



DATA SHEET #8

ECTOMYCORRHIZAL INOCULANT

# DIEHARD™ Ecto Injectable



**“The Industry's First Complete Ecto Injectable Inoculant”**

**DIEHARD™ Ecto Injectable** is formulated to be used to treat mature and newly planted landscape trees and shrubs with live beneficial mycorrhizal fungi with root injection equipment. It contains highly selected species of low host specificity ectomycorrhizal fungi that will quickly colonize the roots of mature and newly planted landscape trees and shrubs. *Trichoderma* has been added to promote mycorrhizal colonization and prevent fungal diseases. The mycorrhizal inoculants are combined with humic acids, soluble sea kelp, yucca plant extracts and beneficial bacteria to promote rapid root development.

## Product Benefits

### IMPROVES

Survival  
Rooting  
Flowering  
Water Absorption  
Nutrient Availability  
Yields and Production  
Client Satisfaction  
& Goodwill

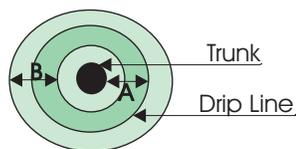
### REDUCES

Plant Losses  
Fertilizer Use  
Need Of Pesticides  
Heat Stress Damage  
Irrigation Frequency  
Losses From Drought  
Conditions

## Directions For Use

Mix the contents of each 8 oz. bag with 100 gallons of water. Inject on a 2 ½ to 3 foot grid pattern applying ½ gallon of solution per injection site. The following injection area is suggested:

Method: Measure from the trunk to the drip line (A). Divide this number by 2. Measure from the drip line this amount towards the tree and outward from the drip line and treat this area (B) using a grid pattern.



## Non Plant Food Ingredients

Ectomycorrhizal Fungi	5,417,500 spores per cubic centimeter to include: <i>Pisolithus tinctorius</i> (4,659,050), <i>Rhizopogon</i> (758,450).
Humic Acids	26% Derived from <i>Leonardite</i>
Soluble Yucca Extract	17% <i>Yucca schidigera</i>
Soluble Sea Kelp Extract	18 % <i>Ascophyllum nodosum</i>
<i>Trichoderma</i>	94,560,000 CFU's per cc Genus <i>Trichoderma</i> (6 species), <i>Gliocladium virens</i> (2 strains), <i>Trichoderma harzianum</i> (2 strains), <i>Trichoderma viride</i> (2 strains).
Phosphate Solubilizing, Nitrogen Fixing and Growth Promoting Bacteria.	63,040,000 Colony forming units per cubic centimeter of Genus <i>Bacillus</i> (32 species), Genus <i>Pseudomonas</i> (2 species), Genus <i>Streptomyces</i> (2 species).
Root Promoting Vitamin	Biotin, Folic acid, B, B2, B3, B6, B7, B12, C and K.
Amino Acids (Protein)	Animal and plant proteins
Fulvic Acid	Plant-derived mineral

## Compatibility

**Species:** Alder, Arborvitae, Birch, Hazelnut, Pine, Chestnut, Hickory, Spruce, Aspen, Chinquapin, Larch, Basswood, Fir, Oak, Beech, Hemlock, Pecan, Eucalyptus and Willow.

**Fungicides:** Non-systemic fungicides normally have no effect. Foliar applied fungicides normally have no effect. Systemic fungicides may be applied 2 weeks before or after use of product. Fungicide use according to label instructions do not extinguish mycorrhizae, they only inhibit development for a short period of time.

## Storage & Handling

Store in a cool, dry place. Avoid high temperatures and direct sunlight. Product shelf life is up to two years.



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## Plant Species and Type of Mycorrhizae

### Endomycorrhizae

Arborvitae	Cedar	Ginkgo	Mulberry	Rose
Acacia	Celery	Grapes (all)	Monkey Pod	Russian Olive
Agapanthus	Cherry	Grass	Nasturtium	Ryegrass
Ailanthus	Chokeberry	Gum	Okra	Sassafras
Alder	Chrysanthemum	Hackberry	Olive	Sagebrush
Alfalfa	Citrus (all)	Hawthorn	Onion	Serviceberry
Almond	Clover	Hibiscus	Pacific Yew	Sequoia
Apple	Coconut	Holly	Palms (all)	Silverbell
Apricot	Coffee	Hophornbeam	Palmetto	Sourwood
Artichoke	Coral Tree	Hornbeam	Pampas Grass	Soybean
Ash	Corn	Horsechestnut	Papaya	Squash
Asparagus	Cotton	Impatiens	Passion Fruit	Strawberry
Avocado	Cottonwood	Jojoba	Paulownia	Sudan Grass
Bamboo	Crabapple	Juniper	Paw Paw	Sugar Cane
Basil	Cryptomeria	Kiwi	Pea	Sumac
Bayberry	Cucumber	Leek	Peach	Sunflower
Bean	Currant	Lettuce	Peanut	Sweet Gum
Begonia	Cypress	Lily	Pear	Sweet potato
Black Locust	Dogwood	Locust	Pecan	Sycamore
Blackberry	Eggplant	London	Pepper	Tea
Box Elder	Elm	Planetree	Pistachio	Tobacco
Buckeye	Eucalyptus	Magnolia	Persimmon	Tomato
Bulbs	Euonymus	Mahogany	Pittosporum	Tree-of-heaven
Burning Bush	Fern	Mahonia	Plum	Tupelo
Cacao	Fescue	Mango	Poinsettia	Walnut
Cactus	Fig	Maples (all)	Potato	Wheat
Camellia	Forsythia	Marigold	Poplar	Willow
Carrot	Fountain Grass	Melons (all)	Raintree	Yam
Casuarina	Fuchsia	Mesquite	Raphiolepis	Yellow poplar
Cassava	Gardenia	Millet	Raspberry	Yucca
Catalpa	Garlic	Mimosa	Redbud	
Ceanothus	Geranium	Morning Glory		

All nut trees except Pecan, Chestnut, Macadamia, and Hazelnut.  
 All fruit trees, grapevines, grasses and many vegetables  
 All berries except blueberry, cranberry and lingonberry.  
 All shrubs and foliage except Laurel, Rhododendron, and Azalea

### Ectomycorrhizae

Alder	Birch	Hemlock	Madrone	Poplar
Aspen	Chestnut	Hickory	Oak	Spruce
Basswood	Chinquapin	Larch	Pecan	Willow
Beech	Fir	Linden	Pine	

### Both Endo and Ectomycorrhizae

Alder	Cottonwood	Poplar
Aspen	Eucalyptus	Willow

## Health & Safety

- Inhalation If dusty conditions exist wear a dust mask.
- Ingestion Drink large amounts of water, induce vomiting, and seek medical attention.
- Eyes Flush with large amounts of water.
- Safety Product becomes very slippery when wet.

**Limited Warranty:** All information contained herein is offered in good faith. There are no warranties of merchantability of fitness for a particular purpose which extend beyond the information contained herein. Our liability is limited to replacement of any product which does not meet these specifications.

## DIEHARD™ Inoculants

### DIEHARD™ Transplant

- For trees and shrubs

### DIEHARD™ Palm

- For transplanting palms

### DIEHARD™ Flower Bed

- For flower beds

### DIEHARD™ Root Reviver

- For established and newly transplanted trees and shrubs

### DIEHARD™ Root Dip

- Ecto and endomycorrhizae for bare root treatment

### DIEHARD™ Ecto Root Dip

- For ecto specific plant species such as Oaks, Poplar, and Pines

### DIEHARD™ Injectable

- For both endo and ecto specific plant species

### DIEHARD™ Ecto Nursery Drench

- Custom blend of NINE strains of ecto for large scale nursery inoculation

### DIEHARD™ BioRush®

-Dry, soluble, and beneficial bacteria

### DIEHARD™ BioRush® Fe

-Dry, soluble chelated iron and beneficial bacteria

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