

LABORATORY TESTING PERFORMANCE EVALUATION



Project Information

Project Name	TTII PRO-TURF PAD 20 mm Performance Evaluation		
Client Information	Target Technologies Int. Inc. 8535 Eastlake Drive, Burnaby, BC		
Report Date	11/13/2023	Received Date	10/19/2023
Report Status	Final	Job No.	99052/9237
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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 laboratory testing for the characteristics listed below.

Test Type	Test Method	Test Description
g-max	ASTM F355A	Standard Test Method for Impact Attenuation of Playing Surface Systems, and Materials Used for Athletics, Recreation and Play
Tensile Strength	EN 12230:2003	Surfaces for sports areas — Determination of tensile properties of synthetic sports surfaces
Hydraulic Transmissivity	ASTM D4716	Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
Permeability	ASTM D4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
Thickness	ISO 9863-1	Determination of thickness at specified pressures Part 1: Single layers
Mass per Unit Area	ISO 9864	Test method for the determination of mass per unit area of geotextiles and geotextile-related products
Thermal Conductivity	ASTM C177	Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
Compressive Strength	ASTM D3575	Standard Test Methods for Flexible Cellular Materials Made from Olefin Polymers

This is a summary report. Complete results and background information can be provided upon request.



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General Information

Synthetic Turf Product	2in Elite Woven Turf	Shock Pad	TTII PRO-TURF Pad 20mm
Performance Infill	1lb/sf TPE Athletic Field Performance Infill	Sub-Base	Concrete
Stabilizing Infill	5lb/sf Sand	Technician	AK

Results Tables

Property	Unit	Result
Thickness at 0.3 psi load	in	0.69
Mass per Unit Area	lb/ft ²	0.57
Tensile Strength	psi	55.5
Compressive Strength at 25% Deflection	psi	5.6
Thickness after 72 hour recovery	in	0.69
Compressive Strength at 50% Deflection	psi	48.3
Thickness after 72 hour recovery	in	0.67
g-max Impact Attenuation (Pad only)	g's	326
g-max Impact Attenuation (System)	g's	131

Note 1: Results are for pad only

Note 2: System g-max result is for 5lb sand and 1lb/sf TPE Athletic Field Performance Infill system



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Property	Unit	Result
Water Flow Rate under 2in hydraulic head	gpm/ft ²	17.5
Water Permeability by Permittivity	in/hr	401
In-plane water flow rate at 0.3psi load and 0.005 hydraulic gradient	gpm/ft	6.2
Hydraulic Transmissivity (Horizontal Permeability)	m ² /s	0.0013
Thermal Conductivity	BTU/h.ft.°F	0.277
Thermal Resistance	h.ft ² .°F/BTU	1.346

Note 3: Results are specific to pad sample with nominal thickness of 0.43 in

End of Report

