

[AirDrain Drainage ASTM D4716 Synthetic Grass and Natural Grass Testing](#)

What drains better than air!

If your field floats, has ponding or infill migration (which is an extreme player safety and owner liability issue) and you can't figure out why, maybe because they said it would drain XX amount per hour and in reality it doesn't and never will.

Those issues don't get better they get worse! Countless hours in maintenance and grooming, adding materials etc. etc. what's the cost of that every month?

In a Cost Value Performance scenario, no product comes close to AirDrain!

Over the years, many architects and engineers have asked us just how fast will the AirDrain grid drain. Our reply has always been that the AirDrain is only limited by what is above it and the exit drains. Due to the fact that the area of an AirDrain part is 1" inch high and has a 92% air void.

Recently, our AirDrain grid was tested using the [ASTM D 4716 Hydraulic Transmissivity Standard Test Method](#). The testing was done using plates on top and bottom of the AirDrain part, setting them to the required slope and adding water from one end down the slope. AirDrain was draining so fast they had to modify their testing equipment to accommodate the volume of water AirDrain could move.

As it turns out there is practically no resistance to drainage using the AirDrain grid? The most important factor to consider is the percentage of slope that the AirDrain is sitting on.

To put this in perspective of rainfall, AirDrain can handle anything that Mother Nature throws at it. On a nearly completely flat surface (1/2% of 1% slope) AirDrain will drain 2.85 inches of rainfall in one minute.

For example, it could rain over 171 inches in an hour and AirDrain could drain it. AirDrain can hold .576 gallons of water per sqft. if needed until it can evacuate to the perimeter exit drains.

AirDrain has been used in specs and projects where the city or county has limited the water that can be introduced into the sewer system or has limited the size or volume of the exit drains on a roof top. AirDrain's capability to hold water .576 gallons of water per sqft. in the grid until the exit drains can evacuate it is another plus for the AirDrain System.

No other product on the market comes close to AirDrain's ability to drain a project, it's not even close.

So when you see the claims of manufacturers rainfall per hour drainage, ask them if they have the test that really shows a products drainage capability.

Now you know!

AirDrain Nothing drains better than air!



GEOSYNTHETICS TEST RESULTS
 TRI Client: Airfield Systems
 Project: Aldrain Project

Material: Aldrain
 Sample Identification: C#00932
 TRI Log #: 22857

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Hydraulic Transmissivity (ASTM D 4716) Plate / Expanded Polystyrene / 4.5 oz NWGT / Aldrain / 10 oz NWGT / Plate												
Direction Tested: Machine Direction Normal Load (psf): 125 Hydraulic Gradient: 0.75 Test Length (in): 12 Test Width (in): 12 Seat Time, hrs: 0.25												
Characteristic Equation Extrapolation $y = 3.41E-04x^2 + 2.21E-03x$ C2 3.41E-04 C1 2.21E-03 Extrapolated i= 0.75												
											Flow Rate (GPM/ft width)	43.8
											Flow Rate (LPM/m width)	543.6
											Transmissivity (m ² /s)	4.53E-01
Hydraulic Gradient: 0.1 Test Length (in): 12 Test Width (in): 12 Seat Time, hrs: 0.25												
Volume (cc): 6000 6000 6000 Time (s): 6.7 6.7 6.7 Flow Rate (GPM/ft width): 14.18 14.18 14.18 Flow Rate (LPM/m width): 176.16 176.16 176.16 Transmissivity (m ² /s): 2.94E-02 2.94E-02 2.94E-02 Test Temp (C): 20.2 Temp. Corr. Factor: 0.999												
											14.2	
											176.2	
											2.94E-02	
Hydraulic Gradient: 0.07 Test Length (in): 12 Test Width (in): 12 Seat Time, hrs: 0.25												
Volume (cc): 6000 6000 6000 Time (s): 8.3 8.3 8.3 Flow Rate (GPM/ft width): 11.45 11.45 11.45 Flow Rate (LPM/m width): 142.20 142.20 142.20 Transmissivity (m ² /s): 3.39E-02 3.39E-02 3.39E-02 Test Temp (C): 20.2 Temp. Corr. Factor: 0.999												
											11.4	
											142.2	
											3.39E-02	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



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	1	2	3	4	5	6	7	8	9	10				
Hydraulic Gradient:	0.03	Volume (cc)			6000	6000	6000							
Test Length (in)	12	Time (s)			14.2	14.1	14.1							
Test Width (in)	12	Flow Rate (GPM/ft width)			6.69	6.74	6.74						6.7	
Seat Time, hrs	0.25	Flow Rate (LPM/m width)			83.12	83.71	83.71						83.5	
		Transmissivity (m ² /s)			4.62E-02	4.65E-02	4.65E-02						4.64E-02	
		Test Temp (C)			20.2									
		Temp. Corr. Factor			0.999									
Hydraulic Gradient:	0.01	Volume (cc)			6000	6000	6000							
Test Length (in)	12	Time (s)			32.1	32.0	31.8							
Test Width (in)	12	Flow Rate (GPM/ft width)			2.96	2.97	2.99						3.0	
Seat Time, hrs	0.25	Flow Rate (LPM/m width)			36.77	36.88	37.12						36.9	
		Transmissivity (m ² /s)			6.13E-02	6.15E-02	6.19E-02						6.15E-02	
		Test Temp (C)			20.2									
		Temp. Corr. Factor			0.999									
Hydraulic Gradient:	0.005	Volume (cc)			2253	2255	2250							
Test Length (in)	12	Time (s)			20.0	20.0	20.0							
Test Width (in)	12	Flow Rate (GPM/ft width)			1.78	1.79	1.78						1.8	
Seat Time, hrs	0.25	Flow Rate (LPM/m width)			22.16	22.18	22.13						22.2	
		Transmissivity (m ² /s)			7.39E-02	7.39E-02	7.38E-02						7.38E-02	
		Test Temp (C)			20.2									
		Temp. Corr. Factor			0.999									

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