

MATERIALS ANALYSIS REPORT

USGA ProTour Sand and Dakota Peat Mix



TESTING CERT # 1794-01

DAKOTA

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Customer Name: **Eric Pollock / G & S Solutions** Date Sample Received: **4/21/2009**
 Customer Address: **2455 WCR 49** Sample Description: **Sand/Dakota 90/10**
 City, State, Zip Code: **LaSalle, CO 80465** Sample Condition: **Good 3.4 %M**
 Customer Telephone: **303-961-0092** Customer Fax:

Sample Description	Lab Number	Porosity ⁽¹⁾				Bulk Density ⁽¹⁾ (g/cm ³)	Particle Density ⁽¹⁾ (g/cm ³)	% Organic Matter ⁽³⁾ (LOI)	Conductivity* ⁽²⁾ (mmhos)	pH ⁽⁴⁾ (CaCl2 1:1)
		Ksat ⁽¹⁾ (in/hr)	% Total	%Capillary ^(a)	% Air ^(a)					
USGA Recommendation		≥ 6	35-55	15-25	15-30	---	---	---	---	
Sand	LR09-053A	45.9							6.8	
Sand/Dakota 90/10	LR09-053B	19.5	44.1	19.7	24.4	1.51	2.97	0.69	6.5	
Within Range or Not		OK	OK	OK	OK	OK	OK	OK	OK	

Particle Size Analysis ⁽⁵⁾			Sand Size Distribution ^{(5), (b)}						Coefficient of Uniformity D60/D10	
% Sand	% Silt	% Clay	% Gravel (#10 sieve)	% Very Coarse (#18 sieve)	% Coarse (#35 sieve)	% Medium (#60 sieve)	% Fine (#100 sieve)	% Very Fine ^(c) (#140 sieve) (#270 sieve)		
>92 %	≤ 5%	≤ 3%	≤ 3% gravel ≤ 10% combined		≥ 60 %		≤ 20%	≤ 5%		---
99.6	0.42	0.02	0.02	5.78	28.6	43.0	17.8	4.30	0.02	2.45
OK	OK		OK		OK		OK	OK		OK

Particle Shape ⁽⁵⁾	
Angularity	Sphericity
Sub-angular/ Sub-round	Medium
OK	OK



(1) ASTM F1815, (2) Soil EC 1:2 soil H2O ratio method,
 (3) ASTM F1647, (4) ASTM D4972, (5) ASTM 1632,
 (6) ASTM D2974, (7) ASTM D2976, (8) ASTM C136,
 (a) determined at 30 cm tension, (b) % retained on sieve,
 (c) as defined by USGA specifications

Member of the Putting Greens Materials Testing Technical Advisory Committee
 Member of USGA Proficiency Testing Program

ALL IN-HOUSE REFERENCE MATERIALS TESTED WITHIN LIMITS X YES ___ NO - EXPLAIN

ASTM Methods: C136, D421, D2974, D2976, D4972, F1632, F1647, F1815

Ksat adjusted to 8%M.

*This test result is not covered by our current A2LA accreditation.

Comment:

By: *Diane K. Kuehl* **Date:** 4/27/2009 **Title:** Lab Manager

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