



TESTING TECHNOLOGY FOR SPORT

ASTM 1292-18E1 Test Report

Rubber Mat 23mm

Report Number: 96597/8213

Report Status: Final

Client: GrassmatsUSA

Unit 4A & B

Holmes Chapel Business Park

Manor Lane

Holmes Chapel CW4 8AF



TESTING TECHNOLOGY FOR SPORT

UNITED STATES

50 Business Depot Drive

Ringgold, Georgia 30736

Phone: +1 706 406 2070

Email: support@sportslabs.com

Web: www.sportslabs.com

REGIONAL LOCATIONS



-Seattle, Washington

-Columbia, Missouri

-Dallas, Texas

-Los Angeles, California

-Montreal, Quebec

Job Number	96597/8213	Report Date	01/31/2025
Project Name	Rubber Mat 23mm	Test Date	01/30/2025
Client Information	Grassmats USA		
Report Status	Final		
Prepared by	Gustavo Munoz		
	Laboratory Manager		
Checked by	Kieran O'Donnell		
	General Manager		

Introduction

Sports Labs were commissioned to carry ASTM 1292-18e1 testing on a mat sample submitted by the manufacturer. The system was assembled and tested over concrete.

Contents

1. Conclusions
2. Testing Apparatus
3. Sample & System Information
 - 3.1 – Test Results - 72°
 - 3.2 - Test Results - 25°
 - 3.3 – Test Results - 120°



Foreword

- i. This report has been prepared by Sports Labs with all reasonable skill, care, and diligence within the of the contract with the Client and within the limitations of the resources devoted to it.
- ii. Sports Labs reports and data are for the exclusive use of the customers who they are addressed to and may not be reproduced without permission from Sports Labs.
- iii. This report shall not be used for engineering or contractual purposes unless signed by the Author and the Checker and unless the report status in "Final".

1.0 – Conclusions

System	Reference Temperature (F)			Overall CFH (ft)
	72°	25°	120°	
Rubber Mat 23mm	10'	10'	10'	10

The results reported herein reflect the performance of the described samples at the time of testing and at the temperature(s) reported. The results are specific to the described samples. Samples of surfacing materials that do not closely match the described samples will perform differently.

2.0 – Testing Apparatus

Testing Apparatus		
Function	Manufacturer	Model
Temperature Measurement	Lavatools	PT12
Headform / Missile	Alpha Automation	Hemispherical E-Missile
Data Acquisition	Alpha Automation	Triax 2010
Accelerometer	Dytran	3010M14
	Calibration Date: 07/06/2024	

3.0 – Sample & System Information

Sample / System Information			
Carpet Type	Natural Grass		
Performance Infill Type	N/A	Performance Infill Rate	N/A
Stabilizing Infill Type	N/A	Stabilizing Infill Rate	N/A
Underlayment Type	Rubber Mat 23mm	Measured Thickness	N/A
Substrate Type	4" compacted topsoil over Concrete	Depth	N/A
Test Date	01/30/2025	Sample Receipt Date	01/22/2025
Operator	ED/JD	Samples Submitted #	01
Sample Manufacturer	Unknown	Sample Manufacture Date	Unknown



TESTING TECHNOLOGY FOR SPORT

ASTM 1292-18e1 Report

3.1 – Test Results – Ambient – 72°

Condition	Dry
Ambient Temperature (F)	72.7
Reference Temperature (F)	72.0
Surface Temperature After Final Test (F)	72.6

Sample Reference Temp 72°F – Test Height 1			
	Drop Height (ft)	Gmax	HIC
Drop 1	9.00	105	590
Drop 2	9.00	124	763
Drop 3	9.00	140	908
Mean Results	9.00	132	836

Sample Reference Temp 72°F - Test Height 2			
	Drop Height (ft)	Gmax	HIC
Drop 1	10.00	130	834
Drop 2	10.00	136	882
Drop 3	10.00	148	996
Mean Results	10.00	142	939

Sample Reference Temp 72°F - Test Height 3			
	Drop Height (ft)	Gmax	HIC
Drop 1	11.00	142	1009
Drop 2	11.00	145	1034
Drop 3	11.00	154	1082
Mean Results	11.00	150	1058

3.2 – Test Results – Frozen – 25.0°

Condition	Frozen
Ambient Temperature (F)	72.6
Reference Temperature (F)	25.0
Surface Temperature After Final Test (F)	26.4

Sample Reference Temp 25°F – Test Height 1			
	Drop Height (ft)	Gmax	HIC
Drop 1	9.00	101	574
Drop 2	9.00	122	722
Drop 3	9.00	133	806
Mean Results	9.00	128	764

Sample Reference Temp 25°F - Test Height 2			
	Drop Height (ft)	Gmax	HIC
Drop 1	10.00	117	706
Drop 2	10.00	133	818
Drop 3	10.00	144	907
Mean Results	10.00	139	863

Sample Reference Temp 25°F - Test Height 3			
	Drop Height (ft)	Gmax	HIC
Drop 1	11.00	145	1003
Drop 2	11.00	158	1038
Drop 3	11.00	162	1090
Mean Results	11.00	160	1064

3.3 – Test Results – Hot – 120.0°

Condition	Hot
Ambient Temperature (F)	72.4
Reference Temperature (F)	120.0
Surface Temperature After Final Test (F)	119.3

Sample Reference Temp 120°F – Test Height 1			
	Drop Height (ft)	Gmax	HIC
Drop 1	9.00	136	877
Drop 2	9.00	142	901
Drop 3	9.00	150	988
Mean Results	9.00	146	945

Sample Reference Temp 120°F - Test Height 2			
	Drop Height (ft)	Gmax	HIC
Drop 1	10.00	134	855
Drop 2	10.00	140	928
Drop 3	10.00	148	1002
Mean Results	10.00	144	965

Sample Reference Temp 120°F - Test Height 3			
	Drop Height (ft)	Gmax	HIC
Drop 1	11.00	139	950
Drop 2	11.00	143	970
Drop 3	11.00	156	1101
Mean Results	11.00	150	1036

End of Report