



Turf & Soil Diagnostics

Carolina Stalite Company
 Chuck Friedrich
 P.O. Box 1037
 Salisbury, NC 28145



Date received Aug-28-2017
 Date Reported Sep-07-2017
 Facility NC DEQ

Particle Size Evaluation*

Lab ID#	Sample Name	% Retained mm (US sieve)									
		% Sand 2.0 - 0.05 mm	% Silt 0.05-0.002mm	% Clay < 0.002mm	Gravel 4.0 (5)	Gravel 2.0 (10)	V. Coarse 1.0 (18)	Coarse 0.50 (35)	Medium 0.25 (60)	Fine 0.10 (140)	V. Fine 0.05 (270)
17080117-1	MDC 6 Bioretention Media	85.0	14.0	< 1.0	0.2	8.7	28.3	24.3	15.3	11.2	6.2

Lab ID#	Sample Name	USDA Textural Classification	Uniformity Coefficient Cu	D50 mm	Acid Reaction	Combined Fractions < 0.25 mm	No. 100 Fines 0.15 (100)			% Organic Matter Dry Wt.**
17080117-1	MDC 6 Bioretention Media	Loamy Sand	40.3	0.62	Slight	32.0	7.1			2.93

*ASTM F1632 Method B & Determination of Size Factors SOP

**ASTM F1647 Method A

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

This report may not be reproduced in part, but only in full.

Sample condition upon receipt was normal.

Samples were received with a transmittal letter.

Reviewed by _____



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Infiltration Rate

Lab ID#	Sample Name	Infiltration Rate* in/hr	Infiltration Rate* cm/hr	Bulk Density g/cc	Organic Matter % Dry Wt. ‡
17080117-1	MDC 6 Bioretention Media	21.7	55.0	0.97	2.93

*TSD Infiltration Rate SOP

‡ ASTM F1647 Method A

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Reviewed by Sam Fero



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Water Release Characterization

Lab ID#	Sample Name	Particle Density* g/cc	Bulk Density g/cc	Total Pore Space %
17080117-1	MDC6 Bioretention Media	2.17	1.04	52.1

MDC6 Bioretention Media						
Tension (cm)	Capillary Porosity	Non-Capillary Porosity	Degree of Saturation	Capillary Porosity	Non-Capillary Porosity	Degree of Saturation
	%	%	%	%	%	%
0	42.0	0.0	100.0			
30	22.7	29.4	43.6			
75	16.3	35.8	31.2			
150	14.0	38.1	26.8			

A2LA Testing Certificate Number 797-01

TSD Developed SOP

*SSSA, Methods of Soil Analysis

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Reviewed by Sam Ferris



**Carolina Stalite
NCDEQ
Water Release Curve
File #17080117**

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