

DIEHARD™ Transplant Usage Calculator* And Specification

Fill in the following information to create your specification for DIEHARD™ Transplant.

Worksheet Date

Landscape Architect

Project I.D.

Location of Project

Projected Date of Installation

DIEHARD™ Transplant Required:

Rate in	Number	Required
Ounces	On Job	For Job

Rate in	Number	Required
Ounces	On Job	For Job

Total Ounces Required On Job

Total Pounds

Total 8 oz. bags

Why use this calculator? Because by specifying the exact amount of materials need for a project you can rest assured your client will see the results that you had in mind. If instead the specification is worded "According to the manufacturers recommended rates, etc.", then the interpretation of application rates is left to the contractor bidding on the job. Ten contractors will likely figure this 10 different ways. Not anymore... Now amounts to use are not left to manipulation. The calculator is a terrific "Internal Auditor" to insure the correct amount DIEHARD™ ingredients are used on a project.



DIEHARD™ Transplant Specification For

Worksheet Date

Landscape Architect

Project I.D.

Projected Date of Installation

DIEHARD™ Transplant required in pounds

Specifications are as follows:

Product Specification Sheet

DIEHARD™ TRANSPLANT

PART I: 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 shall be included.

PART II: PRODUCT SPECIFICATION: PRODUCT SHALL INCLUDE SPECIFICALLY:

Endomycorrhizal	11 Propagules per cubic centimeter: <i>Glomus mosseae</i> (2), <i>Glomus intraradices</i> (2), <i>Glomus fasciculatum</i> (2), <i>Glomus dussii</i> (1), <i>Glomus clarum</i> (1), <i>Glomus deserticola</i> (1.50), <i>Glomus microagregatum</i> (1.50).
Ectomycorrhizal	180,000 spores per cubic centimeter to include: <i>Pisolithus tinctorius</i> (154,800) and <i>Rhizopogon</i> (25,200).
Nitrogen Fixing, Phosphate solubilizing, and Growth Promoting Bacteria.	800,000 Colony forming units per cubic centimeter of <i>Genus Bacillus</i> (32 species), <i>Genus Pseudomonas</i> (2 species), <i>Genus Streptomyces</i> (2 species).
<i>Trichoderma</i>	1,200,000 CFU's <i>Genus Trichoderma</i> (6 species), <i>Gliocladium virens</i> (2 strains), <i>Trichoderma Harzianum</i> (2 strains), <i>Trichoderma viride</i> (2 strains).
Humic Acid	22% derived from <i>Leonardite</i>
Sea Kelp Extract	11% <i>Ascophylum nodosum</i>
Yucca Plant Extract	7% <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	Minimum 29% cross linked copolymer
Particle Size	1.0 mm to 2.0 mm, maximum 5 % < 1.0 mm
Percent Soluble	Less than 5 %
Absorption Rate	300 - 400 times in distilled water

Alternative produces must contain these ingredients to be approved by the Landscape Architect.

PART III: PRODUCT 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. Complete backfill procedure immediately to minimize direct sun exposure to product. Store product in a dry, cool place being mindful that product is not to be exposed to high heat over 105° F. for periods in excess of four hours.

Size of Plant Material	Rate In Ounces	Size of Plant Material	Rate In Ounces
3 Inch cont.	0.15	1 Ft. in Height	2
4 Inch cont.	0.2	2 Ft. in Height	2
1 Quart	0.25	3 Ft. in Height	4
2 Quart	0.5	4 Ft. in Height	4
1 Gallon	1	5 Ft. in Height	6
2 Gallon	2	6 Ft. in Height	6
3 Gallon	2	7 Ft. in Height	8
5 Gallon	2	8 Ft. in Height	8
7 Gallon	4	9 Ft. in Height	8
10 Gallon	4	10 Ft. in Height	12
15 Gallon	6	12 Ft. in Height	16
20 Gallon	8	14 Ft. in Height	20
25 Gallon	8	16 Ft. in Height	24
30 Gallon	12	18 Ft. in Height	28
50 Gallon	12	20 Ft. in Height	32
65 Gallon	16	22 Ft. in Height	36
100 Gallon	20	24 Ft. in Height	40
200 Gallon	24	24 Spade	4
300 Gallon	32	30 Spade	8
1 Inch Caliper	4	44 Spade	16
2 Inch Caliper	8	52 Spade	24
3 Inch Caliper	12	62 Spade	32
4 Inch Caliper	16	80 Spade	40
5 Inch Caliper	20	96 Spade	48
6 Inch Caliper	24	16 Inch Box	6
7 Inch Caliper	28	20 Inch Box	8
8 Inch Caliper	32	24 Inch Box	8
9 Inch Caliper	36	30 Inch Box	16
10 Inch Caliper	40	36 Inch Box	24

12	Inch Caliper	48	42	Inch Box	28
15	Inch Caliper	60	48	Inch Box	32
18	Inch Caliper	72	60	Inch Box	48
21	Inch Caliper	84	72	Inch Box	64
24	Inch Caliper	96	96	Inch Box	80
27	Inch Caliper	108			
30	Inch Caliper	120			
36	Inch Caliper	136			

PART IV: EXECUTION

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

<http://www.horticulturalalliance.com/123xls/DhtuseXLS2.xls>

Or calculate usage rates at

www.horticulturalalliance.com/spec1.htm

PART V: MANUFACTURER'S SERVICE

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

PART VI: VERIFICATION OF USE

The contractor will verify use of product by submitting receipts for products purchased equaled to the amount of product as specified by the Landscape Architect. Include project name and ID, and key contract directing the use of product along with receipts. 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.

PART VII: ALTERNATIVE PROCEDURES

If it has been determined that product has not been used contractor shall immediately apply both a vertimulch application with product and a deep soil injection with an appropriate injection product containing endomycorrhizae and yucca extracts.

END OF SECTION

Interactive Landscape Architect Web Site - www.horticulturalalliance.com/spec1.htm

Input job specific info, plant size and quantities and include the exact product and amounts in your specification - thus, almost eliminating any contractor "errors".

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 moments notice.
- We provide verification to you that the contractor has purchased products – just ask and we will track this and provide you the information.