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

Client: **Rubbercycle, LLC**
Manufacturer: **Rubbercycle, LLC**
Manufacturing Location: **Lakewood, NJ**

Phone: **732-3630600**
Commercial Name of product: **RB16N**
Sample Selection: **Yes:** **No: X**
Date of Manufacture: **Unknown**
No. of samples submitted: **3 Samples**

TUV Report No.: **QI1102241-1**
Report Date: **3/25/2011**
Test Date: **3/22/2011**
Initial Test ☐
Follow up Test ☐ **Ref Job:**
Sample Receipt Date: **3/15/2011**
Selection Date: **N/A**
Ambient Air Temperature: **22.1°C**
Humidity: **27%**

## Test Equipment:

Triax 2000 Accelerometer Calibration Due Date: **Jul-11**
Temperature Probe Calibration Due Date: **Jan-12**

Environmental Chamber No.: **PLYP00101**
Calibration Due Date: **8/18/11**
Environmental Chamber No.: **PLYP00069**
Calibration Due Date: **8/18/11**

## Loose fill Material Sample Description:

Loose Fill Wood: ☐
Engineered Wood Fiber: ☐
Rubber: ☐
Sand: ☐
Gravel: ☐
Other: ☐

Un-compacted Depth: Inches

Compacted Depth: Inches

## Unitary Sample Description:

Tiles ☐
Poured in Place ☐
Other ☑

Thickness: **6.0 inches**
Top Layer: **1.25" SBR**
Base Layer: **4.75" Rubber Nugget**

**Comments:**

Determine Critical Fall Heights are tested one foot above and one foot below the passing fall height. The system RB16N exceeded TUV SUD America's maximum test parameters of 16 feet. Consequently, TUV reports impact data at 14 ft, 15 ft and 16 ft

**The above described sample was tested at : 16 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: _____ Date: 3/25/11

Reviewed by: _____ Date: 3/25/2011

Client: **Rubbercycle, LLC**

Manufacturer: **Rubbercycle, LLC**

TUV Report No. **QI1102241-1**

Test Date: **3/22/2011**

| Drop | Specified Drop 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 | 16 | 125 | 894 | 31.9 | 119 | 983 | 31.9 | 114 | 909 | 31.9 |
| 2 | 16 | 136 | 992 | 31.9 | 119 | 904 | 31.8 | 111 | 807 | 31.9 |
| 3 | 16 | 128 | 893 | 32.0 | 120 | 900 | 31.9 | 110 | 810 | 32.0 |
| Average | | 132 | 942.5 | | 119.5 | 902 | | 110.5 | 808.5 | |
| Measured Surface Temperature | | -6°C | Max. Change from reference + 5°C ,(9°F) | | 23°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 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 | 15 | 123 | 937 | 30.9 | 114 | 842 | 30.9 | 92 | 628 | 30.9 |
| 2 | 15 | 127 | 925 | 31.0 | 114 | 838 | 31.0 | 96 | 647 | 30.9 |
| 3 | 15 | 124 | 874 | 31.0 | 112 | 807 | 31.0 | 98 | 665 | 31.0 |
| Average | | 125.5 | 899.5 | | 113 | 822.5 | | 97 | 656 | |
| Measured Surface Temperature | | -6°C | Max. Change from reference + 5°C ,(9°F) | | 23°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 | Two 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 | 14 | 115 | 824 | 29.8 | 111 | 817 | 29.8 | 94 | 687 | 29.8 |
| 2 | 14 | 112 | 750 | 29.9 | 110 | 804 | 29.9 | 88 | 579 | 29.9 |
| 3 | 14 | 110 | 707 | 30.0 | 105 | 730 | 29.9 | 89 | 576 | 29.9 |
| Average | | 111 | 728.5 | | 107.5 | 767 | | 88.5 | 577.5 | |
| Measured Surface Temperature | | -6°C | Max. Change from reference + 5°C ,(9°F) | | 23°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 | | |

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