America

TÜV SÜD America Inc.

**Product Safety Services** 1755 Atlantic Blvd.

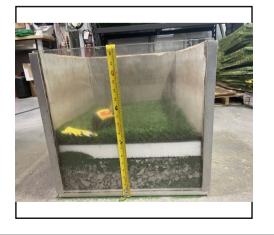
Auburn Hills, MI 48326

Phone: (616) 546-4600

## **IPEMA Impact Attenuation Report – ASTM F1292-22**

ite Grass	TUV Report No.: <u>72186757-3a</u>						
	Report Date: 2/9/2023						
	Test Date: 2/9/2023						
00064-66)	Sample Receipt Date: 1/27/2023						
i							
<b>T</b> .							
ose Fill Ma	terial Sample Description:						
	Un-compacted Depth: Inches						
	Compacted Depth: Inches						
Unitory	Sample Description:						
_							
	Top Layer:						
	Base Layer:						
<u> Turf Syste</u>	m Sample Description:						
$\checkmark$	Turf Pile Height: <u>1.8125</u> Inches						
$\checkmark$	Pad Thickness: 2.0 Inches						
$\checkmark$	Aggregate: 4.0 Inches						
$\checkmark$	Aggregate: <u>4.0</u> Inches Infill Amount: <u>2.0</u> Lbs./Sq. Ft.						
ces of turf; fifty five	Infill Amount: 2.0 Lbs./Sq. Ft.						
ces of turf; fifty five	Infill Amount: 2.0 Lbs./Sq. Ft. Infill Type: envirofill (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 inch intersection pad, and 15 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness o						
ces of turf; fifty five I (grain size #12/20 was determine DVe described	Infill Amount: 2.0 Lbs./Sq. Ft. Infill Type: envirofill (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 inch intersection pad, and 15 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness o	f 7.8125in. specifi					
was determine to ove described to not close	Infill Amount: <u>2.0</u> Lbs./Sq. Ft. Infill Type: envirofill (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) 2.0 inch intersection pad, and 15 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness o ed to be: <u>8</u> <u>Ft.</u> Is samples at the time of testing and at the temperature(s) reported. The results are	f 7.8125in. specifi					
was determine to ove described to not close	Infill Amount: <u>2.0</u> Lbs./Sq. Ft. Infill Type: envirofill (55) 2.0 inch center pads, twenty seven (27) 2.0 inch intersection pad, and 15 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness o ed to be: <u>8</u> <u>Ft.</u> It samples at the time of testing and at the temperature(s) reported. The results are easy match the described samples will perform differently. The following data sheet p	f 7.8125in. specific					
		Selection:       Initial:       Follow up       Ref Job:         00064-66)       Sample Receipt Date:       1/27/2023         Ambient Air Temperature:       25.6 °C         Humidity:       24 %         Test Equipment:       Calibration Due Date:         Calibration Due Date:       8/30/2023         PLYP00226       Environmental Chamber No.: PLYP00069         Z       Calibration Due Date:         8/30/2023       See Fill Material Sample Description:         Un-compacted Depth:       Inches         Compacted Depth:       Inches         Compacted Depth:       Top Layer:         Base Layer:       Base Layer:         Turf System Sample Description:       Turf Pile Height:         1.8125       Inches					

TUV Report No: 72186757-3a Participant: Polyloom dba Tencate Grass Manufacturing Location ID: Dayton, TN Test Date: 2/9/2023 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 8 115 700 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 22.7 8.01 716 3 8 116 700 22.8 8.08 128 773 22.8 8.08 127 768 22.8 8.08 118.0 Average 719.0 125.5 773.0 121.5 742.0 Max. Change from reference + 3°C, Max. Change from reference + 5°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.) 24.3 1 24.2 9.10 24.2 9.18 9 123 836 153 1066 9.10 156 1058 2 9.10 9 24.1 9.03 158 24.2 9.10 162 24.2 126 869 1139 1079 9.10 3 9 9.10 125 849 24.2 9.10 156 1086 24.2 166 1111 24.2 157.0 1095.0 125.5 859.0 1112.5 164.0 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 G-Max HIC G-Max Drop Height Drop Height Drop Height (ft/s) (ft/s) (ft/s) (ft.) (ft.) (ft.) 106 21.4 21.4 7.12 101 21.4 1 7 619 7.12 117 724 584 7.12 2 7 7.19 575 7.19 113 658 21.5 7.19 117 676 21.5 104 21.5 3 7 115 659 7.12 649 7.19 104 578 21.5 7.19 21.4 114 21.5 Average 114.0 658.5 115.5 662.5 104.0 576.5 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









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: <u>1131 Broadway St.</u> <u>Dayton, TN 37321</u> Phone: <u>423.413.7028</u> Manufacturing Location ID; <u>Dayton, TN</u> Commercial Name of Product: <u>Diamond Light (C000064-66)</u> Date of Manufacture: <u>Unknown</u> No. of samples submitted: <u>See Comments</u>	Project No.:72186757-3b Report Date:2/9/2023 Test Date:2/9/2023 Selection: Initial Test: Follow up Test: <b>Ref Job:</b> Sample Receipt Date:1/27/2023 Ambient Air Temperature:25.1°C Humidity: 24 %
<u>Test Eq</u>	uipment:
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 I</u>	Layer Description:
Tiles:	Total Thickness: 7.8125in.
Poured in Place:	Top Layer: See Comments
Turf: 🗸	Base Layer: See Comments
at the locations indicated on Pages 2 and 3. Impact Location: Least Favorable Impact Location was determined at:	<u>Reference Temperature:</u> 23°C
<ul> <li>2.0 inch intersection pad, and 150lbs infill.</li> <li>5.) Diamond Light (1.8125in. Pile Height)– infilled with 2.0 lbs per sq. ft. of Envirofill infill (grain si 6.) Maximum Critical Fall Height report is 72186757-3a</li> </ul>	rf; fifty five (55) 2.0 inch center pads, twenty seven (27) 2.0 inch seamed pads, twenty seven (27) ize #12/20 mesh) – over 2.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate.
	ch the described samples will perform differently. The following data sheet provides
Sample in compliance with ASTM F1292-22 at the temperature and rating sp	ecified? Yes 🗹 No 🗌
Tim Lockstein         Title: Project	ct Safety Engineer Date: 2/9/2023
Reviewed by: <u>Simuthery Frudia</u> Title: Project	ct Engineering Technician Date: 2/22/2023
PSS_F_09.119 IPEMA Surface Material Report - Least Favorable Impact Location (6 Locati	ons) - ASTM F1292 Rev. 1, Effective Date: 2020-7-21 Page 1 of 3

Project No.: 72186757-3b

Manufacturing Location ID: Dayton, TN

Test Date: 2/9/2023

Drop	Specified Reference Temperature -4°C, (2)					Referer	nce Temperati	ure 23°C, (73°	F)	Reference Temperature 49°C, (120°F)				
	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	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	
Ave	rage	0.0	0.0			119.5	719.5			0.0	0.0			
leasured Surfa	ce Temperature	-4°C Max. Change from reference + 5°C, (5°F)			23°C	Max. Cha	nge from refer (±5°F)	$ence + 3^{\circ}C$ ,	49°C Max. Change from reference -3°C, (-5°F)					
Sample C	ondition:			RY				RY				RY		
	entage (%) of max	vimum allow			C)•	G-Max:	59.8%	HIC:	72.0%					
100	entage (70) of ma		inc values (g	-max and III				•	urf/Seam	Pad				
		Refe	rence Tempera	ature -4°C, (2				ure 23°C, (73°			e Temperature	49°C, (120°F	<sup>2</sup> )	
Drop	Specified 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)	Theoretica Drop Heigh (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	
Ave	rage	0.0	0.0			121.5	713.0			0.0	0.0			
leasured Surfa	ce Temperature	-4°C	Max. Chai	nge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	nge from refer (±5°F)	ence $\pm 3^{\circ}$ C,	49°C Max. Change from referen -3°C, (-5°F)				
Sample C	Condition:		D	RY			DRY				DRY			
Perce	entage (%) of max	kimum allowa	able values (g	-max and HI	C):	G-Max:	60.8%	HIC:	71.3%					
					Im	pact Loc	ation: (	Center Ti	urf/Interse	ction Pa	h			
	Specified	Refe	rence Tempera	ature -4°C, (2				ure 23°C, (73°				49°C, (120°F	<sup>2</sup> )	
	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)	Theoretica Drop Heigh (ft.)	
Drop					0.00	103	596	22.7	8.01				0.00	
Drop 1	8						698	22.8	8.08				0.00	
	8				0.00	119	090							
1	1				0.00	119 126	727	22.8	8.08			İ	0.00	
1 2 3	8	0.0	0.0						8.08	0.0	0.0		0.00	
1 2 3 Ave	8 8	0.0 -4°C		nge from refer (5°F)	0.00	126	727 712.5			0.0 49°C		Change from r -3°C, (-5°F	eference	
1 2 3 Ave	8 rage ce Temperature		Max. Chai		0.00	126 122.5	727 712.5 Max. Cha	22.8 nge from refer			Max.	Change from r -3°C, (-5°F)	eference	

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Project No.: 72186757-3b

Test Date: 2/9/2023

Manufacturing Location ID: Dayton, TN

					Im	pact Loc	ation:	Seam Tu	rf/Center	Pad				
	Specified	Refe	erence Temper	ature -4°C, (2				ure 23°C, (73°			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	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	
Aver	age	0.0	0.0			119.0	737.5			0.0	0.0			
Measured Surfac	ce Temperature	°C	Max. Cha	nge from refer (5°F)	rence + 5°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		
Perce	ntage (%) of ma	kimum allow	able values (g	-max and HI	C):	G-Max:	59.5%	HIC:	73.8%					
									rf/Seam F					
	Specified	Refe	rence Temper	ature -4°C, (2		Referen	nce Temperat	ure 23°C, (73°	,	Reference	e Temperatur	e 49°C, (120°I		
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	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	
Aver	age	0.0	0.0			127.5	770.0			0.0	0.0			
Measured Surfac	Measured Surface Temperature °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 reference -3°C, (-5°F)				
Sample C	ondition:		D	RY			C	RY			[	DRY		
Perce	ntage (%) of ma	kimum allow	able values (g	-max and HI	C):	G-Max:	63.8%	HIC:	77.0%	7.0%				
					lm	pact Loc	ation:	Seam Tu	rf/Intersec	ction Pac	d			
	Specified	Refe	rence Temper	ature -4°C, (2	5°F)	Referen	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	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	
Aver	age	118.0	719.0			125.5	773.0			116.0	742.0			
Measured Surfac	ce Temperature	-4°C	Max. Cha	nge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	nge from refer (±5°F)	rence $\pm 3^{\circ}$ C,	49°C	reference )			
Sample C	ondition:		D	RY				RY			E	DRY		
Perce	ntage (%) of ma	kimum allow	able values (g	-max and HI	C):	G-Max:	62.8%	HIC:	77.3%					
						TUN SUD Americ	a							

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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	TUV Report No.: 72186757-8a						
Main Office Address: 1131 Broadway St.		Report Date: 2/20/2023						
Dayton, TN 37321		Test Date: 2/20/2023						
Phone: <u>423.413.7028</u> Manufacturing Location ID:Dayton, TN		Selection: Initial: Follow up Ref Job:						
Commercial Name of product:Diamond Light (COC	0064-66)	Sample Receipt Date: 1/27/2023						
Date of Manufacture: Unknown	,0004-00)	Ambient Air Temperature: 22.3 °C						
No. of samples submitted: See Comments		Humidity: 24 %						
	<u>T</u> (	est Equipment:						
Alpha Automation, Triax, TUV System 5:		Environmental Chamber No.:PLYP00069						
Alpha Automation, Triax, TUV System 7:	$\checkmark$	Calibration Due Date: 8/30/2023						
Accelerometer ID: F	PLYP00226	Environmental Chamber No.: AE-029						
Accelerometer Calibration Date: 7	7/18/2022	Calibration Due Date: 8/30/2023						
Loo	se Fill Ma	aterial Sample Description:						
Engineered Wood Fiber:		Un-compacted Depth: Inches						
Loose Fill Wood:								
Rubber Nuggets:								
Rubber Buffings:								
Sand:		Compacted Depth: Inches						
Gravel:								
Other:								
	Unitary	v Sample Description:						
Tiles:		Total Thickness:						
Poured in Place:		Top Layer:						
Other:		Base Layer:						
r	urf Syst	em Sample Description:						
– Turf:	$\checkmark$	Turf Pile Height: 1.8125 Inches						
Pad:	$\overline{\checkmark}$	Pad Thickness: 1.0 Inches						
Aggregate:	$\checkmark$	Aggregate: 4.0 Inches						
Infill:	$\checkmark$	Infill Amount: 2.0 Lbs./Sq. Ft.						
Comments:		Infill Type: envirofill						
		5) 1.0 inch center pads, twenty seven (27) 1.0 inch seamed pads, twenty seven (27) 1.0 inch intersection pad, and 150lbs infill. sh) – over 1.0 inch Tiger Playground Pad – overlaying 4in. of compacted aggregate. Total system depth/thickness of 6.8125in.						
The maximum critical fall height of the above described sample w	vas determii	<u>ned to be:</u> 5 <b>Ft.</b>						
		ed samples at the time of testing and at the temperature(s) reported. The results are specific sely match the described samples will perform differently. The following data sheet provides						
ample in compliance with ASTM F1292-22 at the temperative statement of the second	ature and r	ating specified? Yes 🖌 No 🗌						
Signature: Patrick Ashley		Title: Project Engineering Technician Date: 2/20/2023						
Signature: Patrick Ashley Reviewed by: <u>Timethy Foulia</u>		Title: Project Engineering Technician Date: 2/22/2023						

TUV Report No: 72186757-8a Participant: Polyloom dba Tencate Grass Manufacturing Location ID: Dayton, TN Test Date: 2/20/2023 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 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 5.09 140.5 Average 631.0 156.5 720.5 187.5 922.5 Max. Change from reference + 3°C, Max. Change from reference + 5°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.) 6.09 1 172 208 232 6.09 6 877 19.8 1157 19.8 6.09 1362 19.8 2 200 6.09 6 6.09 982 6.09 243 1069 19.8 184 19.8 1469 19.8 6.09 3 209 6.09 234 1332 6 187 1050 19.8 6.09 1159 19.8 19.8 196.5 238.5 1400.5 193.5 1059.5 1070.5 Average Max. Change from reference + 5°C, Max. Change from reference + 3°C, Max. Change from reference Measured Surface Temperature -4°C 23°C 48°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.) 4.03 327 16.2 4.08 101 1 83 282 16.1 96 337 16.1 4.03 4 2 4.08 4.08 469 16.2 4.08 4 98 355 16.2 122 448 16.2 125 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 Max. Change from reference + 5°C, Max. Change from reference + 3°C, Max. Change from reference Measured Surface Temperature -3°C 23°C 49°C (5°F) -3°C, (-5°F) (5°F) Dry Dry Sample Condition: Dry



America



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: <u>1131 Broadway St.</u> <u>Dayton, TN 37321</u> Phone: <u>423.413.7028</u> Manufacturing Location ID: <u>Dayton, TN</u> Commercial Name of Product: <u>Diamond Light (C000064-66)</u> Date of Manufacture: <u>Unknown</u> No. of samples submitted: <u>See Comments</u>	Project No.:72186757-8b 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:22.3°C Humidity: 24 %
<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: 6.8125in.
Poured in Place:	Top Layer: See Comments
Turf: 🗹	Base Layer: See Comments
at the locations indicated on Pages 2 and 3.           Impact Location:           Least Favorable Impact           Location was determined at:	Reference Temperature: 23°C
inch intersection pad, and 150lbs infill.	urf; fifty five (55) 1.0 inch center pads, twenty seven (27) 1.0 inch seamed pads, twenty seven (27) 1.0 size #12/20 mesh) – over 1.0 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 atch 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 🗌
Patrick Ashley Signature:	ect Engineering Technician Date: 2/20/2023
Reviewed by: <u>Simulting Fourlis</u> Title: Proj	ect Engineering Technician Date: 2/22/2023
PSS_F_09.119 IPEMA Surface Material Report - Least Favorable Impact Location (6 Location)	ations) - ASTM F1292 Rev. 1, Effective Date: 2020-7-21 Page 1 of 3

Project No.: 72186757-8b

Manufacturing Location ID: Dayton, TN

Test Date: 2/20/2023

					lm	pact Loc	ation: (	Center Tu	rf/Intersect	ion of Pa	d			
	Specified	Refe	rence Tempera	ature -4°C, (2	5°F)	Referer	ice Temperati	ure 23°C, (73°	F)	Reference	e Temperature	e 49°C, (120°F	F)	
Drop In	mpact 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	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	
Averag	je	140.5	631.0			156.5	720.5			187.5	922.5			
Measured Surface 7	Temperature	-4°C	Max. Chai	nge from refer (5°F)	rence + 5°C,	23°C Max. Change from reference $\pm$ 3°C, ( $\pm$ 5°F)			rence $\pm 3^{\circ}$ C,	49°C Max. Change from reference -3°C, (-5°F)				
Sample Cond	dition:		D	RY			D	RY			C	RY		
	age (%) of max	timum allowa	able values (g	-max and HI	C):	G-Max:	78.3%	HIC:	72.1%					
					Im	pact Loc	ation: (	Center Ti	urf/Seam	Pad				
		Refe	rence Tempera	ature -4°C, (2				ure 23°C, (73°			e Temperature	e 49°C, (120°F	5)	
Drop II	Specified mpact 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	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	
Averag	je	0.0	0.0			151.5	688.0			0.0	0.0			
Measured Surface	Temperature	°C	°C Max. Change from reference + 5°C, (5°F)				Max. Cha	Aax. Change from reference <u>+</u> 3°C, (±5°F)			°C Max. Change from reference -3°C, (-5°F)			
Sample Conc	Sample Condition: DRY						D	RY		DRY				
Percenta	age (%) of max	timum allowa	able values (g	-max and HI	C):	G-Max:	75.8%	HIC:	68.8%					
					Im	pact Loc	ation: (	Center Ti	urf/Center	Pad				
	Vegetted	Refe	rence Tempera	ature -4°C, (2		Reference Temperature 23°C, (73°F)				Reference Temperature 49°C, (120°F)				
Drop In	Specified mpact 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	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	
Averag	je	0.0	0.0			143.0	648.0			0.0	0.0			
Measured Surface	Temperature	°C	Max. Char	nge from refer (5°F)	rence + 5°C,	23°C	Max. Cha	nge from refer (±5°F)	$rence + 3^{\circ}C$ ,	°C	Max. Change from reference -3°C, (-5°F)			
Sample Conc	dition:		D	RY			D	RY			C	RY		
Percentage (%) of maximum allowable values (g-max and HIC):					G-Max:	71.5%	HIC:	64.8%						



Project No.: 72186757-8b

Test Date: 2/20/2023

Manufacturing Location ID: Dayton, TN

					Im	pact Loc	ation:	Seam Tu	rf/Center	Pad			
	Specified	Refe	erence Temper	ature -4°C, (2				ture 23°C, (73°			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	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
Ave	rage	0.0	0.0			117.5	505.5			0.0	0.0		
Measured Surfa	ce Temperature	°C	Max. Cha	nge from refe (5°F)	rence + 5°C,	23°C	Max. Cha	ange from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C Max. Change from reference -3°C, (-5°F)			
Sample C	Condition:		D	RY			[	DRY			. [	DRY	
Perce	entage (%) of ma	ximum allow	able values (g	-max and HI	C):	G-Max:	58.8%	HIC:	50.6%				
					Im	pact Loo	ation:	Seam Tu	rf/Seam F	Pad			
	Specified	Refe	rence Temper	ature -4°C, (2	5°F)	Refere	nce Temperat	ture 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	496	18.0	5.04				0.00
2					0.00	131	593	18.0	5.04				0.00
3	1				0.00	142	640	18.0	5.04				0.00
Ave	rage	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. Cha	ange from refer (±5°F)	rence $\pm 3^{\circ}$ C,	°C Max. Change from reference -3°C, (-5°F)			
Sample C	Condition:		D	RY			[	DRY			[	DRY	
	entage (%) of ma	ximum allow	able values (g	-max and HI	(C):	G-Max:	68.3%	HIC:	61.7%				
					lm	pact Loc	ation:	Seam Tu	rf/Intersed	ction Pac	k		
	Specified	Refe	rence Temper	ature -4°C, (2	5°F)	Refere	nce Temperat	ture 23°C, (73°	Ϋ́F)	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	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
Ave	rage	0.0	0.0			129.5	597.5			0.0	0.0		
Measured Surfa	ce Temperature	°C	Max. Cha	nge from refe (5°F)	rence + 5°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	Condition:		D	RY			[	DRY			[	DRY	
Perce	entage (%) of ma	ximum allow	able values (g	-max and HI	C):	G-Max:	64.8%	HIC:	59.8%				
						TUN SUD							

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