



DATA SHEET #7

ECTO & ENDO INOCULANT

DIEHARD™ Injectable



“The Industry's First Complete Injectable Inoculant”

DIEHARD™ Injectable is formulated to be used to treat mature and newly planted landscape trees and shrubs with live beneficial mycorrhizal fungi intended for use 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. The mycorrhizal inoculants are combined with other beneficial fungus (*Trichoderma*), humic acids, soluble sea kelp, yucca plant extracts, vitamins, folic acid, amino acid, and a host of beneficial bacteria to promote rapid root development. The results are quick colonization of roots with beneficial mycorrhizal fungi to provide a boost in the overall health of the tree.

Non Plant Food Ingredients

Endomycorrhizal	220 Propagules per gram <i>Glomus mosseae</i> (44), <i>Glomus intraradices</i> (44), <i>Glomus fasciculatum</i> (44), <i>Glomus dussii</i> (22), <i>Glomus clarum</i> (22), <i>Glomus deserticola</i> (22), <i>Glomus microaggregatum</i> (22).
Ectomycorrhizal	6,057,269 spores per gram to include: <i>Pisolithus tinctorius</i> (5,633,260), <i>Rhizopogon</i> (424,009).
<i>Trichoderma</i>	105,726,872 Colony forming units per gram to include Genus <i>Trichoderma</i> (6 species), <i>Trichoderma virens</i> (2 strains), <i>Trichoderma harzianum</i> (2 strains), <i>Trichoderma viride</i> (2 strains).
Nitrogen Fixing, Phosphosphate solubilizing and Growth Promoting Bacteria.	70,484,581 Colony forming units per gram of Genus <i>Bacillus</i> (<i>Bacillus subtilis</i> , <i>Bacillus azotofixans</i> , Genus <i>Pseudomonas</i> (<i>Pseudomonas aureofaceans</i>), Genus <i>Streptomyces</i> (<i>Streptomyces lycidas</i> , <i>Streptomyces griseoviridis</i>).

INERT INGREDIENTS

Soluble Sea Kelp Extract	18.0% <i>Ascophyllum nodosum</i>
Humic Acids	26.0% Derived from Leonardite
Soluble Yucca Extract	10.0% <i>Yucca schidigera</i>

Product Benefits

IMPROVES

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

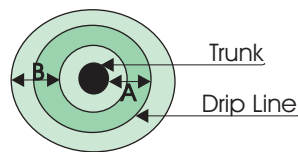
REDUCES

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 foot grid pattern at ½ gallons 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.



Compatibility

Species: All plants and shrubs. Rhododendrons, Azaleas, Heather, Blueberries, and Laurels associate with ericoid mycorrhiza but are compatible with ingredients contained in this product.

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 18 months.



DIEHARD™ Injectable



“Stimulates root growth naturally”

Plant Species and Type of Mycorrhizae

Endomycorrhizae

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

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™ Ecto Injectable

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

DIEHARD™ Ecto Nursery Drench

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

DIEHARD™ BioRush™

-Dry, soluble, biostimulants and beneficial bacteria

DIEHARD™ BioRush™ Fe

-Dry, soluble chelated iron, biostimulants, and beneficial bacteria

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