

**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: Everglade-Sierra Pro (C000070-71-73-76)

Date of Manufacture: Unknown

No. of samples submitted: See Comments

TUV Report No.: 72186757-4a

Report Date: 2/10/2023

Test Date: 2/10/2023

Selection: ☐Initial: ☒Follow up: ☐ Ref Job:

Sample Receipt Date: 1/27/2023

Ambient Air Temperature: 24.4 °C

Humidity: 25 %

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: 1.75 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.) Everglade-Sierra Pro (1.75in. 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 7.75in.
 3.) Least Favorable Impact Location was Center Turf/Center Pad
 4.) Last Favorable Impact Location report is 72186757-4b

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 LocksteinTitle: Project Engineering technicianDate: 2/10/2023Reviewed by: Timothy FowlerTitle: Project Engineering TechnicianDate: 2/22/2023

Participant: Polyloom dba Tencate GrassTUV Report No: 72186757-4aManufacturing Location ID: Dayton, TNTest Date: 2/10/2023

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	123	772	22.8	8.08	129	800	22.9	8.15	151	966	22.9	8.15
2	8	129	825	22.8	8.08	136	853	22.9	8.15	155	986	22.9	8.15
3	8	136	870	22.8	8.08	137	874	22.9	8.15	135	840	22.8	8.08
Average		132.5	847.5			136.5	863.5			145.0	913.0		
Measured Surface Temperature		-4°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference <u>+3</u> °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	869	24.2	9.10	146	1013	24.3	9.18	174	1210	24.3	9.18
2	9	129	905	24.3	9.18	163	1146	24.3	9.18	160	1091	24.2	9.10
3	9	142	987	24.3	9.18	162	1150	24.3	9.18	176	1252	24.2	9.10
Average		135.5	946.0			162.5	1148.0			168.0	1171.5		
Measured Surface Temperature		-4°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference <u>+3</u> °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	103	609	21.4	7.12	96	537	21.4	7.12	97	502	21.5	7.19
2	7	113	653	21.4	7.12	101	561	21.5	7.19	107	567	21.5	7.19
3	7	113	650	21.4	7.12	104	570	21.4	7.12	125	700	21.5	7.19
Average		113.0	651.5			102.5	565.5			116.0	633.5		
Measured Surface Temperature		-4°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference <u>+3</u> °C, (5°F)			49°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			



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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: Everglade-Sierra Pro (C000070-71-73-76)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

Project No.: 72186757-4b
Report Date: 2/10/2023
Test Date: 2/10/2023
Selection: ☐ Initial Test: ☒
Follow up Test: ☐ Ref Job: ☐
Sample Receipt Date: 1/27/2023
Ambient Air Temperature: 24.4°C
Humidity: 25%

Test Equipment:

Alpha Automation, Triax, TUV System 5: ☐ Environmental Chamber No.: PLYP00069
Alpha Automation, Triax, TUV System 7: ☒ Calibration Due Date: 8/30/2023
Accelerometer ID: PLYP00226 Environmental Chamber No.: AE-029
Accelerometer Calibration Date: 7/18/2022 Calibration Due Date: 8/30/2023

Unitary Sample Layer Description:

Tiles: ☐ Total Thickness: 7.75in.
Poured in Place: ☐ Top Layer: See Comments
Turf: ☒ Base Layer: See Comments
Other: ☐

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.

Least Favorable Impact Location was determined at: Impact Location: Center Turf/Center Pad Reference Temperature: 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.) Everglade-Sierra Pro (1.75in. 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.) Determine Critical Fall Height Report is 72186757-4a.

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 Engineering Technician

Date: 2/10/2023

Reviewed by: Timothy Foubia

Title: Project Engineering Technician

Date: 2/22/2023

Participant: Polyloom dba Tencate GrassProject No.: 72186757-4bManufacturing Location ID: Dayton, TNTest Date: 2/10/2023**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	123	772	22.8	8.08	129	800	22.9	8.15	151	966	22.9	8.15
2	8	129	825	22.8	8.08	136	853	22.9	8.15	155	986	22.9	8.15
3	8	136	870	22.8	8.08	137	874	22.9	8.15	135	840	22.8	8.08
Average		132.5	847.5			136.5	863.5			145.0	913.0		
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:	68.3%	HIC:	86.4%				

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	693	22.8	8.08				0.00	
2	8				0.00	130	814	22.8	8.08				0.00	
3	8				0.00	128	791	22.8	8.08				0.00	
Average		0.0	0.0			129.0	802.5			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:	64.5%	HIC:	80.3%					

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	110	663	22.8	8.08				0.00	
2	8				0.00	125	776	22.8	8.08				0.00	
3	8				0.00	130	792	22.8	8.08				0.00	
Average		0.0	0.0			127.5	784.0			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:	78.4%					



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Participant: Polyloom dba Tencate GrassProject No.: 72186757-4bManufacturing Location ID: Dayton, TNTest Date: 2/10/2023**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	110	686	22.8	8.08				0.00	
2	8				0.00	115	716	22.8	8.08				0.00	
3	8				0.00	120	755	22.8	8.08				0.00	
Average		0.0	0.0			117.5	735.5			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:	73.6%					

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	108	669	22.8	8.08				0.00	
2					0.00	122	769	22.7	8.01				0.00	
3					0.00	126	789	22.7	8.01				0.00	
Average		0.0	0.0			124.0	779.0			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:	62.0%	HIC:	77.9%					

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	112	679	22.7	8.01				0.00	
2					0.00	107	641	22.8	8.08				0.00	
3					0.00	117	711	22.7	8.01				0.00	
Average		0.0	0.0			112.0	676.0			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:	56.0%	HIC:	67.6%					



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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: Everglade-Sierra Pro (C000070-71-73-76)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

TUV Report No.: 72186757-9a

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: 22.9 °C

Humidity: 26 %

Test Equipment:Alpha Automation, Triax, TUV System 5: ☐

Environmental Chamber No.: PLYP00069

Alpha Automation, Triax, TUV System 7: ☒

Calibration Due Date: 8/30/2023

Accelerometer ID: PLYP00226

Environmental Chamber No.: AE-029

Accelerometer Calibration Date: 7/18/2022

Calibration Due Date: 8/30/2023

Loose Fill Material Sample Description:Engineered Wood Fiber: ☐

Un-compacted Depth: _____ Inches

Loose Fill Wood: ☐Rubber Nuggets: ☐Rubber Buffings: ☐Sand: ☐

Compacted Depth: _____ Inches

Gravel: ☐Other: ☐**Unitary Sample Description:**Tiles: ☐

Total Thickness: _____

Poured in Place: ☐

Top Layer: _____

Other: ☐

Base Layer: _____

Turf System Sample Description:Turf: ☒

Turf Pile Height: 1.75 Inches

Pad: ☒

Pad Thickness: 1.0 Inches

Aggregate: ☒

Aggregate: 4.0 Inches

Infill: ☒

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.) Everglade-Sierra Pro (1.75in 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 6.75in.
3.) Least Favorable Impact Location was Center Turf/Intersection of Pad.
4.) Last Favorable Impact Location report is 72186757-9b

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 AshleyTitle: Project Engineering TechnicianDate: 2/20/2023Reviewed by: Timothy FoubiaTitle: Project Engineering TechnicianDate: 2/22/2023

Participant: Polyloom dba Tencate GrassTUV Report No: 72186757-9aManufacturing Location ID: Dayton, TNTest 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	145	692	18.0	5.04	120	503	18.0	5.04	141	629	18.1	5.09
2	5	156	742	18.1	5.09	150	662	18.1	5.09	162	756	18.1	5.09
3	5	155	705	18.1	5.09	153	689	18.1	5.09	163	749	18.1	5.09
Average		155.5	723.5			151.5	675.5			162.5	752.5		
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	197	1069	19.8	6.09	183	953	19.8	6.09	206	1133	19.8	6.09
2	6	202	1112	19.8	6.09	193	1034	19.8	6.09	207	1128	19.8	6.09
3	6	212	1177	19.8	6.09	199	1122	19.8	6.09	217	1208	19.8	6.09
Average		207.0	1144.5			196.0	1078.0			212.0	1168.0		
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	4	86	298	16.1	4.03	95	346	16.2	4.08	93	310	16.1	4.03
2	4	100	367	16.1	4.03	124	460	16.2	4.08	113	412	16.1	4.03
3	4	105	388	16.2	4.08	126	470	16.2	4.08	122	452	16.1	4.03
Average		102.5	377.5			125.0	465.0			117.5	432.0		
Measured Surface Temperature		-3°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference <u>+3</u> °C, (5°F)			48°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		Dry				Dry				Dry			



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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: Everglade-Sierra Pro (C000070-71-73-76)
Date of Manufacture: Unknown
No. of samples submitted: See Comments

Project No.: 72186757-9b

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: 22.9°C

Humidity: 26%

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: ☐

Total Thickness: 6.75in.

Poured in Place: ☐

Top Layer: See Comments

Turf: ☒

Base Layer: See Comments

Other: ☐

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.

**Least Favorable Impact
Location was determined at:**

Impact Location:Center Turf/Intersection
of Pad**Reference Temperature:**

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.) Everglade-Sierra Pro (1.75in 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 72186757-9a.

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 AshleyTitle: Project Engineering TechnicianDate: 2/20/2023Reviewed by: Timothy FranklinTitle: Project Engineering TechnicianDate: 2/22/2023

Participant: Polyloom dba Tencate GrassProject No.: 72186757-9bManufacturing Location ID: Dayton, TNTest 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	145	692	18.0	5.04	120	503	18.0	5.04	141	629	18.1	5.09
2	5	156	742	18.1	5.09	150	662	18.1	5.09	162	756	18.1	5.09
3	5	155	705	18.1	5.09	153	689	18.1	5.09	163	749	18.1	5.09
Average		155.5	723.5			151.5	675.5			162.5	752.5		
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:	75.8%	HIC:	67.6%				

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	121	511	18.0	5.04				0.00	
2	5				0.00	145	657	18.1	5.09				0.00	
3	5				0.00	137	596	18.1	5.09				0.00	
Average		0.0	0.0			141.0	626.5			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:	70.5%	HIC:	62.7%					

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	113	481	18.0	5.04				0.00	
2	5				0.00	145	658	18.0	5.04				0.00	
3	5				0.00	140	637	18.1	5.09				0.00	
Average		0.0	0.0			142.5	647.5			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:	71.3%	HIC:	64.8%					



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Participant: Polyloom dba Tencate GrassProject No.: 72186757-9bManufacturing Location ID: Dayton, TNTest 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	112	496	18.0	5.04				0.00	
2	5				0.00	135	612	18.1	5.09				0.00	
3	5				0.00	150	705	18.1	5.09				0.00	
Average		0.0	0.0			142.5	658.5			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:	71.3%	HIC:	65.9%					

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	111	493	18.0	5.04				0.00	
2					0.00	126	574	18.1	5.09				0.00	
3					0.00	122	528	18.1	5.09				0.00	
Average		0.0	0.0			124.0	551.0			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:	62.0%	HIC:	55.1%					

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	115	519	18.0	5.04				0.00	
2					0.00	135	611	18.1	5.09				0.00	
3					0.00	142	654	18.1	5.09				0.00	
Average		0.0	0.0			138.5	632.5			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:	69.3%	HIC:	63.3%					

