



Turf & Soil Diagnostics

## Greenrise Tech

525 Barker Rd.  
Readyville, TN



Date Received Jul-28-2021

Date Reported Aug-2-2021

Facility Product Development

### Maximum Media Density for Dead Load Analysis of Green Roof Systems <sup>†</sup>

Lab ID#	Sample Name	Water Permeability (Saturated Hydraulic Conductivity)		Initial Media Density (Application Density)		Maximum Media Density (Saturated Density)		Maximum Media Water Retention (%)	Air-filled Porosity <sup>††</sup> (%)	Dry Media Density	
		(in/hr)	(mm/min)	(lb/ft <sup>3</sup> )	(g/cm <sup>3</sup> )	(lb/ft <sup>3</sup> )	(g/cm <sup>3</sup> )			(lb/ft <sup>3</sup> )	(g/cm <sup>3</sup> )
21070093-1	Extensive (45% Lightweight Aggregate, 20% Compost, 15% Sand, 20% Perlite)	5.4	2.3	61.0	0.98	79.6	1.28	43	16	55.0	0.88

Lab ID#	Sample Name	Initial Sample Wt. (Kg)	Sample Volume (m <sup>3</sup> )	Initial Sample Height (cm)	Final Sample Height (cm)	Sample Wt. After Draining (Kg)	Total Pore Space (%)	pH <sup>†††</sup>	Electrical Conductivity mmhos/cm	Organic Matter <sup>**</sup> (%)	Organic Matter <sup>**</sup> g/L
21070093-1	Extensive (45% Lightweight Aggregate, 20% Compost, 15% Sand, 20% Perlite)	1.860	0.0019	10.4	10.5	2.5	59	6.4	0.2	8.8	77.3

### Particle Size Evaluation\*

Lab ID#	Sample Name	% Passing US sieve (mm)								
		% Sand 2.0 - 0.063 mm	% Silt 0.063-0.002 mm	% Clay < 0.002mm	Gravel 3/8"	Gravel 1/8" (3.17)	Gravel 10 (2.0)	V. Coarse 18 (1.0)	Medium 60 (0.25)	V. Fine 230 (0.063)
21070093-1	Extensive (45% Lightweight Aggregate, 20% Compost, 15% Sand, 20% Perlite)	50.6	9.7	5.1	99.8	69.5	65.4	59.4	23.2	14.8

\* ASTM E2399

\*\* At Maximum Media Density (Water-holding Capacity)

††† ASTM D4972 w CaCl<sub>2</sub> (not screened)

\* ASTM F1632 Method B

\*\* Ashed at 550° C (FLL Guidelines)  
Electrical Conductivity (1:5)

Samples were tested as received and comments pertain only to the samples shown.

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Sample condition upon receipt was normal.

Samples were received with a transmittal letter.

Duane Otto

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Otto  
Date: 2021.08.02  
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Reviewed by \_\_\_\_\_