TÜV SÜD America Inc.
Product Safety Services
1755 Atlantic Blvd.
Auburn Hills, MI 48326
Phone: (616) 546-4600

IPEMA Impact Attenuation Report – ASTM F1292-22

Participant: Polyloom dba Tencate Grass
Main Office Address: 1131 Broadway St.
Dayton, TN 37321
Phone: 423.413.7028
Manufacturing Location ID: Dayton, TN
Commercial Name of product: Diamond Light (C000064-66)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

TUV Report No.: 72186757-3a
Report Date: 2/9/2023
Test Date: 2/9/2023
Selection: ☐ Initial: ☑
Follow up ☐ Ref Job:
Sample Receipt Date: 1/27/2023
Ambient Air Temperature: 25.6 °C
Humidity: 24 %

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☐
Alpha Automation, Triax, TUV System 7: ☑
Accelerometer ID: PLYP00226
Accelerometer Calibration Date: 7/18/2022

Environmental Chamber No.: PLYP00069
Calibration Due Date: 8/30/2023
Environmental Chamber No.: AE-029
Calibration Due Date: 8/30/2023

Loose Fill Material Sample Description:

Engineered Wood Fiber: ☐
Loose Fill Wood: ☐
Rubber Nuggets: ☐
Rubber Buffings: ☐
Sand: ☐
Gravel: ☐
Other: ☐

Un-compacted Depth: _____ Inches

Compacted Depth: _____ Inches

Unitary Sample Description:

Tiles: ☐
Poured in Place: ☐
Other: ☐

Total Thickness:
Top Layer:
Base Layer:

Turf System Sample Description:

Turf: ☑
Pad: ☑
Aggregate: ☑
Infill: ☑

Turf Pile Height: 1.8125 Inches
Pad Thickness: 2.0 Inches
Aggregate: 4.0 Inches
Infill Amount: 2.0 Lbs./Sq. Ft.
Infill Type: envirofill

Comments:
1.) Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces of turf; fifty five (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 inch intersection pad, and 150lbs infill.
2.) Diamond Light (1.8125in. Pile Height)– infilled with 2.0 lbs per sq. ft. of Envirofill infill (grain size #12/20 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness of 7.8125in.
3.) Least Favorable Impact Location was Seam Turf/Intersection Pad.
4.) Last Favorable Impact Location report is 72186757-3b

The maximum critical fall height of the above described sample was determined to be: 8 **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.

Sample in compliance with ASTM F1292-22 at the temperature and rating specified? **Yes** ☑ **No** ☐

Signature: Tim Lockstein Title: Project Engineering Technician Date: 2/9/2023

Reviewed by: Timothy Fowler Title: Project Engineering Technician Date: 2/22/2023

Participant: Polyloom dba Tencate Grass

TUV Report No: 72186757-3a

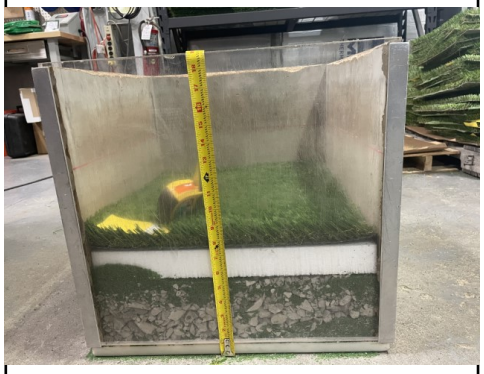
Manufacturing Location ID: Dayton, TN

Test Date: 2/9/2023

Drop	Critical Fall Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8	115	700	22.8	8.08	105	613	22.7	8.01	135	835	22.8	8.08
2	8	120	738	22.8	8.08	123	773	22.8	8.08	116	716	22.7	8.01
3	8	116	700	22.8	8.08	128	773	22.8	8.08	127	768	22.8	8.08
Average		118.0	719.0			125.5	773.0			121.5	742.0		
Measured Surface Temperature		-4°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 -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	9	123	836	24.2	9.10	153	1066	24.2	9.10	156	1058	24.3	9.18
2	9	126	869	24.1	9.03	158	1139	24.2	9.10	162	1079	24.2	9.10
3	9	125	849	24.2	9.10	156	1086	24.2	9.10	166	1111	24.2	9.10
Average		125.5	859.0			157.0	1112.5			164.0	1095.0		
Measured Surface Temperature		-4°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 under (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	106	619	21.4	7.12	117	724	21.4	7.12	101	584	21.4	7.12
2	7	113	658	21.5	7.19	117	676	21.5	7.19	104	575	21.5	7.19
3	7	115	659	21.4	7.12	114	649	21.5	7.19	104	578	21.5	7.19
Average		114.0	658.5			115.5	662.5			104.0	576.5		
Measured Surface Temperature		-4°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			



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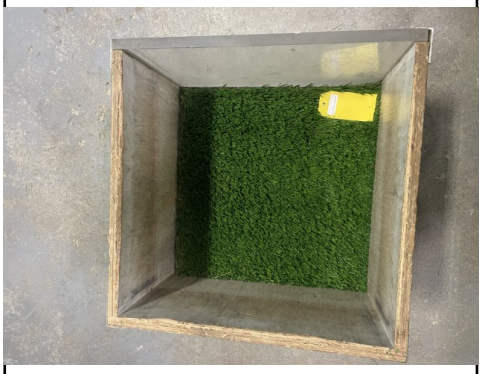

TÜV SÜD America Inc.
Product Safety Services
1755 Atlantic Blvd.
Auburn Hills, MI 48326
Phone: (616) 546-4600

IPEMA Surfacing Material Report - Least Favorable Impact Location – ASTM F1292-22

Participant: Polyloom dba Tencate Grass
Main Office Address: 1131 Broadway St.
Dayton, TN 37321
Phone: 423.413.7028
Manufacturing Location ID: Dayton, TN
Commercial Name of Product: Diamond Light (C000064-66)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

Project No.: 72186757-3b
Report Date: 2/9/2023
Test Date: 2/9/2023
Selection: ☐ Initial Test: ☑
Follow up Test: ☐ **Ref Job:**
Sample Receipt Date: 1/27/2023
Ambient Air Temperature: 25.1**°C**
Humidity: 24 **%**

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☐
Alpha Automation, Triax, TUV System 7: ☑
Accelerometer ID: PLYP00226
Accelerometer Calibration Date: 7/18/2022

Environmental Chamber No.: PLYP00069
Calibration Due Date: 8/30/2023
Environmental Chamber No. AE-029
Calibration Due Date: 8/30/2023

Unitary Sample Layer Description:

Tiles: ☐
Poured in Place: ☐
Turf: ☑
Other: ☐

Total Thickness: 7.8125in.
Top Layer: See Comments
Base Layer: See Comments

Determine Least Favorable Impact Location: The highest percentage (%) of maximum allowable value, based on g-max or HIC, as tested at the locations indicated on Pages 2 and 3.

	Impact Location:	**Reference Temperature:**
Least Favorable Impact Location was determined at:	Seam Turf/Intersection Pad	**23°C**

Comments:
1.) Samples tested in laboratory environment, overlying poured concrete floor.
2.) Calculate the average g-max and HIC scores by averaging results from the second and third impacts.
3.) After Least Favorable Impact Location is determined at 23°C, remaining testing will be completed at temperatures 49°C and -6°C at that location.
4.) Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces of turf; fifty five (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 inch intersection pad, and 150lbs infill.
5.) Diamond Light (1.8125in. Pile Height)– infilled with 2.0 lbs per sq. ft. of Envirofill infill (grain size #12/20 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate.
6.) Maximum Critical Fall Height report is 72186757-3a

The above described sample was tested at : 8 **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.

Sample in compliance with ASTM F1292-22 at the temperature and rating specified? **Yes** ☑ **No** ☐

Signature: Tim Lockstein Title: Project Safety Engineer Date: 2/9/2023

Reviewed by: Timothy Franklin Title: Project Engineering Technician Date: 2/22/2023

Participant: Polyloom dba Tencate Grass

Project No.: 72186757-3b

Manufacturing Location ID: Dayton, TN

Test Date: 2/9/2023

Impact Location: Center Turf/Center Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8				0.00	108	679	22.9	8.15				0.00
2	8				0.00	114	682	22.9	8.15				0.00
3	8				0.00	125	757	22.9	8.15				0.00
Average		0.0	0.0			119.5	719.5			0.0	0.0		
Measured Surface Temperature		-4°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			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	59.8%	**HIC:**	72.0%				

Impact Location: Center Turf/Seam Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8				0.00	113	659	22.8	8.08				0.00
2	8				0.00	116	677	22.8	8.08				0.00
3	8				0.00	127	749	22.8	8.08				0.00
Average		0.0	0.0			121.5	713.0			0.0	0.0		
Measured Surface Temperature		-4°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			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	60.8%	**HIC:**	71.3%				

Impact Location: Center Turf/Intersection Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8				0.00	103	596	22.7	8.01				0.00
2	8				0.00	119	698	22.8	8.08				0.00
3	8				0.00	126	727	22.8	8.08				0.00
Average		0.0	0.0			122.5	712.5			0.0	0.0		
Measured Surface Temperature		-4°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			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	61.3%	**HIC:**	71.3%				

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Participant: Polyloom dba Tencate Grass

Project No.: 72186757-3b

Manufacturing Location ID: Dayton, TN

Test Date: 2/9/2023

Impact Location: Seam Turf/Center Pad

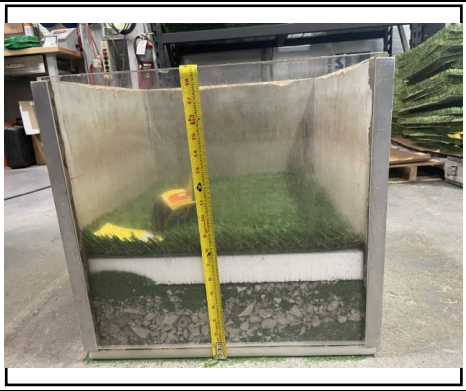
Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	8				0.00	106	657	22.7	8.01				0.00
2	8				0.00	117	717	22.8	8.08				0.00
3	8				0.00	121	758	22.8	8.08				0.00
Average		0.0	0.0			119.0	737.5			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	59.5%	**HIC:**	73.8%				

Impact Location: Seam Turf/Seam Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8				0.00	114	705	22.7	8.01				0.00
2	8				0.00	130	796	22.7	8.01				0.00
3	8				0.00	125	744	22.8	8.08				0.00
Average		0.0	0.0			127.5	770.0			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	63.8%	**HIC:**	77.0%				

Impact Location: Seam Turf/Intersection Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	8	115	700	22.8	8.08	105	613	22.7	8.01	135	835	22.8	8.08
2	8	120	738	22.8	8.08	123	773	22.8	8.08	116	716	22.7	8.01
3	8	116	700	22.8	8.08	128	773	22.8	8.08	127	768	22.8	8.08
Average		118.0	719.0			125.5	773.0			116.0	742.0		
Measured Surface Temperature		-4°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			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	62.8%	**HIC:**	77.3%				



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IPEMA Impact Attenuation Report – ASTM F1292-22

Participant: Polyloom dba Tencate Grass
Main Office Address: 1131 Broadway St.
Dayton, TN 37321
Phone: 423.413.7028
Manufacturing Location ID: Dayton, TN
Commercial Name of product: Diamond Light (C000064-66)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

TUV Report No.: 72186757-8a
Report Date: 2/20/2023
Test Date: 2/20/2023
Selection: ☐ Initial: ☑
Follow up ☐ Ref Job:
Sample Receipt Date: 1/27/2023
Ambient Air Temperature: 22.3 °C
Humidity: 24 %

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☐
Alpha Automation, Triax, TUV System 7: ☑
Accelerometer ID: PLYP00226
Accelerometer Calibration Date: 7/18/2022

Environmental Chamber No.: PLYP00069
Calibration Due Date: 8/30/2023
Environmental Chamber No.: AE-029
Calibration Due Date: 8/30/2023

Loose Fill Material Sample Description:

Engineered Wood Fiber: ☐
Loose Fill Wood: ☐
Rubber Nuggets: ☐
Rubber Buffings: ☐
Sand: ☐
Gravel: ☐
Other: ☐

Un-compacted Depth: _____ Inches

Compacted Depth: _____ Inches

Unitary Sample Description:

Tiles: ☐
Poured in Place: ☐
Other: ☐

Total Thickness:
Top Layer:
Base Layer:

Turf System Sample Description:

Turf: ☑
Pad: ☑
Aggregate: ☑
Infill: ☑

Turf Pile Height: 1.8125 Inches
Pad Thickness: 1.0 Inches
Aggregate: 4.0 Inches
Infill Amount: 2.0 Lbs./Sq. Ft.
Infill Type: envirofill

Comments:

1.) Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces of turf; fifty five (55) 1.0 inch center pads, twenty seven (27) 1.0 inch seamed pads, twenty seven (27) 1.0 inch intersection pad, and 150lbs infill.
2.) Diamond Light (1.8125in Pile Height)– infilled with 2.0 lbs per sq. ft. of Envirofill infill (grain size #12/20 mesh) – over 1.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness of 6.8125in.
3.) Least Favorable Impact Location was Center Turf/Intersection Pad.
4.) Last Favorable Impact Location report is 72186757-8b

The maximum critical fall height of the above described sample was determined to be: 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.

Sample in compliance with ASTM F1292-22 at the temperature and rating specified? **Yes** ☑ **No** ☐

Signature: Patrick Ashley Title: Project Engineering Technician Date: 2/20/2023

Reviewed by: Timothy Fowlkes Title: Project Engineering Technician Date: 2/22/2023

Participant: Polyloom dba Tencate Grass

TUV Report No: 72186757-8a

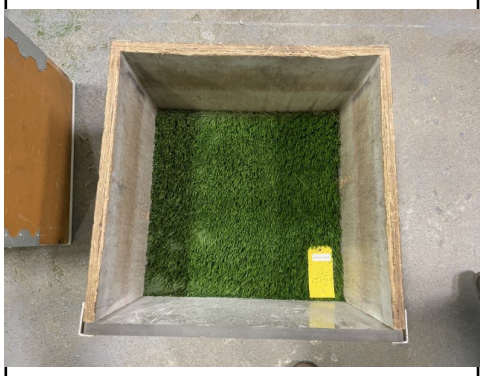
Manufacturing Location ID: Dayton, TN

Test Date: 2/20/2023

Drop	Critical Fall Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	139	602	18.1	5.09	126	532	18.0	5.04	172	821	18.1	5.09
2	5	134	607	18.1	5.09	147	670	18.1	5.09	183	890	18.1	5.09
3	5	147	655	18.1	5.09	166	771	18.1	5.09	192	955	18.1	5.09
Average		140.5	631.0			156.5	720.5			187.5	922.5		
Measured Surface Temperature		-4°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 -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	6	172	877	19.8	6.09	208	1157	19.8	6.09	232	1362	19.8	6.09
2	6	200	1069	19.8	6.09	184	982	19.8	6.09	243	1469	19.8	6.09
3	6	187	1050	19.8	6.09	209	1159	19.8	6.09	234	1332	19.8	6.09
Average		193.5	1059.5			196.5	1070.5			238.5	1400.5		
Measured Surface Temperature		-4°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			48°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			

Drop	One foot under (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	4	83	282	16.1	4.03	96	327	16.2	4.08	101	337	16.1	4.03
2	4	98	355	16.2	4.08	122	448	16.2	4.08	125	469	16.2	4.08
3	4	104	378	16.2	4.08	131	492	16.2	4.08	144	555	16.2	4.08
Average		101.0	366.5			126.5	470.0			134.5	512.0		
Measured Surface Temperature		-3°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			



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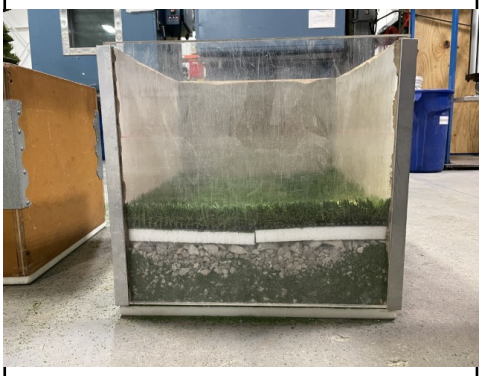

TÜV SÜD America Inc.
Product Safety Services
1755 Atlantic Blvd.
Auburn Hills, MI 48326
Phone: (616) 546-4600

IPEMA Surfacing Material Report - Least Favorable Impact Location – ASTM F1292-22

Participant: Polyloom dba Tencate Grass
Main Office Address: 1131 Broadway St.
Dayton, TN 37321
Phone: 423.413.7028
Manufacturing Location ID: Dayton, TN
Commercial Name of Product: Diamond Light (C000064-66)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

Project No.: 72186757-8b
Report Date: 2/20/2023
Test Date: 2/20/2023
Selection: ☐ Initial Test: ☑
Follow up Test: ☐ **Ref Job:**
Sample Receipt Date: 1/27/2023
Ambient Air Temperature: 22.3**°C**
Humidity: 24 **%**

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☐
Alpha Automation, Triax, TUV System 7: ☑
Accelerometer ID: PLYP00226
Accelerometer Calibration Date: 7/18/2022

Environmental Chamber No. PLYP00069
Calibration Due Date: 8/30/2023
Environmental Chamber No. AE-029
Calibration Due Date: 8/30/2023

Unitary Sample Layer Description:

Tiles: ☐
Poured in Place: ☐
Turf: ☑
Other: ☐

Total Thickness: 6.8125in.
Top Layer: See Comments
Base Layer: See Comments

Determine Least Favorable Impact Location: The highest percentage (%) of maximum allowable value, based on g-max or HIC, as tested at the locations indicated on Pages 2 and 3.

	Impact Location:	**Reference Temperature:**
Least Favorable Impact Location was determined at:	Center Turf/Intersection Pad	**23°C**

Comments:
1.) Samples tested in laboratory environment, overlying poured concrete floor.
2.) Calculate the average g-max and HIC scores by averaging results from the second and third impacts.
3.) After Least Favorable Impact Location is determined at 23°C, remaining testing will be completed at temperatures 49°C and -6°C at that location.
4.) Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces of turf; fifty five (55) 1.0 inch center pads, twenty seven (27) 1.0 inch seamed pads, twenty seven (27) 1.0 inch intersection pad, and 150lbs infill.
5.) Diamond Light (1.8125in Pile Height) – infilled with 2.0 lbs per sq. ft. of Envirofill infill (grain size #12/20 mesh) – over 1.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate.
6.) Determine Critical Fall Height report 72186757-8a.

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.

Sample in compliance with ASTM F1292-22 at the temperature and rating specified? **Yes** ☑ **No** ☐

Signature: Patrick Ashley Title: Project Engineering Technician Date: 2/20/2023

Reviewed by: Timothy Franklin Title: Project Engineering Technician Date: 2/22/2023

Participant: Polyloom dba Tencate Grass

Project No.: 72186757-8b

Manufacturing Location ID: Dayton, TN

Test Date: 2/20/2023

Impact Location: Center Turf/Intersection of Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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	139	602	18.1	5.09	126	532	18.0	5.04	172	821	18.1	5.09
2	5	134	607	18.1	5.09	147	670	18.1	5.09	183	890	18.1	5.09
3	5	147	655	18.1	5.09	166	771	18.1	5.09	192	955	18.1	5.09
Average		140.5	631.0			156.5	720.5			187.5	922.5		
Measured Surface Temperature		-4°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			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	78.3%	**HIC:**	72.1%				

Impact Location: Center Turf/Seam Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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				0.00	133	559	18.0	5.04				0.00
2	5				0.00	150	679	18.0	5.04				0.00
3	5				0.00	153	697	18.0	5.04				0.00
Average		0.0	0.0			151.5	688.0			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	75.8%	**HIC:**	68.8%				

Impact Location: Center Turf/Center Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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				0.00	116	483	18.0	5.04				0.00
2	5				0.00	140	635	18.0	5.04				0.00
3	5				0.00	146	661	18.1	5.09				0.00
Average		0.0	0.0			143.0	648.0			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	71.5%	**HIC:**	64.8%				

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Participant: Polyloom dba Tencate Grass

Project No.: 72186757-8b

Manufacturing Location ID: Dayton, TN

Test Date: 2/20/2023

Impact Location: Seam Turf/Center Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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				0.00	98	409	17.9	4.98				0.00
2	5				0.00	110	466	18.0	5.04				0.00
3	5				0.00	125	545	18.0	5.04				0.00
Average		0.0	0.0			117.5	505.5			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	58.8%	**HIC:**	50.6%				

Impact Location: Seam Turf/Seam Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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					0.00	112	496	18.0	5.04				0.00
2					0.00	131	593	18.0	5.04				0.00
3					0.00	142	640	18.0	5.04				0.00
Average		0.0	0.0			136.5	616.5			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	68.3%	**HIC:**	61.7%				

Impact Location: Seam Turf/Intersection Pad

Drop	Specified Impact Height (Ft.)	Reference Temperature -4°C, (25°F)				Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°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					0.00	107	477	18.0	5.04				0.00
2					0.00	129	588	18.0	5.04				0.00
3					0.00	130	607	18.0	5.04				0.00
Average		0.0	0.0			129.5	597.5			0.0	0.0		
Measured Surface Temperature		°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (±5°F)			°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			
Percentage (%) of maximum allowable values (g-max and HIC):						**G-Max:**	64.8%	**HIC:**	59.8%