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Specifications

DIEHARD™ TRANSPLANT

Part 1: General Description

A transplant amendment shall be used which is formulated as a transplant preparation to inoculate landscape trees and shrubs with live beneficial mycorrhizal fungi when planting. It contains highly selected endo and ectomycorrhizae fungi that will quickly colonize the roots of new transplants to provide the best possible conditions for the roots to become as effective as possible during the establishment period and beyond. Both endo and ectomycorrhizal inoculants are combined with *Trichoderma*, humic acids, beneficial bacteria, soluble sea kelp, yucca plant extracts, to promote rapid root development. To reduce transplant stress and watering maintenance, and to slow release all soluble components of the formulation, water management gel is added to complete the package.

Part 2: Ingredients: Product shall include specifically:

Endomycorrhizal	22 Propagules per gram <i>Glomus mosseae</i> , <i>Glomus intraradices</i> , <i>Glomus fasciculatum</i> , <i>Glomus dussii</i> , <i>Glomus clarum</i> , <i>Glomus deserticola</i> , <i>Glomus microaggregatum</i> .
Ectomycorrhizal	90,308 Spores per gram to include: <i>Pisolithus tinctorius</i> (77,665), <i>Rhizopogon</i> (12,643).
Bacillus, Pseudomonas & Streptomyces Species	55,479,921 CFU's per gram Genus Bacillus: <i>B. megaterium</i> , <i>B. subtilis</i> , <i>B. amyloliquefaciens</i> , <i>B. azotoformans</i> , <i>B. licheniformis</i> , <i>B. pumilus</i> , <i>B. Firmus</i> , <i>B. coagulans</i> , <i>Geobacillus stearothermophilus</i> , and <i>Paenibacillus polymyxa</i> , <i>Paenibacillus Durum</i> . Genus Pseudomonas: <i>P. putida</i> , <i>P. fluorescence</i> , <i>P. Aureofaceans</i> . Genus Streptomyces: <i>S. lydicus</i> , <i>S. griseus</i> , <i>S. coelicolor</i> .
<i>Trichoderma</i>	27,185 CFU's per gram Genus <i>Trichoderma</i> : <i>Trichoderma hamatum</i> , <i>Trichoderma harzianum</i> , <i>Trichoderma viride</i> , <i>Trichoderma reesei</i> .
Humic Acid	24% derived from <i>Leonardite</i>
Sea Kelp Extract	10% <i>Ascophyllum nodosum</i>
Yucca Plant Extract	4% <i>Yucca schidigera</i>
Root Promoting Vitamins	B, B2, B3, B6, B7, B12, C, K, Biotin, Fulvic Acid
Amino Acids	Animal and Plant Proteins
Horta-Sorb® MD Water Gel Particle Size Percent Soluble Absorption Rate	Minimum 29% cross linked copolymer 1.0 mm to 2.0 mm, maximum 5 % < 1.0 mm Less than 5 % 300 - 400 times in distilled water

Part 3: Application

Mix with backfill in the top first 8-10 inches of planting hole adjacent to the root ball for larger plants, and 4-6 inches for smaller plants, making sure that it is in contact with the root ball. Avoid



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exposure to direct sunlight and store product in a dry, cool place.

Part 4: Execution

Use in strict accordance with supplier's instructions and recommendations. Follow recommended application rates per manufacturer at

<https://horticulturalalliance.com/how-to-apply-soil-microbes-mycorrhizae/>

And calculate usage rates at

<https://horticulturalalliance.com/wp-content/uploads/2018/09/DH-Usage-Calculator.xlsx>

Part 5: Manufacturer's Service

At the request of Landscape Architect provide the services of a qualified technical representative to instruct the user in proper mixing and handling of the product.

Part 6: Verification of Use

Landscape Architect shall determine how much materials are required on each job by using the usage calculator above or by providing manufacturer with plant list, in which case the manufacturer will do the take-off and provide volume requirements to the Landscape Architect as a purchase requirement for the Contractor. Landscape Architect shall require receipts for materials purchased to verify use. Additionally, Landscape Architect may require submittal of all empty product bags of materials purchased. At the request of the Landscape Architect excavation of random plots of up to 1% of planted materials. Landscape Architect shall require alternative procedures if product has not been used based upon manufacturer's recommendations.

END OF SECTION

Free Services Provided to Specifiers

- We do a take off for you - fax your plant list to us and we will do a take off and fax back to you the amount of materials required for the job.
- We introduce your contractors to our products - give us a list of your contractors and we will introduce, educate and provide them with installation information and list of materials for the job.
- With toll-free phone (800-628-6373) and fax lines (888-386-4478) we are at your service at a moment's notice.
- We provide verification to you that the contractor has purchased products – just register the project with us and we will do the rest and keep you informed.