



1550 66<sup>th</sup> Ave. Dr. East  
 Sarasota, FL 34243  
 800-628-6373  
 888-386-4478 Fax  
 info@horticulturalalliance.com  
 http://www.horticulturalalliance.com

## *Specifications*

# DIEHARD™ COMPLETE ORGANIC

### Part 1: General Description

DIEHARD™ COMPLETE organic is made up of dozens of ingredients that boost the health of plants of all types. These ingredients include mycorrhizal fungi, biostimulants of humic acid, sea kelp, yucca, beneficial bacteria, amino acid, and root promoting vitamins and a just the right amount of a horticultural grade gel to absorb solubles and keep them in the root zone and available to plants. The product should be used in all foundation plantings, flower beds and planting soils. Used with turf the product is simply broadcast before planting and as a soil amendment for potting and propagation mixes. All-in-all the products applications are universal for all plantings and existing landscape, orchard, groves, vineyard and managed crops including propagation and potting mixes.

### Part 2: Ingredients: Product shall include specifically:

#### GUARANTEED ANALYSIS

Endomycorrhizal Fungi	14 spores per gram <i>Glomus mosseae</i> , <i>Glomus intraradices</i> , <i>Glomus claroideum</i> , <i>Glomus etunicatum</i> , <i>Glomus clarum</i> , <i>Glomus deserticola</i> , and <i>Glomus microaggregatum</i> .
Ectomycorrhizal Fungi	66,079 spores per gram to include: <i>Pisolithus tinctorius</i> (56,828) and <i>Rhizopogon</i> (9,251).
Bacillus, Pseudomonas & Streptomyces Species	22,148,150 CFU's per gram Genus <i>Bacillus</i> : <i>B. megaterium</i> , <i>B. subtilis</i> , <i>B. amyloliquefaciens</i> , <i>B. azotoforans</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> . Genus <i>Pseudomonas</i> : <i>P. putida</i> , <i>P. fluorescens</i> , <i>P. aureofaciens</i> , <i>P. Durum</i> . Genus <i>Streptomyces</i> : <i>S. lydicus</i> , <i>S. griseus</i> , <i>S. coelicolor</i> .
<i>Trichoderma</i>	7,996 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 Acids	41% derived from Leonardite
Sea Kelp Extract	19% <i>Ascophyllum nodosum</i>
Yucca Plant Extract	1% <i>Yucca schidigera</i>

#### OTHER INGREDIENTS

Root Promoting Vitamin	B, B2, B3, B6, B7, B12, C, K,  Biotin, Fulvic Acid.
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*Technology Based* \* *Service Lead* \* *Customer Driven*



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Amino Acids	Animal and plant proteins
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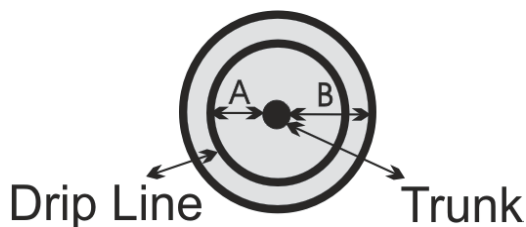
**Use of Product**

**Flower Beds & Vegetable Plantings:** Mix thoroughly into the first 3" to 4" of soil at the rate of 2 lbs. per 100 sq. ft. of bed.

**Garden Seeding:** Band beneath seed or transplants and cover with 1/4 to 1/2 inch of soil at the rate of 1 tsp. per plant or one cup per 25 feet of row.

**Blubs:** Place one tablespoon beneath each when planting.

**Vertimulching:** Bore 2 inch diameter holes on a 2.5 to 3 foot grid pattern in the vicinity of roots and mix 4 oz. of product with soil removed and return to fill hole. Following grid pattern suggested:



Measure from the trunk to the drip line (A). Divide this number by 2. Add this to drip line measurement (B) to get the treatment area. Apply product on a grid pattern.

**Planting Trees & Shrubs:** We strongly recommend using DIEHARD™ Transplant or DIEHARD™ Palm Transplant when transplanting because these products contain over 25% of Horta-Sorb® - horticultural grade super absorbent, which is very beneficial when transplanting. However, in the event you wish to use a product that does not contain the gels DIEHARD™ Complete is the perfect match. Mix with backfill in the upper 1/3 of planting hole being sure product is next to the roots.

Plant Size	Container or Ball Size	Rate
Flower or Veg.	4 inch	1 tsp/½ oz.
Shrub	1 gal.	2 tbs/1 oz.
Shrub	3 gal.	8 oz./4 oz.
Shrub	5 gal.	1 cup/8 oz.
2" diameter	20 gal/24" ball	2 cups/1 lbs.
3" diameter	30 gal/32" ball	4 cups/2 lbs.
4" diameter	50 gal/44" ball	8 cups/4 lbs.
6" diameter	200 gal/60" ball	8 lbs.

**Potting/Propagation Mix:** 3 lbs. per cubic yard or 1/2 cup per cubic foot.

**Turf:** Sod, Seed, Sprigs: Mix 3 lbs. per 1,000 square feet and rake into the first 1 inch of soil.

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**Potting/Propagation Mix:** Generally, 3 lbs. per cubic yard or 1/2 cup per cubic foot.

Configuration	lb./cu.yd.	No/yd <sup>3</sup>	Propagules
Gen. Purpose Mix	3	0	118/gal.
Larger than 7 gal.	1		8250/lb.
7 gallon	1	35	236
5 gallon	1.25	52	198
3 gallon	1.5	72	172
2 gallon	1.75	125	116
1 gallon	3	260	95
6 inch	4	450	73
4 inch	6	960	52
50 cell flat	10	170	10
72 cell flat	12	189	7
128 cell flat	18	220	5

#### Part 4: Execution

Use in strict accordance with supplier's instructions and recommendations.



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#### **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, or alternatively require the Contractor to determine and submit to the Landscape Architect, how much materials are required on each job by using the INTERACTIVE SPECIFICATION sheet on the web at [www.horticulturalalliance.com/spec.1.htm](http://www.horticulturalalliance.com/spec.1.htm), 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 and 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 5% of planted materials. Landscape Architect shall require alternative procedures if product has not been used based upon manufacturer's recommendations.

**END OF SECTION**



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#### **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.