



Turf & Soil Diagnostics



MATERIALS TEST REPORT FOR
Les Sols Champlain

REPORT TO: Les Sols Champlain
Alain Marchand
1111 Cabane Ronde
Mascouche, QC J7K 0P2, Canada

DATE RECEIVED: Aug-24-2015
REPORT DATE: Sep-01-2015
CONDITION OF SAMPLE: Normal

PARTICLE SIZE (ASTM F1632)

Lab ID#	Sample Name	Soil Separate* %			Sieve Size / Sand Fraction Sand Particle Diameter % Retained					
		Sand	Silt	Clay	No. 10 Gravel 2.0 mm	No. 18 V. Coarse 1.0 mm	No. 35 Coarse 0.50 mm	No. 60 Medium 0.25 mm	No. 100 Fine 0.15 mm	No. 270 V. Fine 0.05 mm
40724-2	Sable Lave # 1	99.3	< 1.0	< 1.0	0.0	1.5	17.4	59.8	18.0	2.5
USGA Recommendations for Greens		≥ 92%	≤ 5%	≤ 3%	≤ 3% Gravel ≤ 10% Combined		≥ 60% Combined		≤ 20%	≤ 5%***
Greens Topdress Guidelines†			≤ 3%		0%	≤ 5%	≥ 60% Combined		≤ 20%	≤ 5%

† Guidelines Developed by Hummel & Co.

PARTICLE SHAPE / pH / PARTICLE SIZE PARAMETERS / INFILTRATION RATE

Lab ID#	Sample Name	Shape Sphericity	Shape Angularity	pH ¹ 1:1	Uniformity Coefficient Cu	D15 mm	D85 mm	% Organic Matter Dry Wt.**
40724-2	Sable Lave # 1	Low to High	Angular to Rounded		2.2	0.21	0.59	

*ASTM F1632 and Determination of Size Factors SOP

¹ ASTM D4972, method A, CaCl₂, 25 g sample used

**ASTM F1647 Method A

***Maximum of 10% combined on Very Fine Sand, Silt, and Clay fractions.

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

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Samples were received with a transmittal letter.

Reviewed by Sam Ferris



Turf & Soil Diagnostics



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PHYSICAL PROPERTIES (ASTM F-1815)

Lab ID#	Sample Name	Bulk Density g/cc	Infiltration Rate* in/hr	Infiltration Rate* cm/hr
40724-2	Sable Lave # 1	1.56	45.5	115.7
	USGA Recommendations for Greens	-	> 6	> 15

* Saturated Hydraulic Conductivity (K-SAT)

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.

Reviewed by Sam Fero



Turf & Soil Diagnostics

September 1, 2015

Les Sols Champlain

TSD File #40724

Comments: The Sable Lave # 1 Sand sample was tested as received and is being evaluated for use as greens topdressing. Guidelines for topdressing sand selection are included for your information and possible comparison.

The sand is clean with little silt and clay present. The sand fraction is uniform in particle size, with the majority of the sand falling into the fine to coarse sand fractions. The uniformity in particle size is illustrated by the low uniformity coefficient (Cu). The sand is clean in the coarsest fractions, so it should work cleanly into the greens canopy.

The sand has a saturated hydraulic conductivity (infiltration) rate that meets USGA recommendations. The rate is high but within normal limits for sand this size.

The test results are acceptable for greens topdress, though we recommend particle size testing of the existing rootzone to confirm compatibility.

If you have any questions or are in need of further assistance, please contact us. Samples are generally kept on the premises for 45 days after report date. Thank you for using Turf & Soil Diagnostics, Inc.

Sincerely,

Sam Ferro
President

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