America

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 Tenca	te Grass	TU'	V Report No.: 72186757-4a
Main Office Address: 1131 Broadway St.			Report Date: 2/10/2023
Dayton, TN 37321 Phone: 423.413.7028		Selection:	Test Date: <u>2/10/2023</u> Initial:
Manufacturing Location ID:Dayton, TN			Follow up Ref Job:
Commercial Name of product:Everglade-Sierra Pro	(C000070	-71-73-76) Sample I	Receipt Date: 1/27/2023
Date of Manufacture: <u>Unknown</u>		Ambient A	r Temperature: <u>24.4</u> °C
No. of samples submitted:See Comments	т	est Equipment:	Humidity: 25 %
Alpha Automation, Triax, TUV System 5:			Chamber No.: PLYP00069
Alpha Automation, Triax, TUV System 7:	$\overline{\checkmark}$	Calibrati	on Due Date: 8/30/2023
Accelerometer ID:	PLYP00226	Environmental	Chamber No.: AE-029
Accelerometer Calibration Date:	7/18/2022	Calibrati	on Due Date: 8/30/2023
Loo	se Fill Ma	aterial Sample Description:	
Engineered Wood Fiber:		Un-compacted Depth:	Inches
Rubber Nuggets:			
Rubber Buffings:			
		Compacted Depth:	Inches
Sand:			
Gravel:			
Other:			
		Sample Description:	
Tiles:		Tota	I Thickness:
Poured in Place:	Ц		Top Layer:
Other:			Base Layer:
-		em Sample Description:	
Turf:	$\checkmark$		f Pile Height: <u>1.75</u> Inches
Pad:	$\checkmark$	Pa	ad Thickness: 2.0 Inches
Aggregate:	$\checkmark$		Aggregate: 4.0 Inches
Infill:	$\checkmark$		Infill Amount: <u>2.0</u> Lbs./Sq. Ft.
Comments:			
<ol> <li>Customer submitted: eighteen (18) whole pieces of furf; twenty two (22) seamed piece</li> <li>Everglade-Sierra Pro (1.75in. Pile Height)- infilled with 2.0 lbs per sq. ft. of Envirofill in</li> <li>Least Favorable Impact Location was Center Turf/Center Pad</li> <li>Last Favorable Impact Location report is 72186757-4b</li> </ol>			
The maximum critical fall height of the above described sample v	was determi	ned to be: 8 Ft.	
The results reported herein reflect the performance of the about the described samples. Samples of surfacing materials that in accurate representation of the test results.			
Sample in compliance with ASTM F1292-22 at the temper	ature and r	ating specified? Yes 🖌	No 🗌
Signature: <i>7im Lockstein</i>		Title: Project Engineering technicia	an Date: 2/10/2023
Signature: 7 <i>im Lockstein</i> Reviewed by: <u>Jimether</u> Fouli-		Title: Project Engineering Technici	an Date: 2/22/2023
•			

Participant: Polyloom dba Tencate Grass TUV Report No: 72186757-4a Manufacturing Location ID: Dayton, TN Test Date: 2/10/2023 Reference Temperature -4°C, (25°F) Reference Temperature 23°C, (73°F) Reference Temperature 49°C, (120°F) Critical Theoretical Theoretical Theoretical Drop Fall Height Velocity Velocity Velocity G-Max HIC Drop Height G-Max HIC Drop Height G-Max HIC Drop Height (Ft.) (ft/s) (ft/s) (ft/s) (ft.) (ft.) (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 8.08 132.5 Average 847.5 136.5 863.5 145.0 913.0 Max. Change from reference + 5°C, Max. Change from reference + 3°C, Max. Change from reference -4°C 23°C 49°C Measured Surface Temperature (5°F) (5°F) -3°C, (-5°F) Dry Dry Dry Sample Condition: Reference Temperature -4°C, (25°F) Reference Temperature 23°C, (73°F) Reference Temperature 49°C, (120°F) One foot over Theoretical Theoretical Theoretical Drop Velocity Velocity Velocity (Ft.) G-Max HIC Drop Height G-Max HIC Drop Height G-Max HIC Drop Height (ft/s) (ft/s) (ft/s)(ft.) (ft.) (ft.) 1 24.2 9.10 24.3 9.18 9 123 869 146 1013 24.3 9.18 174 1210 2 9.10 9 129 24.3 9.18 9.18 160 24.2 905 163 1146 24.3 1091 9.10 3 9 142 9.18 9.18 1252 987 24.3 162 1150 24.3 176 24.2 162.5 168.0 1171.5 135.5 946.0 1148.0 Average Max. Change from reference + 5°C, Max. Change from reference + 3°C, Max. Change from reference Measured Surface Temperature -4°C 23°C 49°C (5°F) -3°C, (-5°F) (5°F) Dry Dry Dry Sample Condition: Reference Temperature -4°C, (25°F) Reference Temperature 23°C, (73°F) Reference Temperature 49°C, (120°F) One foot under Theoretical Theoretical Theoretical Drop Velocity Velocity Velocity (Ft.) HIC G-Max HIC HIC G-Max Drop Height Drop Height G-Max Drop Height (ft/s) (ft/s)(ft/s) (ft.) (ft.) (ft.) 7 103 21.4 21.4 7.12 97 21.5 1 609 7.12 96 537 502 7.19 2 7 7.19 107 7.19 113 653 21.4 7.12 101 561 21.5 567 21.5 3 7 113 650 21.4 7.12 570 7.12 125 700 21.5 7.19 104 21.4 102.5 Average 113.0 651.5 565.5 116.0 633.5 Max. Change from reference + 5°C, Max. Change from reference + 3°C, Max. Change from reference Measured Surface Temperature -4°C 23°C 49°C -3°C, (-5°F) (5°F) (5°F) Dry Dry Sample Condition: Dry









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

Participant:Polyloom dba Tencate Grass Main Office Address: <u>1131 Broadway St.</u> Dayton, TN 37321 Phone: <u>423.413.7028</u> Manufacturing Location ID; <u>Dayton, TN</u> Commercial Name of Product:Everglade-Sierra Pro (C000070-71-73-76 Date of Manufacture: <u>Unknown</u> No. of samples submitted: <u>See Comments</u>	Project No.:72186757-4b Report Date:2/10/2023 Test Date:2/10/2023 Selection: Initial Test: Follow up Test: <b>Ref Job:</b> Sample Receipt Date:1/27/2023 Ambient Air Temperature:24.4°C Humidity: 25 %
<u>Test E</u>	quipment:
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
Unitar <u>y Sample</u>	Layer Description:
Tiles:	Total Thickness: 7.75in.
Poured in Place:	Top Layer: See Comments
	Base Layer: See Comments
Least Favorable Impact <u>Impact Location:</u> Location was determined at:	Reference Temperature: 23°C
inch intersection pad, and 150lbs infill.	f; fifty five (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 in size #12/20 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate.
	ples at the time of testing and at the temperature(s) reported. The results are specific tch the described samples will perform differently. The following data sheet provides
Sample in compliance with ASTM F1292-22 at the temperature and rating s	specified? Yes 🗸 No
<b>7im Lockstein</b> Signature:	ect Engineering Technician Date: 2/10/2023
Reviewed by: <u>Finite Fourie</u> Title: Proje	ect Engineering Technician Date: 2/22/2023
PSS_F_09.119 IPEMA Surface Material Report - Least Favorable Impact Location (6 Loca	ations) - ASTM F1292 Rev. 1, Effective Date: 2020-7-21 Page 1 of 3

Project No.: 72186757-4b

Test Date: 2/10/2023

Manufacturing Location ID: Dayton, TN

		Refe	rence Temper	ature -4°C. (2	5°F)	Referer	ce Temperat	ure 23°C, (73°	F)	Reference	Temperatur	e 49°C, (120°F	?)	
Drop	Specified Impact Height (Ft.)	G-Max	ніс	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	ніс	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	
Ave	rage	132.5	847.5			136.5	863.5			145.0	913.0			
Measured Surfa	ce Temperature	-4°C Max. Change from reference + 5°C, (5°F)				23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	49°C	Max.	Change from -3°C, (-5°F		
Sample C	Condition:		D	RY			C	RY			0	DRY		
Perce	entage (%) of max	ximum allow:	able values (g	-max and HI	C):	G-Max:	68.3%	HIC:	86.4%					
					Im	pact Loc	ation: (	Center Ti	urf/Seam	Pad				
	T	Refe	rence Temper	ature -4°C. (2				ure 23°C, (73°			Temperature	e 49°C, (120°F	?)	
D	Specified	1.010			Theoretical				Theoretical		portatur	1	Theoretical	
Drop	Impact Height (Ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Drop Heigh (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	
Ave	rage	0.0	0.0			129.0	802.5			0.0	0.0			
Measured Surfa	ured Surface Temperature $^{\circ}C$ Max. Change from reference + 5°C, (5°F)					23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max.	Change from -3°C, (-5°F		
Sample C	Condition:		D	RY			C	RY				DRY		
Perce	entage (%) of max	ximum allow:	able values (g	-max and HI	C):	G-Max:	64.5%	HIC:	80.3%					
					Im	nact I oc	ation: (	Contor Tu	urf/Interse	ction Par	4			
		Refe	rence Temper	ature -4°C, (2		Referer	ice Temperat	ure 23°C, (73°	F)			e 49°C, (120°F	7)	
Drop	Specified Impact Height (Ft.)	G-Max	ніс	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	
Ave	rage	0.0	0.0			127.5	784.0			0.0	0.0			
Average     0.0     0.0       Measured Surface Temperature     °C     Max. Change from reference + 5°C, (5°F)					rence + 5°C,	23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max Change from reference			
Measured Surfa	Sample Condition: DRY						C	RY			[	DRY		
	Condition:			Percentage (%) of maximum allowable values (g-max and HIC):						G-Max: 63.8% HIC: 78.4%				

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Project No.: 72186757-4b

Test Date: 2/10/2023

Manufacturing Location ID: Dayton, TN

					Im	pact Loc	ation:	Seam Tu	rf/Center	Pad			
		Refe	rence Temper	ature -4°C, (2				ure 23°C, (73°			e Temperatur	e 49°C, (120°l	F)
Drop	Specified Impact Height (Ft.)	G-Max	ніс	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	НІС	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	ніс	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
Aver	rage	0.0	0.0			117.5	735.5			0.0	0.0		
Measured Surfac	ce Temperature	°C	(5°F)			23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max.	Change from -3°C, (-5°F	
Sample C	ondition:		D	RY			C	DRY			[	DRY	
Perce	entage (%) of max	ximum allow	able values (g	-max and HI	C):	G-Max:	58.8%	HIC:	73.6%				
					lm	pact Loc	ation:	Seam Tu	Irf/Seam F	Pad			
	Specified	Refe	erence Temper	ature -4°C, (2	5°F)	Referen	nce Temperat	ure 23°C, (73°	Ϋ́F)	Reference	e Temperatur	e 49°C, (120°I	F)
Drop	Impact Height (Ft.)	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
Aver	age	0.0	0.0			124.0	779.0			0.0	0.0		
Measured Surfac	ce Temperature	°C	Max. Cha	nge from refer (5°F)	rence $+ 5^{\circ}$ C,	23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C Max. Change from reference -3°C, (-5°F)			
Sample C	ondition:		D	RY			[	RY			. [	DRY	
	entage (%) of max	ximum allow	able values (g	-max and HI	C):	G-Max:	62.0%	HIC:	77.9%				
					lm	pact Loc	ation:	Seam Tu	rf/Intersed	ction Pad	d		
	Specified	Refe	rence Temper	ature -4°C, (2		Reference Temperature 23°C, (73°F)				Reference	e Temperatur	e 49°C, (120°I	F)
Drop	Impact Height (Ft.)	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
Aver	age	0.0	0.0			112.0	676.0			0.0	0.0		
Measured Surfac	ce Temperature	°C	Max. Cha	nge from refer (5°F)	rence $+ 5^{\circ}$ C,	23°C	Max Change from reference + 3°C Max Change from refe						
Sample C	ondition:		D	RY			[	DRY		DRY			
Perce	entage (%) of max	ximum allow	able values (g	-max and HI	C):	G-Max:	56.0%	HIC:	67.6%				
						TUN SUD	a						
PS	S_F_09.119 IPEN	IA Surface Ma	terial Report - I	east Favorabl	e Impact Location	n (6 Locations)	- ASTM F1292	2 Rev. 1, Effe	ctive Date: 2020-	7-21 Page	e 3 of 3	עיטד	B

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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 Tencat	e Grass		/ Report No.: <u>72186757-9a</u>
Main Office Address: 1131 Broadway St.			Report Date: 2/20/2023
Dayton, TN 37321		Selection:	Test Date: <u>2/20/2023</u> Initial:
Phone: <u>423.413.7028</u> Manufacturing Location ID:Dayton, TN			Follow up Ref Job:
Commercial Name of product: Everglade-Sierra Pro	(C000070-71-7	3-76) Sample F	Receipt Date: 1/27/2023
Date of Manufacture: <u>Unknown</u>		Ambient Air	Temperature: <u>22.9</u> °C
No. of samples submitted:See Comments	Tost	 Equipment:	Humidity: <u>26</u> %
Alpha Automation, Triax, TUV System 5:			Chamber No.: PLYP00069
Alpha Automation, Triax, TUV System 7:			on Due Date: 8/30/2023
Accelerometer ID:		Environmental C	Chamber No.: AE-029
Accelerometer Calibration Date:	7/18/2022	Calibratio	on Due Date: 8/30/2023
Loo	se Fill Materia	al Sample Description:	
Engineered Wood Fiber:		Un-compacted Depth:	Inches
		p	
Rubber Nuggets:			
Rubber Buffings:			
Sand:		Compacted Depth:	Inches
Gravel:			
Other:	Unitary San	nple Description:	
<b>T</b> il			- <b>T</b> history
Tiles:		Iota	Thickness:
Poured in Place:			Top Layer:
Other:			Base Layer:
		ample Description:	
Turf:	$\checkmark$		f Pile Height: <u>1.75</u> Inches
Pad:	$\checkmark$	Pa	d Thickness: <u>1.0</u> Inches
Aggregate:	$\checkmark$		Aggregate: 4.0 Inches
Infil:	$\checkmark$	I	nfill Amount: <u>2.0</u> Lbs./Sq. Ft.
Comments:			
<ol> <li>Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces c</li> <li>Everglade-Sierra Pro (1.75in Pile Height)- infilled with 2.0 lbs per sq. ft. of Envirofill infill ()</li> <li>Least Favorable Impact Location was Center Turf/Intersection of Pad.</li> <li>Last Favorable Impact Location report is 72186757-9b</li> </ol>			
Fhe maximum critical fall height of the above described sample v	vas determined to	<u>be:</u> 5 <b>Ft.</b>	
The results reported herein reflect the performance of the about the described samples. Samples of surfacing materials that in accurate representation of the test results.	ve described sar do not closely m	nples at the time of testing and at the atch the described samples will perfo	temperature(s) reported. The results are specific rm differently. The following data sheet provides
Sample in compliance with ASTM F1292-22 at the temperation of te	ature and rating	specified? Yes 🗸	No 🗌
Signature: Patrick Ashley		Title: Project Engineering Technicia	an Date: 2/20/2023
Signature: <u>Patrick Ashley</u> Reviewed by: <u>Timethy</u> Fouli		Title: Project Engineering Technicia	an Date: 2/22/2023

	Participant:	Polyloom	n dba Ten	icate Gra	ss		TUV Report No: 72186757-9a							
Manufacturi	ng Location ID:	Dayton, Tl	N					Test Date:	2/20/2023					
		Refe	erence Tempe	erature -4°C, (	(25°F)	Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)				
Drop	Critical Fall Height (Ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	ніс	Velocity (ft/s)	Theoretica Drop Heigh (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	
Ave	rage	155.5	723.5			151.5	675.5			162.5	752.5			
Measured Surfa	ace Temperature	-4°C						Change from -3°C, (-5°]						
Sample C	Condition:			Dry				Dry				Dry		
		Reference Temperature -4°C, (25°F)				Refe	rence Tempe	rature 23°C, (		Refe	rence Temper	ature 49°C, (		
Drop	One foot over (Ft.)	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)	Theoretica Drop Heigl (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	
Ave	erage	207.0	1144.5			196.0	1078.0			212.0	1168.0			
Measured Surfa	ace Temperature	-4°C	Max. Cha	ange from ref (5°F)	erence + 5°C,	23°C	Max. Ch	ange from ref (5°F)	erence $\pm 3^{\circ}$ C,	49°C	49°C Max. Change from reference -3°C, (-5°F)			
Sample C	Condition:			Dry				Dry			[	Dry		
	One foot under	Refe	erence Tempe	erature -4°C, (	(25°F) Theoretical	Refe	rence Tempe	rature 23°C, (	73°F) Theoretical	Refe	rence Temper	ature 49°C, (	120°F) Theoretica	
Drop	(Ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Drop Heigl (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	
	erage ace Temperature	102.5 -3°C	377.5 Max. Cha	ange from ref (5°F)	Terence + 5°C,	125.0 23°C	465.0 Max. Ch	ange from ref (5°F)	erence <u>+</u> 3°C,	117.5 48°C	432.0 Max.	Change from -3°C, (-5°)		
0 1 0				Dry				Dry				Dry	.)	
	Condition:						<b>V</b>							

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

Participant:Polyloom dba Tencate Grass Main Office Address: <u>1131 Broadway St.</u> Dayton, TN 37321 Phone: <u>423.413.7028</u> Manufacturing Location ID; <u>Dayton, TN</u> Commercial Name of Product:Everglade-Sierra Pro (C000070-71-73-76) Date of Manufacture: <u>Unknown</u> No. of samples submitted: <u>See Comments</u>	Project No.:72186757-9b Report Date:2/20/2023 Test Date:2/20/2023 Selection: Initial Test: Follow up Test: <b>Ref Job:</b> Sample Receipt Date:1/27/2023 Ambient Air Temperature:22.9°C Humidity: 26 %
<u>Test Equ</u>	upment:
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
Unitar <u>y Sample L</u>	ayer Description:
Tiles:	Total Thickness: 6.75in.
Poured in Place:	Top Layer: See Comments
Turf: 🔽	Base Layer: See Comments
Determine Least Favorable Impact Location: The highest percentage at the locations indicated on Pages 2 and 3. Least Favorable Impact Location was determined at:	(%) of maximum allowable value, based on g-max or HIC, as tested <u>Reference Temperature:</u> 23°C
<u>Comments:</u> 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 tempera 4.) Customer submitted: eighteen (18) whole pieces of turf; twenty two (22) seamed pieces of turf; fifty 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 = 6.) Determine Critical Fall Height report 72186757-9a. <u>The above described sample was tested at</u>	five (55) 1.0 inch center pads, twenty seven (27) 1.0 inch seamed pads, twenty seven (27) 1.0 inch #12/20 mesh) – over 1.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate.
The results reported herein reflect the performance of the above described sample to the described samples. Samples of surfacing materials that do not closely match an accurate representation of the test results.	
Sample in compliance with ASTM F1292-22 at the temperature and rating spe	cified? Yes 🗹 No 🗌
Patrick Ashley         Title: Project	t Engineering Technician Date: 2/20/2023
Reviewed by: <u>Jimethery Fouri</u> Title: Project	t Engineering Technician Date: 2/22/2023
PSS_F_09.119 IPEMA Surface Material Report - Least Favorable Impact Location (6 Location	ns) - ASTM F1292 Rev. 1, Effective Date: 2020-7-21 Page 1 of 3

Project No.: 72186757-9b

Manufacturing Location ID: Dayton, TN

Test Date: 2/20/2023

Drop 1 2 3 Aver Measured Surface	Specified Impact Height	KCIC	rence Temper	ature -4°C, (2	5°F)	Referer	ice Temperati	ure 23°C, (73°	F)	Reference Temperature 49°C, (120°F)			
2 3	(Ft.)	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.)
3 Aver	5	145	692	18.0	5.04	120	503	18.0	5.04	141	629	18.1	5.09
Aver	5	156	742	18.1	5.09	150	662	18.1	5.09	162	756	18.1	5.09
	5	155	705	18.1	5.09	153	689	18.1	5.09	163	749	18.1	5.09
Measured Surfac	age	155.5	723.5			151.5	675.5			162.5	752.5		
	ce Temperature	-4°C	Max. Cha	nge from refer (5°F)	rence + 5°C,	23°C Max. Change from reference $\pm$ 3°C, $(\pm 5^{\circ}F)$				49°C	Max.	Change from -3°C, (-5°F	
Sample C	ondition:		D	RY			D	RY			C	RY	
-	ntage (%) of ma	ximum allow	able values (g	-max and HI	C):	G-Max:	75.8%	HIC:	67.6%				
									urf/Seam	Pad			
		Refe	rence Temper	ature -4°C, (2				are 23°C, (73°		Reference Temperature 49°C, (120°F)			
Drop	Specified Impact Height (Ft.)	G-Max	НІС	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
Aver	age	0.0	0.0			141.0	626.5			0.0	0.0		
Measured Surfac	leasured Surface Temperature °C Max. Change from reference + 5°C, (5°F)					23°C	Max. Cha	nge from refer (±5°F)	ence $\pm 3^{\circ}$ C,	ů	Max.	Change from 1 -3°C, (-5°F	
Sample C	ondition:		D	RY			D	RY			C	RY	
Perce	ntage (%) of ma	ximum allow	able values (g	-max and HI	C):	G-Max:	70.5%	HIC:	62.7%				
						-	_						
						pact Loc	ation: (	Center Tu	urf/Center	Pad			
	Specified	Refe	rence Temper	ature -4°C, (2		Referer	ice Temperati	ure 23°C, (73°		Reference	Temperature	e 49°C, (120°F	1
Drop	Impact Height (Ft.)	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 Heigh (ft.)
	5				0.00	113	481	18.0	5.04				0.00
1	5				0.00	145	658	18.0	5.04				0.00
1 2					0.00	140	637	18.1	5.09				0.00
	5		0.0			142.5	647.5			0.0	0.0		
2		0.0	Max. Change from reference + 5°C,					Max. Change from reference <u>+</u> 3°C, (±5°F) °C Max. Change from -3°C, (-5					
2 3 Aver	age			nge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	0	$ence + 3^{\circ}C$ ,	°C	Max.	Change from 1 -3°C, (-5°F	
2 3 Aver	age ce Temperature		Max. Cha	0	rence + 5°C,	23°C		0	ence $\pm 3^{\circ}$ C,	°C			

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Project No.: 72186757-9b

Test Date: 2/20/2023

Manufacturing Location ID: Dayton, TN

	<del>.</del>				lm	pact Loc	ation:	Seam Tu	rf/Center	Pad			
	Specified	Refe	erence Temper	ature -4°C, (2	5°F)	Refere	nce Temperat	ure 23°C, (73°	°F)	Reference	Temperatur	e 49°C, (120°)	F)
Drop	Impact Height (Ft.)	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
Ave	rage	0.0	0.0			142.5	658.5			0.0	0.0	_	
Measured Surfa	ce Temperature	°C	Max. Cha	inge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	inge from refe (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max.	Change from -3°C, (-5°F	
Sample C	Condition:		[	DRY			[	DRY			[	ORY	
Perce	entage (%) of max	kimum allow	able values (g	g-max and HI	(C):	G-Max:	71.3%	HIC:	65.9%				
					-			•					
		Pofe	ranaa Tampa	ature -4°C, (2				Seam Tu ure 23°C, (73°	rf/Seam F		Tomporatur	e 49°C, (120°)	5)
	Specified	Kele		ature -4 C, (2	Theoretical	Kelele			Theoretical	Kelelelice	remperatur	C, (120 1	Theoretical
Drop	Impact Height (Ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	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
Ave	rage	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. Cha	inge from refe (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max.	Change from -3°C, (-5°F	
Sample C	Condition:			DRY			[	DRY			[	ORY	
Perce	entage (%) of max	kimum allow	able values (g	g-max and HI	[C):	G-Max:	62.0%	HIC:	55.1%				
						pact Loo	cation:	Seam Tu	rf/Intersec	ction Pac	1		
	Specified	Refe	rence Temper	ature -4°C, (2	5°F)	Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)			
Drop	Impact Height (Ft.)	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
Ave	rage	0.0	0.0			138.5	632.5			0.0	0.0		
Measured Surfa	ce Temperature	°C	Max. Cha	inge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	inge from refe (±5°F)	rence $\pm 3^{\circ}$ C,	°C	Max.	Change from -3°C, (-5°F	
Sample C	Condition:		[	DRY			[	DRY			[	ORY	
Perce	entage (%) of max	kimum allow	able values (g	g-max and HI	(C):	G-Max:	69.3%	HIC:	63.3%				
						TUN SUD Americ							

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