

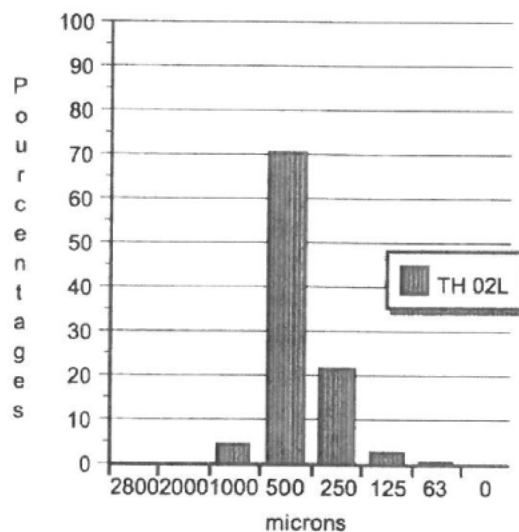
SABLE EXTRA SILICEUX LAVÉ 0/2 L de PERCHE

Répartition granulométrique

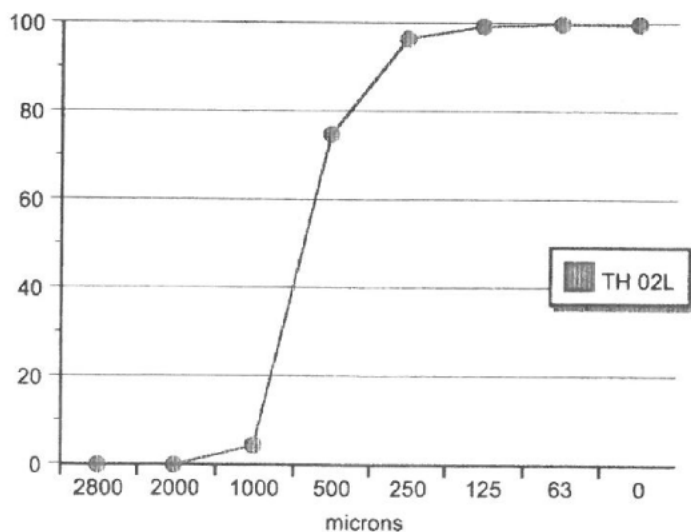
ouv. mailles en microns	refus %	refus cumulés %	tolérances %
2800	0.04	0.04	0 - 5
2000	0.09	0.13	0 - 10
1000	4.42	4.55	0 - 40
500	70.32	74.87	30 - 90
250	21.87	96.74	50 - 100
125	2.56	99.30	90 - 100
63	0.60	99.90	97 - 100
0	0.1	100	100

module de finesse FM : 2,76

Histogramme des refus



Refus cumulés



Analyse chimique en %

Silice totale	SiO ₂	sup. à 99%
Alumine	Al ₂ O ₃	inf. à 0,4%
Oxyde de fer	Fe ₂ O ₃	inf. à 0,2%
Chaux	CaO	inf. à 0,01%
Magnésie	MgO	inf. à 0,02%
Soude	Na ₂ O	inf. à 0,02%
Potasse	K ₂ O	inf. à 0,02%
Oxyde de titane	TiO ₂	inf. à 0,07%
Manganèse	MnO	inf. à 0,01%
Phosphore	P ₂ O ₅	inf. à 0,05%

PROPRIETES PHYSIQUES

Perte au feu	inf. à 0,2%
Humidité	inf. à 6%
pH	7



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10960/1	PARTICLE SIZE DISTRIBUTION		
			Test Report Number 10960/A Page 1 of 2
100%			Sand TH02L 09/04/13 (for Fairway Capping)
			Sample Received Date
moist			Sample Moisture (very wet, wet, moist, dry, n/a)
friable			Sample Consistency (hard, friable, plastic, n/a)
high			Sample Homogeneity (high, medium, low, n/a)
			Particle Size Distribution – ETL Method No. 290
SR			Angularity (VA, A, SA, SR, R, WR, n/a)
M			Sphericity (H, M, L, n/a)
			% Stones greater than 10 mm
			% Coarse Gravel 5 to 10 mm
0.9			% Fine Gravel 2 to 5 mm
13.1			% Very Coarse Sand 1 to 2 mm
55.9			% Coarse Sand 0.5 to 1 mm
24.0			% Medium Sand 0.25 to 0.5 mm
3.7			% Fine Sand 0.15 to 0.25 mm
2.1			% Very Fine Sand 0.05 to 0.15 mm
0.3			% Silt plus Clay, less than 0.05 mm
14.0			% greater than 1mm
79.9			% Coarse + Medium Sand
3.7			% Fine Sand
2.4			% Fines less than 0.15 mm
			Saturated Hydraulic Conductivity – ASTM F1815-11
904.4			Saturated Hydraulic Conductivity @ 20cm Tension (mm/hr)

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Continued from Page 1

10960/1	Test Results	USGA Criteria For Greens	PARTICLE SIZE DISTRIBUTION		
			Test Report	Number 10960/A	Page 2 of 2
HIGH	14.0	≤ 10%	Gravel / Very Coarse Sand Criterion		
in range	79.9	≥ 60%	Coarse / Medium Sand Criterion		
in range	3.7	≤ 20%	Fine Sand Criterion		
in range	2.1	≤ 5%	Very Fine Sand Criterion		
in range	0.3	≤ 8%	Silt & Clay Criterion		
in range	2.4	≤ 10%	Total Fines Criterion		

Angularity codes: VA, very angular; A, angular; SA, sub-angular; SR, sub-rounded; R, rounded; WR, well rounded.
 Sphericity codes: H, high; M, medium; L, low

ASTM Method : F1815-11

“Saturated Hydraulic Conductivity, Water Retention, Porosity, and Bulk Density of Athletic Field Rootzones”

These results refer only to the samples provided. No guarantee is given that they are representative of the bulk material.
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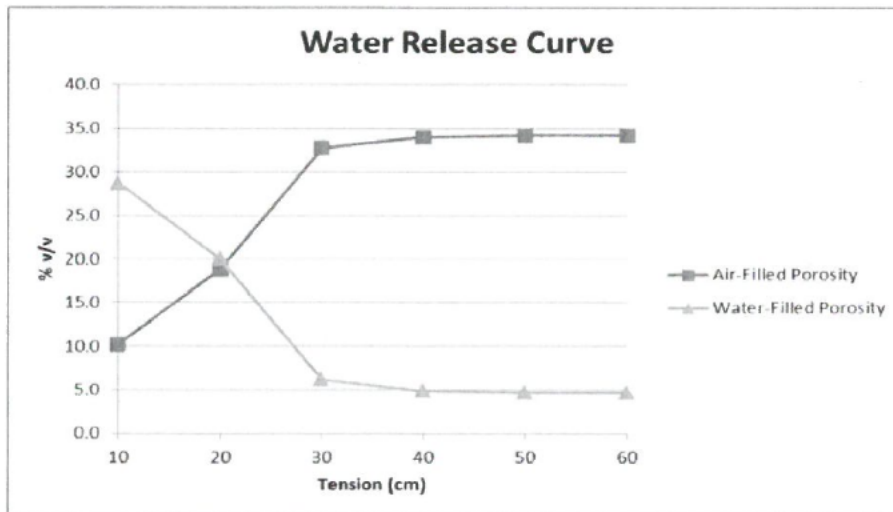
Water Release Curve - Summary Report

Date:

Order: 10960

Sample: Sand TH02L 09/04/13 (for Fairway Capping)

This sample was tested at 10cm, 20cm, 30cm, 40cm, 50cm & 60cm tension (depth) to ascertain at which depth the sand produced acceptable results.



Interpretation of Water Release Curve

This sample does satisfy the USGA recommendation for air-filled porosity (USGA range is 15-30%) at tension (depth) 15-28cm. At tensions shallower than 15cm, the air-filled porosity is lower than recommended. At tensions greater than 28cm, the air-filled porosity is higher than recommended.

This sample does satisfy the USGA recommendation for water-filled porosity (USGA range is 15-25%) at tension (depth) 14-24cm. At tensions shallower than 14cm, the water-filled porosity is higher than recommended. At tensions deeper than 24cm, the water-filled porosity is lower than recommended.

Signed:

Position: Assistant Laboratory Manager, European Turfgrass Laboratories Ltd

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This statement is a direct interpretation of the sample tested

10960/1	10960/1	10960/1	10960/1	10960/1	10960/1	USGA Criteria (for Greens)	WATER RELEASE Various Tensions
100%	100%	100%	100%	100%	100%		Test Report Number: 10960/B page 1 of 1
							Sand TH02L
							(for Fairway Capping)
							Sample Received Date
moist	moist	moist	moist	moist	moist		Sample Moisture (v. wet, wet, moist, dry)
friable	friable	friable	friable	friable	friable		Sample Consistency (hard, friable, plastic)
high	high	high	high	high	high		Sample Homogeneity (high, medium, low)
							Densities & Porosities – ASTM F1815-06 & D5550-06
10cm	20cm	30cm	40cm	50cm	60cm		TENSION (cm)
38.9	38.9	38.9	38.9	38.9	38.9	35-55%	Total Porosity (%v/v)
10.2	18.8	32.7	34.0	34.2	34.2	15-30%	Air-Filled Porosity (%v/v)
28.7	20.1	6.2	4.9	4.7	4.7	15-25%	Water-filled Porosity (%v/v)
17.7	12.4	3.8	3.0	2.9	2.9		Water Retention (%w/w)
in range	in range	in range	in range	in range	in range		Total Porosity Criterion
LOW							
HIGH						10cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion
	in range						
	in range					20cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion
		HIGH					
		LOW				30cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion
			HIGH				
			LOW			40cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion
				HIGH			
				LOW		50cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion
					HIGH		
					LOW	60cm	Air-Filled Porosity Criterion
							Water-filled Porosity Criterion

ASTM Method : F1815-11

“Saturated Hydraulic Conductivity, Water Retention, Porosity, and Bulk Density of Athletic Field Rootzones”

ASTM Method : D5550-06

“Specific Gravity of Soil Solids by Gas Pycnometer”

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