



ADVANCED TERRA TESTING

Apparent Opening Size
ASTM D 4751

Sample

CLIENT	LOT NO.
JOB NO.	ROLL NO.
PROJECT	SAMPLE TYPE
PROJECT NO.	DATE SAMPLED
LOCATION	DESCRIPTION
DATE TESTED	
TECHNICIAN	

Sample 1

Apparent Opening Size (mm): 0.150

Sieve Range	Minimum Diameter (mm)	Initial Mass of Beads (g)	Mass of Beads Passing (g)	Percent Passing by Mass (%)
#10 - #12	1.70	--	--	--
#14 - #16	1.18	--	--	--
#18 - #20	0.850	--	--	--
#25 - #30	0.600	--	--	--
#35 - #40	0.425	--	--	--
#45 - #50	0.300	--	--	--
#60 - #70	0.212	--	--	--
#80 - #100	0.150	50.00	0.57	1.1
#120 - #140	0.106	50.00	4.50	9.0
#170 - #200	0.075	--	--	--
#230 - #270	0.053	--	--	--
#325 - #400	0.038	--	--	--

Sample 2

Apparent Opening Size (mm): 0.106

Sieve Range	Minimum Diameter (mm)	Initial Mass of Beads (g)	Mass of Beads Passing (g)	Percent Passing by Mass (%)
#10 - #12	1.70	--	--	--
#14 - #16	1.18	--	--	--
#18 - #20	0.850	--	--	--
#25 - #30	0.600	--	--	--
#35 - #40	0.425	--	--	--
#45 - #50	0.300	--	--	--
#60 - #70	0.212	--	--	--
#80 - #100	0.150	50.01	0.10	0.2
#120 - #140	0.106	50.01	1.70	3.4
#170 - #200	0.075	50.00	10.13	20.3
#230 - #270	0.053	--	--	--
#325 - #400	0.038	--	--	--

Data entry by:

Date:

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File name:



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Sample 3

Apparent Opening Size (mm): 0.106

Sieve Range	Minimum Diameter (mm)	Initial Mass of Beads (g)	Mass of Beads Passing (g)	Percent Passing by Mass (%)
#10 - #12	1.70	--	--	--
#14 - #16	1.18	--	--	--
#18 - #20	0.850	--	--	--
#25 - #30	0.600	--	--	--
#35 - #40	0.425	--	--	--
#45 - #50	0.300	--	--	--
#60 - #70	0.212	--	--	--
#80 - #100	0.150	50.01	0.05	0.1
#120 - #140	0.106	50.00	1.15	2.3
#170 - #200	0.075	50.00	3.62	7.2
#230 - #270	0.053	--	--	--
#325 - #400	0.038	--	--	--

Sample 4

Apparent Opening Size (mm): 0.106

Sieve Range	Minimum Diameter (mm)	Initial Mass of Beads (g)	Mass of Beads Passing (g)	Percent Passing by Mass (%)
#10 - #12	1.70	--	--	--
#14 - #16	1.18	--	--	--
#18 - #20	0.850	--	--	--
#25 - #30	0.600	--	--	--
#35 - #40	0.425	--	--	--
#45 - #50	0.300	--	--	--
#60 - #70	0.212	--	--	--
#80 - #100	0.150	50.00	0.09	0.2
#120 - #140	0.106	50.00	1.55	3.1
#170 - #200	0.075	50.00	10.33	20.7
#230 - #270	0.053	--	--	--
#325 - #400	0.038	--	--	--

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Sample 5

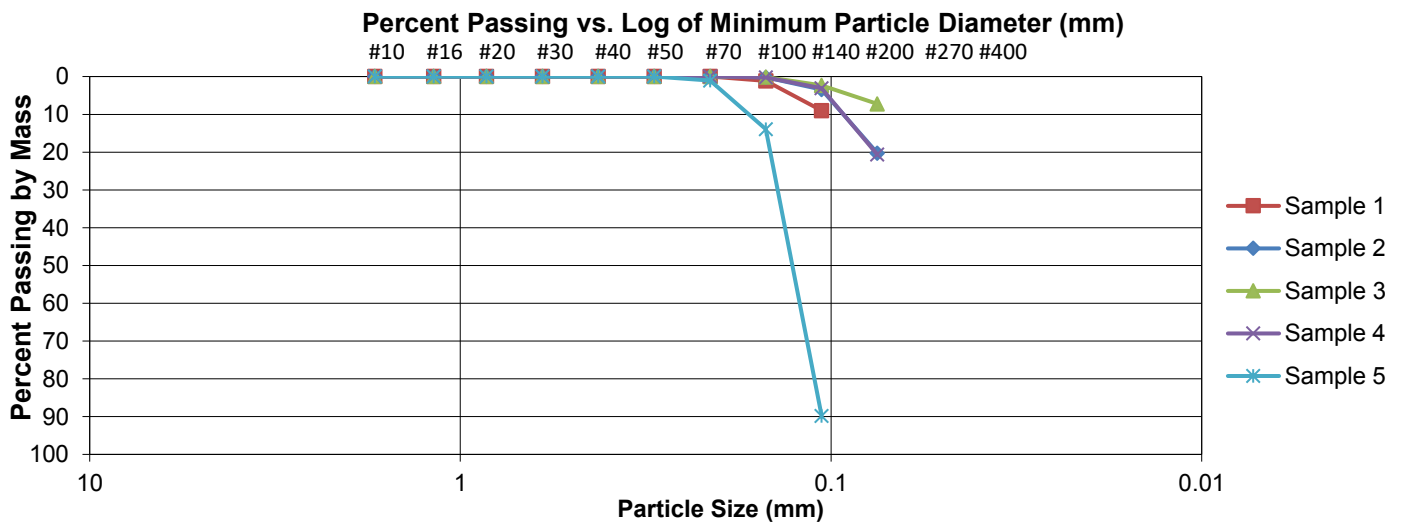
Apparent Opening Size (mm): 0.212

Sieve Range	Minimum Diameter (mm)	Initial Mass of Beads (g)	Mass of Beads Passing (g)	Percent Passing by Mass (%)
#10 - #12	1.70	--	--	--
#14 - #16	1.18	--	--	--
#18 - #20	0.850	--	--	--
#25 - #30	0.600	--	--	--
#35 - #40	0.425	--	--	--
#45 - #50	0.300	--	--	--
#60 - #70	0.212	50.01	0.53	1.1
#80 - #100	0.150	50.00	6.97	13.9
#120 - #140	0.106	50.00	44.92	89.8
#170 - #200	0.075	--	--	--
#230 - #270	0.053	--	--	--
#325 - #400	0.038	--	--	--

Apparent Opening Size

Average Apparent Sieve Size (mm): 0.150
Average Apparent Opening Size (mm): 0.136

Sieve No.: #100

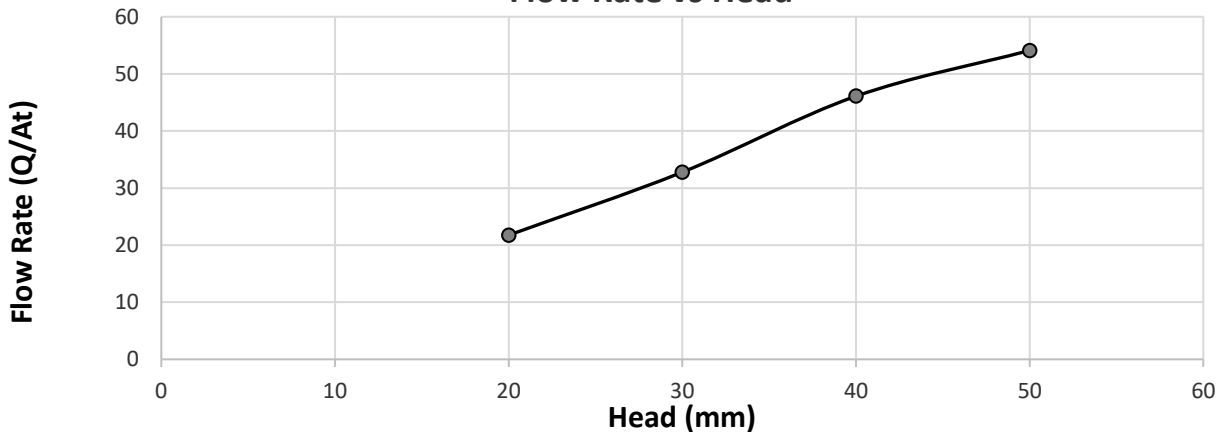


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Permittivity Data - Laminar Flow

Head (mm)	Cross Sectional Area (mm ²) A	Temperature (°C)	Temperature Correction Factor	Elapsed Time (s) t	Discharge Volume (mL) Q	Flow Rate (cm/s)	Corrected Permittivity (s ⁻¹)
50.0	1849	22.0	0.954	5	500	5.16E+00	1.03E+00
				5	485	5.01E+00	1.00E+00
				5	490	5.06E+00	1.01E+00
				5	515	5.32E+00	1.06E+00
				5	510	5.26E+00	1.05E+00
Average Permittivity:							1.03E+00
40.0	1849	22.0	0.954	5	445	4.59E+00	1.15E+00
				5	430	4.44E+00	1.11E+00
				5	425	4.39E+00	1.10E+00
				5	410	4.23E+00	1.06E+00
				5	420	4.33E+00	8.67E-01
Average Permittivity:							1.10E+00
30.0	1849	22.0	0.954	5	300	3.10E+00	1.03E+00
				5	295	3.04E+00	1.01E+00
				5	310	3.20E+00	1.07E+00
				5	305	3.15E+00	1.05E+00
				5	305	3.15E+00	6.30E-01
Average Permittivity:							1.04E+00
20.0	1849	22.0	0.954	5	205	2.12E+00	1.06E+00
				5	210	2.17E+00	1.08E+00
				5	190	1.96E+00	9.80E-01
				5	210	2.17E+00	1.08E+00
				5	190	1.96E+00	3.92E-01
Average Permittivity:							1.05E+00

Flow Rate vs Head



Data entry by:
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File name:

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Permittivity Data

Head (mm)	Cross Sectional Area (mm ²) A	Temperature (°C)	Temperature Correction Factor	Elapsed Time (s) t	Discharge Volume (mL) Q	Flow Rate (cm/s)	Corrected Permittivity (s ⁻¹)
50.0	1849	22.0	0.954	5	500	5.16E+00	1.03E+00
				5	485	5.01E+00	1.00E+00
				5	490	5.06E+00	1.01E+00
				5	515	5.32E+00	1.06E+00
				5	510	5.26E+00	1.05E+00
Average Permittivity:							1.03E+00
50.0	1849	21.9	0.956	5	430	4.45E+00	8.90E-01
				5	420	4.34E+00	8.69E-01
				5	440	4.55E+00	9.10E-01
				5	430	4.45E+00	8.90E-01
				5	430	4.45E+00	8.88E-01
Average Permittivity:							8.90E-01
50.0	1849	22.0	0.954	5	675	6.97E+00	1.39E+00
				5	690	7.12E+00	1.42E+00
				5	690	7.12E+00	1.42E+00
				5	660	6.81E+00	1.36E+00
				5	660	6.81E+00	1.36E+00
Average Permittivity:							1.40E+00
50.0	1849	22.2	0.949	5	805	8.27E+00	1.65E+00
				5	790	8.12E+00	1.62E+00
				5	770	7.91E+00	1.58E+00
				5	760	7.81E+00	1.56E+00
				5	780	8.01E+00	1.61E+00
Average Permittivity:							1.61E+00

Permittivity Summary

Average Permittivity (s⁻¹):	1.29E+00
Average Corrected Permittivity (s⁻¹):	1.23E+00
Standard Deviation:	0.33
Average Flow Rate (gpm/ft²):	9.50E+01
Average Flow Rate (cm/s):	6.45E+00

NOTES	
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Grab Tensile
ASTM D4632

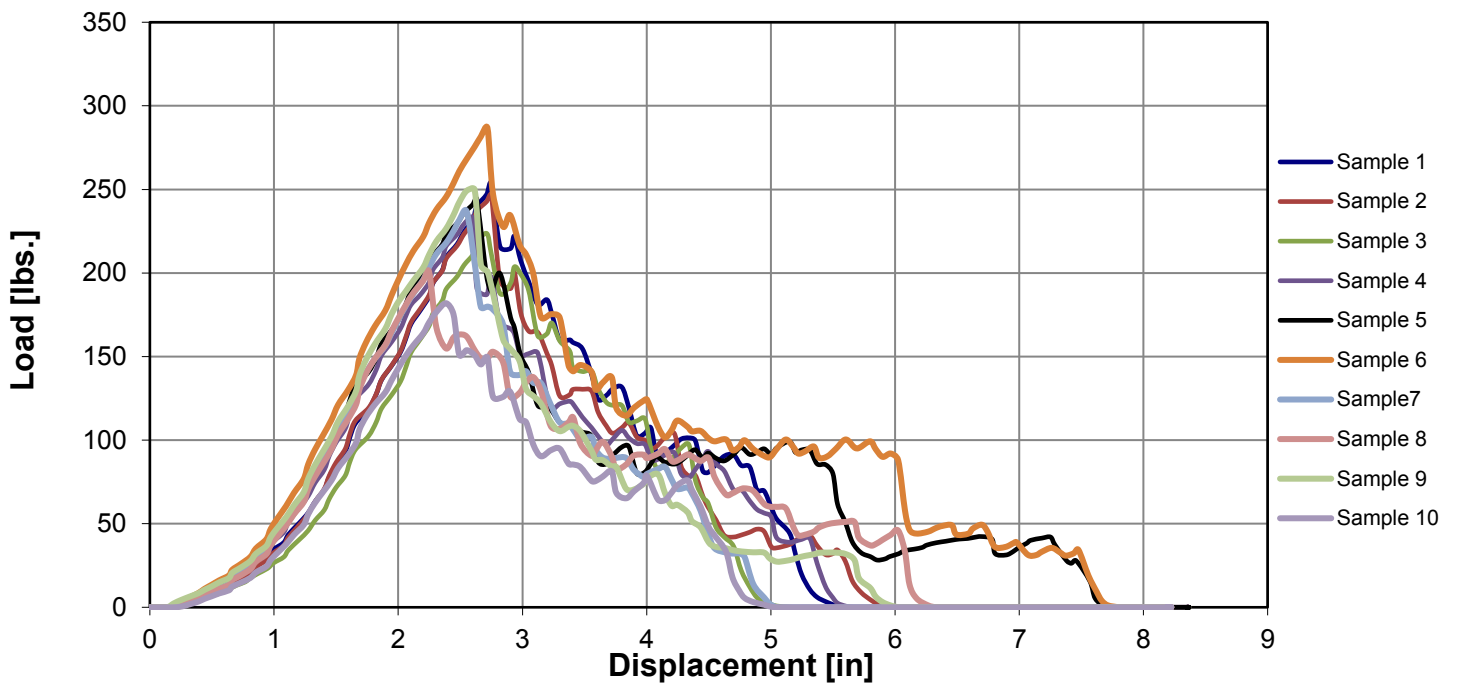
CLIENT
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Tensile Strength Data

Sample Number	Load (lbs)	Load (N)	Elongation (%)	
1	253.5	1127.4	91.6	
2	246.6	1097.1	85.0	
3	223.7	994.9	90.4	
4	232.8	1035.4	86.7	
5	244.4	1087.1	87.7	
6	286.8	1275.7	90.6	
7	236.9	1053.7	85.0	
8	200.9	893.6	74.9	
9	249.8	1111.1	87.2	
10	181.9	809.2	79.5	
Average	235.7	1048.5	85.9	
Standard Deviation	29.0	129.1	5.2	

Direction:	Cross Machine
Grip Separation (in):	3.0
Strain Rate (in/min):	12.0
Sample Width (in):	4.0
Sample Length (in):	8.0



RAW DATA FILES

NOTES

Data entry by:
Checked by:
File name:

Date:
Date: