



TÜV SÜD America Inc.

Product Safety Services

47523 Clipper Drive

Plymouth, MI 48170

Phone: 734.455.4841

IPEMA Impact Attenuation Report – ASTM F1292-13

Participant: XGrass Inc
 Main Office Address: PO Box 579
Rocky Face, GA 30740
 Phone: 706 272 0140
 Manufacturing Location ID: Dalton, GA
 Commercial Name of product: XGrass Prime 53 oz (9 ft system)
 Date of Manufacture: Unknown
 No. of samples submitted: 3 Turf tile systems

TUV Report No.: QI1407999-2, Rev. 1
 Report Date: 9/9/14
 Test Date: 8/11/14 & 8/12/14
 Selection: Initial:
 Follow up Ref Job:
 Sample Receipt Date: 7/9/2014
 Ambient Air Temperature: 22°C
 Humidity: 44.0%
 Initial report Date: 8/12/2014

Test Equipment:

Triax System 4:	<input checked="" type="checkbox"/>	Environmental Chamber No.:	<u>PLYP00101</u>
Triax System 1:	<input type="checkbox"/>	Calibration Due Date:	<u>6/17/15</u>
Accelerometer ID:	<u>PLYP00121</u>	Environmental Chamber No.:	<u>PLYP00069</u>
Accelerometer Calibration Due Date:	<u>1/22/2015</u>	Calibration Due Date:	<u>6/17/15</u>

Loose fill Material Sample Description:

Engineered Wood Fiber:	<input type="checkbox"/>	Un-compacted Depth:	<u>4.5</u> Inches
Loose Fill Wood:	<input type="checkbox"/>		
Rubber:	<input type="checkbox"/>		
Sand:	<input type="checkbox"/>	Compacted Depth:	<u>4</u> Inches
Stone / aggregate:	<input checked="" type="checkbox"/> <u>See comments below</u>		
Other:	<input type="checkbox"/>		

Unitary Sample Description:

Turf Tile System	<input checked="" type="checkbox"/>	Total Thickness:	<u>3.55 in.</u>
Poured in Place	<input type="checkbox"/>	Turf Layer:	<u>1.55 in.</u>
Other	<input type="checkbox"/>	Pad Layer:	<u>2 in.</u>

Comments:

XGrass Prime 53oz turf tiles embedded with with 3 lbs/sq ft Envirofill silica, covering 2 in. pad panel, overlying a 4 in. depth compacted 3/4" inch stone / patio paver stone dust aggregate blend. Report revision 1, editorial.

The above described sample was tested at : 9 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: [Signature] Title: Project Coordinator Date: 9/9/14

Reviewed by: [Signature] Title: Regional mgr. Date: 9/9/2014

Client: **XGrass Inc**

TUV Report No.

QI1407999-2, Rev. 1

Manufacturer: **XGrass Inc**

Test Date:

8/11/14 & 8/12/14

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	9	124	769	24.3	9.180	102	535	24.1	9.029	114	638	24.3	9.180
2	9	134	838	24.3	9.180	116	630	24.2	9.104	133	800	24.3	9.180
3	9	145	931	24.3	9.180	122	656	24.1	9.029	142	892	24.3	9.180
Average		139.5	884.5			119	643			137.5	846		
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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