

LABORATORY TESTING PERFORMANCE EVALUATION



Project Information

Project Name	1.75" Dual Fiber_TTII Safeguard 10-20_PP20 Performance Evaluation			
Client Information	Schmitz Foam Products LLC 188 Treat Avenue Coldwater, MI 49036	Target Technologies International, Inc. 8535 Eastlake Drive Burnaby, BC V5A 4T7	Test Date	2/13/2023
Report Date	2/17/2023 (Revised 4/16/2024)		Sample Received Date	2/6/2023 – 2/9/2023
Report Status	Final		Job No.	98151/8353
Prepared by	Megan Illsley Laboratory Director			
Checked by	Jeffrey Gentile Director of Operations			

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."
4. Complete drop data and individual test results are available upon request.

Summary

Firefly Sports Testing was commissioned to perform laboratory testing for the following characteristics listed below.

Test Type	Test Method	Test Description
HIC	ASTM F3146-18	Standard Test Method for Impact Attenuation of Turf Playing Systems Designed for Rugby
AAA	ASTM F3189-20	Standard Test Method for Measuring Force Reduction, Vertical Deformation, and Energy Restitution of Synthetic Turf Systems Using the Advanced Artificial Athlete
g-max	ASTM F355A-16	Standard Test Method for Impact Attenuation of Playing Surface Systems, and Materials Used for Athletics, Recreation and Play

Complete results and background information can be found in the subsequent sections of this report.



Table Contents

Project Information	1
Summary.....	1
General Information.....	2
Results Tables.....	2
End of Report.....	2

General Information

System Name	1.75" Dual Fiber_Safeguard_PP20		
Carpet	1.75" Dual Fiber	Infill Depth (mm)	30
Performance Infill	n/a		
Stabilizing Infill	6 lb/sf TTII Safeguard 10-20	Shockpad	PP20
Air Temperature (°F)	70	Sub-Base	Concrete
Surface Temperature (°F)	70	Humidity (%)	45

Results Tables

Set	Drop Height (m)	Drop 1 HIC	Drop 2 HIC	Drop 3 HIC	Max HIC	Critical Fall Height (m)
1	0.814	457	473	465	473	1.23
2	1.028	703	653	658	703	
3	1.301	949	1044	1091	1091	
4	1.507	1303	1340	1370	1370	

Force Reduction (%)	Vertical Deformation (mm)	Energy Restitution (%)	g-max (g's)
59	7.8	37	120

End of Report