

LABORATORY TESTING WATER RETENTION



Project Information

Project Name	Nature's Infill and Pine Chip Systems Water Retention		
Client Information	Target Technologies International Inc 8535 Eastlake Drive Burnaby BC V5A4T7		
Report Date	7/24/2023	Sample Received	6/2023
Report Status	Final	Job No.	98473/8669
Prepared by	Megan Illsley Laboratory Director		
Checked By	Jeffrey Gentile Operations Director		

Notes:

1. This report has been prepared by Firefly Sports Testing with all reasonable skill, care and diligence within the terms of the contract with the Client and within the limitations of the resources devoted to it.
2. This report is confidential to the Client and Firefly Sports Testing accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.
3. This report shall not be used for engineering or contractual purposes unless signed by the Author and the Checker and unless the report status is "Final."

Summary

Firefly Sports Testing was commissioned to perform water retention testing. Infill samples were sent to our laboratory.

Procedure

A 11x23-inch turf system sample is prepared and weighed under dry ambient conditions. The sample is then placed in the water retention apparatus, a double walled basin, in which the sample is held in the interior chamber and is contained by perforated walls. The apparatus is then filled with a known weight of water, allowing both the interior and exterior chambers to be filled above the level of the top of the infill system to confirm complete saturation of the system and this level is maintained for 15 minutes. The chambers are then drained completely, and the sample is allowed to free drain for 15 minutes. Following the completion of the free drain time, the same is reweighed to determine the weight of water retained in the system.

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General Information

Test Date(s)	7/13/2023	Air Temperature (°F)	70-73
Technician	AK, FP	Humidity (%)	44-46

System Descriptions

	Nature's Infill A	Nature's Infill B	Pine Chip A	Pine Chip B
Turf Product	2" Dual Fiber (1/2" gauge)	2" Dual Fiber (3/4" gauge)	2" Dual Fiber (1/2" gauge)	2" Dual Fiber (3/4" gauge)
Performance Infill	1.5 lb/sf Nature's Infill	1.5 lb/sf Nature's Infill	1.5 lb/sf Pine Chip	1.5 lb/sf Pine Chip
Stabilizing Infill	5 lb/sf Sand	5 lb/sf Sand	5 lb/sf Sand	5 lb/sf Sand
Shockpad	None	None	None	None

Water Retention Results

Parameter	Nature's Infill A	Nature's Infill B	Pine Chip A	Pine Chip B
Sample Size (ft ²)	1.76	1.76	1.76	1.76
Sample Weight (kg)	5.67	5.40	5.58	5.54
Apparatus Weight (kg)	6.39	6.39	6.39	6.39
Weight of Water Added to Sample (kg)	31.89	37.10	32.21	30.71
Reclaimed Water Total (kg)	29.35	33.75	30.12	27.76
Water Weight Left in System (kg)	2.22	2.13	2.27	2.18
Water Retention per Square Foot (kg)	1.26	1.21	1.29	1.24
Water Retention of Sample by Weight (%)*	39.15	39.44	40.68	39.35

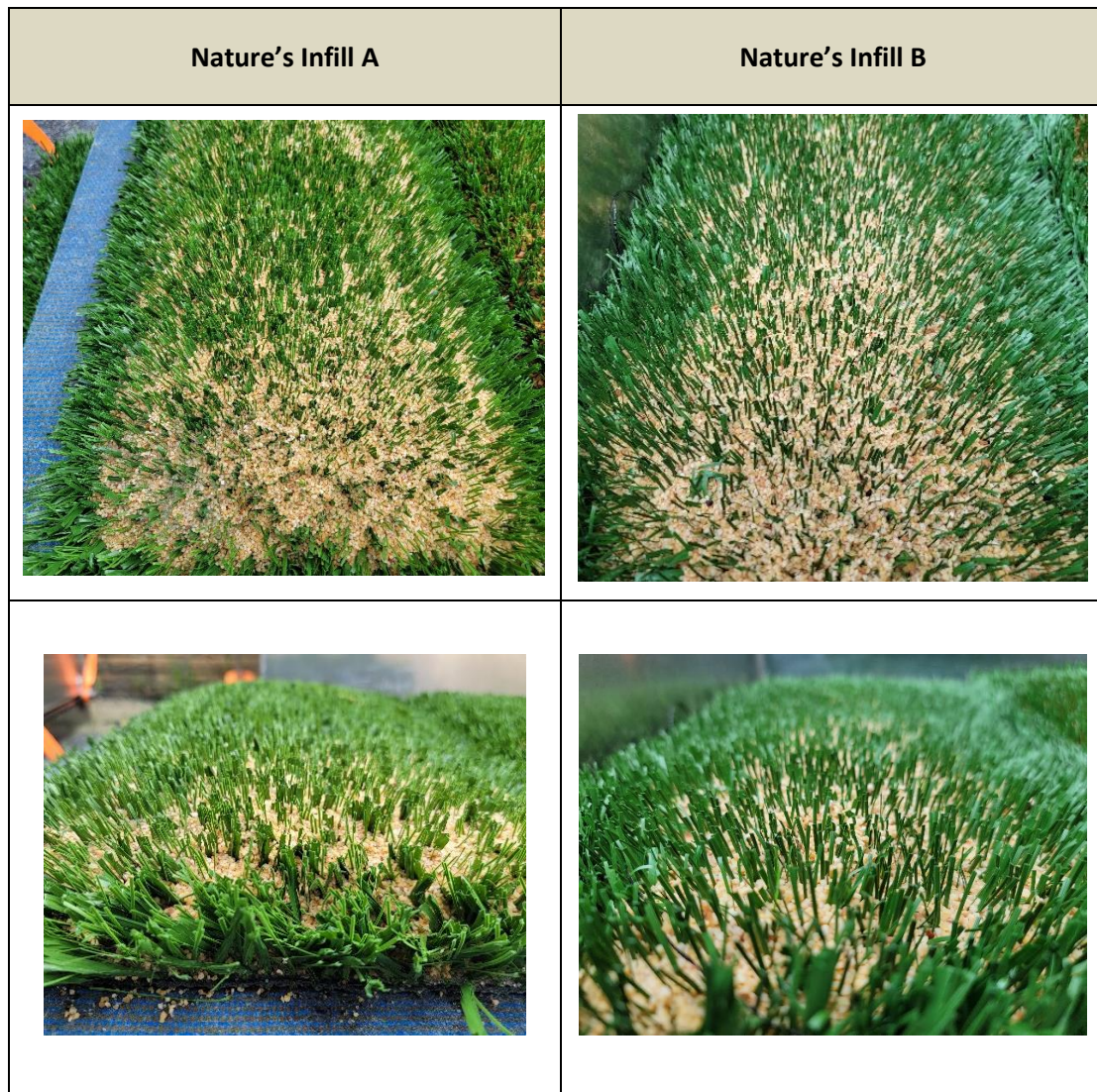
*Result determined by calculating the weight of water retained by the sample divided by the dry weight of the sample prior to testing, expressed as a percentage.



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Sample Photos







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Pine Chip A	Pine Chip B
	
	

End of Report



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