



TÜV SÜD America Inc.
Product Safety Services
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IPEMA Surfacing Material Report – ASTM F1292-09

Client: XGrass
 Manufacturer: XGrass
 Manufacturing Location: Rocky Face, GA
 Phone: (877) 881-8477
 Commercial Name of product: XGrass Play 80oz.
 Date of Manufacture: Unknown
 No. of samples submitted: 3 - 18in. X 18in. Systems

TUV Report No.: Q11203786-3
 Report Date: 4/10/2012
 Test Date: 4/9 and 4/10/12
 Initial Test
 Follow up Test **Ref Job:**
 Sample Receipt Date: 3/30/2012
 Ambient Air Temperature: 20.2°C
 Humidity: 26.0%

Test Equipment:

| | |
|---|---|
| Triax System 1: <input checked="" type="checkbox"/> | Environmental Chamber No.: <u>PLYP00101</u> |
| Triax System 2: <input type="checkbox"/> | Calibration Due Date: <u>8/1/12</u> |
| Accelerometer ID: <u>PLYP00089</u> | Environmental Chamber No.: <u>PLYP00069</u> |
| Accelerometer Calibration Due Date: <u>6/1/2012</u> | Calibration Due Date: <u>8/1/12</u> |

Loose fill Material Sample Description:

| | | |
|---|---------------------------|--------|
| Engineered Wood Fiber: <input type="checkbox"/> | Un-compacted Depth: _____ | Inches |
| Loose Fill Wood: <input type="checkbox"/> | | |
| Rubber: <input type="checkbox"/> | | |
| Sand: <input type="checkbox"/> | Compacted Depth: _____ | Inches |
| Gravel: <input type="checkbox"/> | | |
| Other: <input type="checkbox"/> | | |

Unitary Sample Description:

| | |
|--|---------------------------------------|
| Foam Tiles <input checked="" type="checkbox"/> | Total Thickness: <u>4.0in.</u> |
| Poured in Place <input type="checkbox"/> | Top Layer: <u>2.0in.</u> |
| Turf <input checked="" type="checkbox"/> | Base Layer: <u>2.0in.</u> |

Comments:

System: 2.0 inch turf over 2.0 inch foam, tested over 3.0 inch compacted stone base.

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 F1292-09 at the temperature and rating specified? Yes No

Signature: Timothy Fouchia

Date: 4/10/12

Reviewed by: [Signature]

Date: 4/10/2012

Client: XGrass

TUV Report No. QI1203786-3

Manufacturer: XGrass

Test Date: 4/9 and 4/10/12

| 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) | G-Max | HIC | Velocity (ft/s) | G-Max | HIC | Velocity (ft/s) |
| 1 | 9 | 106 | 622 | 23.9 | 106 | 583 | 23.7 | 116 | 645 | 23.9 |
| 2 | 9 | 108 | 675 | 24.0 | 116 | 640 | 23.8 | 126 | 719 | 24.1 |
| 3 | 9 | 109 | 675 | 24.1 | 124 | 711 | 24.0 | 134 | 792 | 24.1 |
| Average | | 108.5 | 675 | | 120 | 675.5 | | 130 | 755.5 | |
| Measured Surface Temperature | | (-6°C) | Max. Change from reference + 5°C ,(9°F) | | 24°C | Max. Change from reference 3°C ,(5.4°F) ± | | 49°C | Max. Change from reference -3°C ,(-5.4°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) | G-Max | HIC | Velocity (ft/s) | G-Max | HIC | Velocity (ft/s) |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| Average | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Measured Surface Temperature | | °C | Max. Change from reference + 5°C ,(9°F) | | °C | Max. Change from reference 3°C ,(5.4°F) ± | | °C | Max. Change from reference -3°C ,(-5.4°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) | G-Max | HIC | Velocity (ft/s) | G-Max | HIC | Velocity (ft/s) |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| Average | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Measured Surface Temperature | | °C | Max. Change from reference + 5°C ,(9°F) | | °C | Max. Change from reference 3°C ,(5.4°F) ± | | °C | Max. Change from reference 3°C ,(-5.4°F) | |
| Sample Condition: | | | | | | | | | | |



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