

DIEHARD™ Palm Usage Calculator*

And Specification

Fill in the following information to create you specification for DIEHARD™ Palm.

Worksheet Date
Landscape Architect
Project I.D.
Location of Project
Projected Date of Application

DIEHARD™ Palm Required As Follows:

Number of Feet CT Booted	Rate in Ounces	Number On Job	Ounces Required
--------------------------------	-------------------	------------------	--------------------

TOTAL
Total Pounds
No. of 8 oz. bags

***When printing the specification you need not print this page as entered information shall automatically transfer to the specification.**

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™ Palm Specification For

Worksheet Date

Landscape Architect

Project I.D.

Projected Date of Application

DIEHARD™ Palm required in pounds

Specifications are as follows:

Product Specification Sheet

DIEHARD™ PALM

PART 1: PRODUCT DESCRIPTION

Designated palms shall be treated once per year with DIEHARD™ Palm is formulated as a preparation to inoculate the roots of palm trees with live beneficial mycorrhizal fungi and microflora stimulants. It contains highly selected endomycorrhizal fungi that will quickly colonize the roots of palms to provide the best possible conditions for the roots to grow and extract from the root zone water and nutrients. The mycorrhizal fungi are combined with humic acids, biostimulants, beneficial bacteria, soluble sea kelp, yucca plant extracts, fulvic acid, nitrogen, phosphorous, potassium, and chelated magnesium, manganese, iron and zinc, to promote rapid root development. The product is used to promote new feeder root and mycorrhizal development in the roots of palm trees in the landscape.

PART 1I: PRODUCT SPECIFICATION

GUARANTEED NUTRIENT ANALYSIS 6-3-6

Total Nitrogen (N)	6%
1.3% Other Water Soluble Nitrogen and /or Urea Nitrogen	
2.1% Water Soluble Nitrogen	
2.6% Water Insoluble Nitrogen	
Available Phosphate (P2O5)	3%
Soluble Potash (K2O)	6%
Total Magnesium (Mg)	2.5%
2.5% Water Soluble Magnesium (Mg)	
Total Manganese (Mn)	4%
4.0% Water Soluble Manganese (Mn)	
Total Zinc (Zn)	1.5%
1.5% Soluble Zinc (Zn)	
Total Iron (Fe)	2.5%
2.5% Soluble Iron as (Fe)	

© 1997-2005 by Horticultural Alliance, Inc., 1550 66th Ave. Dr. E., Sarasota, FL 34243. The trade names DIEHARD™ and Horta-Sorb® are property of Horticultural Alliance, Inc., Sarasota, Florida 34243, 800-628-6373, Fax: 888-386-4478

*Technology Based * Service Lead * Customer Driven*

Derived from Kelp (Ascophyllum Nodosum), Manganese Sulfate, Zinc Sulfate, Iron Sulfate, Magnesium Sulfate, Superphosphate, Urea, And Potassium Sulfate.

NONPLANT FOOD INGREDIENTS

Endomycorrhizal	6 Propagules per cubic centimeter Glomus mosseae (1), Glomus intraradices (1), Glomus fasciculatum (1), Glomus dussii (0.75), Glomus clarum (0.75), Glomus deserticola (0.75), Glomus microaggregatum (0.75).
Nitrogen Fixing, Phosphate Solubilizing and Growth Promoting Bacteria.	1,000,000 CFU's per cc to include <i>GENUS BACILLUS: (32 SPECIES)</i> <i>Bacillus azotofixans</i> (2 strains) <i>Bacillus azotoformans</i> (3 strains) <i>Bacillus polymyza</i> (5 strains) <i>Bacillus thuringiensis</i> (2 strains) <i>Bacillus licheniformis</i> (6 strains) <i>Bacillus pumulis</i> (2 strains) <i>Bacillus subtilis</i> (10 strains) <i>Bacillus megaterium</i> (2 strains) <i>GENUS PSUEDOMONAS: (2 SPECIES)</i> <i>Psuedomonas aureofaceans</i> (2 strains) <i>GENUS STREPTOMYCES (2 SPECIES)</i> <i>Streptomyces lydicus</i> (2 strains)
Trichoderma	1,500,000 CFU's <i>Genus Trichoderma</i> (6 species), <i>Trichoderma gliocladium</i> (2 strains), <i>Trichoderma harzianum</i> (2 strains), <i>Trichoderma viride</i> (2 strains).
Root Promoting Vitamin	Biotin, Folic Acid, B, B2, B3,B6, B7, B12, C and K
Amino Acids (Protein)	Animal and Plant Proteins
Root Promoting Vitamins	Biotin, Folic Acid, B, B2, B3,B6, B7, B12, C and K
1% Humic Acid Derived from Leonardite	
4% Sea Kelp Extract (Ascophyllum Nodosum)	
1% Yucca Plant Extract (Yucca Schidigera)	
2% Co-polymer (Crossed linked acrylamide and potassium acrylate)	

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

PART III: DIRECTION OF USE

Established Palm - Small and newly planted trees and shrubs: Punch holes around the root ball (4 holes per mature palm). Apply 6 oz. per hole (2" wide x 6-8" deep) and water in. Alternatively, with a broom handle, or soil probe, poke holes around the root ball and apply as follows:

Gray Wood/Container Size = Number of 6 oz. Scoops

1 Gal.	5 Gal.	10 Gal.	6 Ft.	9 Ft.	15 Ft.
1/2	1	2	2	3	5

PART IV: EXECUTION

Use in accordance with approved submittal for each type of planting required in strict accordance with supplier's instructions and recommendations.

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.

END OF SECTION

Free Of Charge Services Provided to Specifiers

w 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.

w We introduce your products - give us a list of we will introduce, educate with installation of materials for the job.	Number of Feet CT Booted	Rate in Ounces	contractors to our your contractors and and provide them information and list
	6	8	
	8	8	
	10	16	
	12	16	
	14	16	

w With toll-free phone at your service at a and fax lines we are moments notice.

w We can provide that the contractor has	16	16	
	18	16	
	20	24	verification to you purchased products
	22	24	
	24	24	