



TÜV SÜD America Inc.
Product Safety Services
 47523 Clipper Drive
 Plymouth, MI 48170
 Phone: 734.455.4841

Surfacing Material Report – ASTM F1292-13

Client: <u>TigerSports Americas dba TigerTurf Americas</u>	Project No.: <u>72105807-9</u>
Manufacturer: <u>TigerSports Americas dba TigerTurf Americas</u>	Report Date: <u>9/22/2015</u>
Manufacturing Location: <u>Union City, GA</u>	Test Date: <u>9/21/15 and 9/22/15</u>
Phone: <u>(855) 773-6688</u>	Initial Test <input checked="" type="checkbox"/>
Commercial Name of product: <u>Diamond Light Spring - 30mm</u>	Follow up Test <input type="checkbox"/> Ref Job:
Date of Manufacture: <u>Unknown</u>	Sample Receipt Date: <u>9/16/2015</u>
No. of samples submitted: <u>3 - 18in. X 18in. Turf Systems</u>	Ambient Air Temperature: <u>22.0°C</u>
	Humidity: <u>38.0%</u>

Test Equipment:

Triax System 4: <input checked="" type="checkbox"/>	Environmental Chamber No.: <u>PLYP00101</u>
Triax System 1: <input type="checkbox"/>	Calibration Due Date: <u>6/22/2016</u>
Accelerometer ID: <u>PLYP00144</u>	Environmental Chamber No.: <u>PLYP00069</u>
Accelerometer Calibration Due Date: <u>3/11/2016</u>	Calibration Due Date: <u>6/22/2016</u>

Loose fill Material Sample Description:

Engineered Wood Fiber: <input type="checkbox"/>	Un-compacted Depth: <u>Unknown</u> Inches
Loose Fill Wood: <input type="checkbox"/>	
Rubber: <input type="checkbox"/>	
Sand: <input type="checkbox"/>	Compacted Depth: <u>4</u> Inches
Aggregate: <input checked="" type="checkbox"/>	
Other: <input type="checkbox"/>	

Turf Sample Description:

Diamond Light Spring Turf <input checked="" type="checkbox"/>	Total Thickness: <u>2.93in.</u>
Poly Pad <input checked="" type="checkbox"/>	Top Layer: <u>1.75in.</u>
Durafil Infill <input checked="" type="checkbox"/>	Base Layer: <u>30mm (1.18in.)</u>

Comments:

- 1.) Turf system received fully assembled in wooden boxes from Client.
- 2.) System: 1.75in. pile Diamond Light Spring Turf, infilled w/ 2.0lbs. per sq. ft. Durafil infill, over 30mm (1.18in.) Poly Pad, overlaying 4in. compacted aggregate (unknown un-compacted depth). Total system depth/thickness of approximately 6.93in.

The above described sample was tested at : 5 Ft.

The results reported herein reflect the performance of the above 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. The following data sheet provides an accurate representation of the test results. Compliance with this Standard does not constitute product certification.

Sample in compliance with ASTM F1292-13 at the temperature and rating specified? Yes No

Signature: Timothy Franckia Title: Project Coordinator Date: 9/22/15

Reviewed by: Jim Gotsch Title: Product Safety Engineer Date: 9/22/15

Client: **TigerSports Americas dba TigerTurf Americas**

Project No.: **72105807-9**

Manufacturer: **TigerSports Americas dba TigerTurf Americas**

Test Date: **9/21/15 and 9/22/15**

Drop	Specified Impact Height (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	5	126	557	18.0	5.037	111	454	18.0	5.037	134	624	18.1	5.093
2	5	140	645	18.0	5.037	140	631	18.1	5.093	145	681	18.1	5.093
3	5	158	756	18.1	5.093	134	605	18.1	5.093	161	778	18.1	5.093
Average		149	700.5			137	618			153	729.5		
Measured Surface Temperature		(-6°C)	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			49°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			

Drop	One foot over (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1					0.000				0.000				0.000
2					0.000				0.000				0.000
3					0.000				0.000				0.000
Average		0	0			0	0			0	0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			°C	Max. Change from reference ± 3°C, (5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:													

Drop	One foot under (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1					0.000				0.000				0.000
2					0.000				0.000				0.000
3					0.000				0.000				0.000
Average		0	0			0	0			0	0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			°C	Max. Change from reference ± 3°C, (5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:													



America



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Surfacing Material Report – ASTM F1292-13

Client: <u>TigerSports Americas dba TigerTurf Americas</u>	Project No.: <u>72105807-11</u>
Manufacturer: <u>TigerSports Americas dba TigerTurf Americas</u>	Report Date: <u>9/22/2015</u>
Manufacturing Location: <u>Union City, GA</u>	Test Date: <u>9/21/15 and 9/22/15</u>
Phone: <u>(855) 773-6688</u>	Initial Test <input checked="" type="checkbox"/>
Commercial Name of product: <u>Diamond Light Spring - 60mm</u>	Follow up Test <input type="checkbox"/> Ref Job:
Date of Manufacture: <u>Unknown</u>	Sample Receipt Date: <u>9/16/2015</u>
No. of samples submitted: <u>3 - 18in. X 18in. Turf Systems</u>	Ambient Air Temperature: <u>22.0°C</u>
	Humidity: <u>38.0%</u>

Test Equipment:

Triax System 4: <input checked="" type="checkbox"/>	Environmental Chamber No.: <u>PLYP00101</u>
Triax System 1: <input type="checkbox"/>	Calibration Due Date: <u>6/22/2016</u>
Accelerometer ID: <u>PLYP00144</u>	Environmental Chamber No.: <u>PLYP00069</u>
Accelerometer Calibration Due Date: <u>3/11/2016</u>	Calibration Due Date: <u>6/22/2016</u>

Loose fill Material Sample Description:

Engineered Wood Fiber: <input type="checkbox"/>	Un-compacted Depth: <u>Unknown</u> Inches
Loose Fill Wood: <input type="checkbox"/>	
Rubber: <input type="checkbox"/>	
Sand: <input type="checkbox"/>	Compacted Depth: <u>4</u> Inches
Aggregate: <input checked="" type="checkbox"/>	
Other: <input type="checkbox"/>	

Turf Sample Description:

Diamond Light Spring Turf <input checked="" type="checkbox"/>	Total Thickness: <u>4.11in.</u>
Poly Pad <input checked="" type="checkbox"/>	Top Layer: <u>1.75in.</u>
Durafil Infill <input checked="" type="checkbox"/>	Base Layer: <u>60mm (2.36in.)</u>

Comments:

- 1.) Turf system received fully assembled in wooden boxes from Client.
- 2.) System: 1.75in. pile Diamond Light Spring Turf, infilled w/ 2.0lbs. per sq. ft. Durafil infill, over 60mm (2.36in.) Poly Pad, overlaying 4in. compacted aggregate (unknown un-compacted depth). Total system depth/thickness of appoximately 8.11in.

The above described sample was tested at : 7 Ft.

The results reported herein reflect the performance of the above 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. The following data sheet provides an accurate representation of the test results. Compliance with this Standard does not constitute product certification.

Sample in compliance with ASTM F1292-13 at the temperature and rating specified? Yes No

Signature: Timothy Franklin Title: Project Coordinator Date: 9/22/15

Reviewed by: [Signature] Title: Product Safety Engineer Date: 9/22/15

Client: TigerSports Americas dba TigerTurf Americas

Project No.: 72105807-11

Manufacturer: TigerSports Americas dba TigerTurf Americas

Test Date: 9/21/15 and 9/22/15

Drop	Specified Impact Height (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)				
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	
1	7	112	635	21.3	7.053	102	515	21.3	7.053	110	537	21.4	7.119	
2	7	124	726	21.3	7.053	116	611	21.3	7.053	123	613	21.4	7.119	
3	7	131	757	21.4	7.119	121	654	21.4	7.119	126	653	21.4	7.119	
Average		127.5	741.5			118.5	632.5			124.5	633			
Measured Surface Temperature		(-6°C)	Max. Change from reference + 5°C, (5°F)				23°C	Max. Change from reference ± 3°C, (5°F)				49°C	Max. Change from reference -3°C, (-5°F)	
Sample Condition:		DRY				DRY				DRY				

Drop	One foot over (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)				
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	
1					0.000				0.000				0.000	
2					0.000				0.000				0.000	
3					0.000				0.000				0.000	
Average		0	0			0	0			0	0			
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)				°C	Max. Change from reference ± 3°C, (5°F)				°C	Max. Change from reference -3°C, (-5°F)	
Sample Condition:														

Drop	One foot under (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)				
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	
1					0.000				0.000				0.000	
2					0.000				0.000				0.000	
3					0.000				0.000				0.000	
Average		0	0			0	0			0	0			
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)				°C	Max. Change from reference ± 3°C, (5°F)				°C	Max. Change from reference -3°C, (-5°F)	
Sample Condition:														



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