements and complete Directions for Use

**DIRECTIONS FOR USE**

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

The ArborSystems Direct Inject units are designed to be used only with ArborSystems pre packed chemicals  
Tampering with packs or contents may cause non warranted damage to your injection system

**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

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Net Contents 4 fl oz (120 ml)  
[Net Contents 1 qt 2 fl oz (1000 ml)]

EPA Reg No 69117 3

EPA Est 69117 NE 1

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**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.

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[ ] Denotes alternate/optional language

{ } Denotes language that does not appear on market labeling

*{Additional Selling/Marketing Copy for use in conjunction with promotional pieces, brochures on the website and in other promotional materials displays, etc }*

**ArborSystems™ Wedgle® Direct Inject™ Tree Injection System**

The ArborSystems Wedgle® Direct Inject Tree Injection system is effective. Chemicals are injected directly into the tree. Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased and control of most problems can be seen in as little as three to five days. Also, because no chemical is lost in non-active wood, the Direct Inject system allows you to use less chemical to achieve high levels of effectiveness. This saves money and reduces chemical waste. The Direct Inject System injects chemicals into a tree with minimal wounding.

10/16

With no holes to drill no air or pathogens are allowed to enter the tree potential decay never starts and long term wounding is prevented The tree s ability to move water and nutrients and to store food is not compromised

Pre mixed chemicals are supplied in self sealing containers After injections have been made you have only one small container of which to dispose Concerns you may have had when spraying will be eliminated And with a closed system there is no mixing

With no drilling required the ArborSystems Direct Inject System

- Minimizes wounding to keep out diseases fungi bacteria and insects
- Prevents air from getting into the tree When air is allowed into a tree s vascular system it cuts off the flow of water and nutrients
- Allows multiple or annual treatments without damaging the tree
- Requires no drills power supply or other bulky equipment

With this system and chemicals tree care professionals effectively combat and manage many of the most devastating environmental plant threats

The ArborSystems Wedgle® Direct Inject System is designed to preserve and protect the natural and urban forest Treat almost any tree in five minutes or less The Direct Inject System is an efficient chemical delivery system You achieve control with less chemical because chemical is placed precisely where the tree can best use it No chemical is lost in dead wood

ArborSystems Direct Inject chemicals are integral parts of the Direct Inject Tree Injection System Use only ArborSystems Direct Inject chemicals with the Direct Inject units Using unauthorized chemicals with the ArborSystems Direct Inject System constitutes a violation of Federal law

#### Chemical Selection

Your distributor can advise you on the best chemical selections for trees in your area

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