



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

IPEMA IMPACT ATTENUATION REPORT – ASTM F1292-13

Participant: **FLEX FIBER**
 Main Office Address: **1606 4th Ave. NW, Ste. B**
West Fargo, ND 58078
 Phone: **(855) 268-7529**
 Manufacturing Location ID: **West Fargo, ND**
 Commercial Name of product: **Flex Fiber**
 Date of Manufacture: **Unknown**
 No. of samples submitted: **Approx. 8 Cu. Ft.**

TUV Report No.: **72120256-3**
 Report Date: **9/30/2016**
 Test Date: **9/29/16 and 9/30/16**
 Selection: Initial:
 Follow up Ref Job:
 Sample Receipt Date: **9/22/2016**
 Ambient Air Temperature: **23.9°C**
 Humidity: **47%**

Test Equipment:

Alpha Automation, Triax, TUV System 5:	<input checked="" type="checkbox"/>	Environmental Chamber No.:	<u>PLYP00069</u>
Alpha Automation, Triax, TUV System 4:	<input type="checkbox"/>	Calibration Due Date:	<u>9/26/2016</u>
Accelerometer ID:	<u>PLYP00144</u>	Environmental Chamber No.:	<u>PLYP00101</u>
Accelerometer Calibration Date:	<u>2/16/2016</u>	Calibration Due Date:	<u>9/26/2016</u>

Loose Fill Material Sample Description:

Engineered Wood Fiber:	<input checked="" type="checkbox"/>	Un-compacted Depth:	<u>16</u> Inches
Loose Fill Wood:	<input type="checkbox"/>		
Rubber Nuggets:	<input type="checkbox"/>		
Rubber Buffings:	<input type="checkbox"/>		
Sand:	<input type="checkbox"/>	Compacted Depth:	<u>12</u> Inches
Gravel:	<input type="checkbox"/>		
Other:	<input type="checkbox"/>		

Unitary Sample Description:

Tiles:	<input type="checkbox"/>	Total Thickness:	_____
Poured in Place:	<input type="checkbox"/>	Top Layer:	_____
Other:	<input type="checkbox"/>	Base Layer:	_____

Turf System Sample Description:

Turf:	<input type="checkbox"/>	Turf Pile Height:	_____ Inches
Pad:	<input type="checkbox"/>	Pad Thickness:	_____ Inches
Aggregate:	<input type="checkbox"/>	Aggregate:	_____ Inches
Infill:	<input type="checkbox"/>	Infill Amount:	_____ Lbs./Sq. Ft.
		Infill Type:	_____

Comments:

The above described sample was tested at : 12 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 F1292-13 at the temperature and rating specified? Yes No

Signature: Timothy Fouchia Title: Project Coordinator Date: 9/23/2016

Reviewed by: [Signature] Title: Regional Manager Date: 9/30/2016



Client: **FLEX FIBER**

TUV Report No.

72120256-3Manufacturer: **FLEX FIBER**

Test Date:

9/29/16 and 9/30/16

Drop	Specified Impact Height (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)				
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	
1	12	56	244	27.8	12.014	62	258	27.9	12.101	70	319	28.0	12.188	
2	12	72	345	28.1	12.275	82	401	28.1	12.275	91	470	28.2	12.363	
3	12	83	414	28.1	12.275	85	402	28.2	12.363	103	578	28.3	12.450	
Average		77.5	379.5			83.5	401.5			97	524			
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C, (5°F)				23°C	Max. Change from reference ± 3°C, (5°F)				49°C	Max. Change from reference -3°C, (-5°F)	
Sample Condition:		DRY				DRY				DRY				

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

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



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