



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™ Product

Relieves symptoms of manganese deficiency in trees.

For use by professional arborists/applicators with the ArborSystems Direct-Inject QC™ Tree Injection System.

### GUARANTEED ANALYSIS

Manganese (Mn) ..... 5.00%  
Derived from: Manganese Sulfate

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.htm>

Package Type	Net Contents	Net Weight
120 ml pack	4 fl oz (120 ml)	0.384 lb (174 g)
1000 ml pack	1 qt 2 fl oz (1000 ml)	2.48 lb (1125.6 g)

### APPLICATION RATE

Inject 1 ml every 4" around the base (flare) of the tree. Injections should be made within 12" of the ground.

**NOTE:** Depending on type of bark, the dosage per injection site may be halved and the number of injection sites doubled.

### TIMING

Injections may be made anytime during the growing season. However, as summer ends, green-up will be less likely to occur because the leaves become less responsive as they age. The best time to inject is spring through early summer.

### INDICATIONS

- In deciduous trees, when fine veins become chlorotic (yellow), and/or if leaf edges are wavy, crinkled, or curled, tree may have manganese deficiency.
- Ornamental trees susceptible to manganese deficiencies include Birch, Dogwood, Maples (especially Red and Sugar) Flowering Cherry, Sweetgum, and Sergeant Crab.

### GENERAL INFORMATION

#### ARBORSYSTEMS DIRECT-INJECT TREE INJECTION SYSTEM

The ArborSystems Direct-Inject Tree Injection System is easy to use. Most trees are treated in as little as five minutes or less with no drilling required. Product is injected into the cambial area of the tree (the active vascular system). There is no need to wait for absorption (translocation). Because the product is placed right where the tree can use it, effectiveness of the product 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. The Direct-Inject System minimizes wounding and promotes long-term tree vigor.

### HOW TO USE ARBORSYSTEMS DIRECT-INJECT PRODUCTS WITH ARBORSYSTEMS DIRECT-INJECT UNITS

1. Use only ArborSystems Direct-Inject products with your unit as they have been formulated specifically for the Direct-Inject system. Use of other products will invalidate warranty.
2. Attach the container 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 to determine the amount of product 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 12" of the ground. Portle® Tip injection height varies depending on type of tree and location.
7. With a smooth motion, firmly squeeze the injection unit handles. This releases a pre-measured 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.

### NOTICE OF WARRANTY

ArborSystems warrants that this product conforms to the 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.

Portle® Tip and Wedgle® Tip are registered trademarks of ArborSystems.

ArborSystems™, Direct-Inject™, WedgeChek™ and Nutriboosters™ 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