Report of Testing Royal Interlocking Carpet for compliance with the applicable requirements of the following criteria: ASTM E648-10

STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR-COVERING SYSTEMS USING A RADIANT HEAT ENERGY SOURCE
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2 Introduction

Intertek has conducted testing for Greatmats.Com Corporation on Royal Interlocking Carpet, to measure the critical radiant flux of horizontally mounted floor-covering systems exposed to a flaming ignition source in a graded radiant heat energy environment in a test chamber. Testing was conducted in accordance with ASTM E648-10, following the Standard Test Method For Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source. This evaluation began November 10, 2010 and was completed November 10, 2010.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client. Samples were not independently selected for testing. Samples were received at the Evaluation Center on October 29, 2010.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Samples were a interlocking foam pieces topped with polypropylene carpet. Dimensions were 42.25 inches long, 24 inches wide and 0.75 inches thick.

4 Testing and Evaluation Methods

The test specimen is a resilient floor bonded to a high density inorganic sheet simulating a concrete subfloor.

Three test specimens were conditioned at 21 ± 3ºC and a relative humidity of 50± 5% with optimum air circulation for a minimum of 48 hours.

4.1. TEST STANDARD 1

The test chamber consists of an air-gas fueled radiant heat energy panel inclined at 30º to and directed at a horizontally mounted floor covering system. A radiant energy flux distribution ranging along the 100-cm length of the test specimen is generated from a nominal maximum of 1.0 W/cm² to a minimum of 0.1 W/cm². An open-flame ignition from a pilot burner initiates the test with the distance burned to flame-out converted to watts per square centimeters from the flux profile graph and reported as crucial radiant flux, W/cm².

With the radiant panel ignited for 1 ½ hours prior to testing the pilot burner is put in position and ignited. The test specimen is put in place in the test chamber, heated for 5 minutes before bringing the pilot burner flame into contact with the specimen at the 9mm mark while the burner
remained on. The pilot burner flame remained in contact with the test specimen for 5 minutes, then removed and extinguished.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS
The Royal Interlocking Carpet samples burned on average to a point that required less than 0.13 W/cm² of energy to keep burning. The samples burned beyond the 900 mm distance which places the 1000mm burn line beyond the last calibrated distance. Samples initially started the test by swelling at 1:20, they then preceded to have the green top material peel away and then started to smoke around 2 minutes. Ignition happened around 5:20, after the burner was put in contact. Sample burned all the way down the holder.

5.2. EXAMINATION OF RESULTS
The distances of burn were 1000mm, 1000mm and 1000mm for each preceding test. These were then averaged. The sample could only be measured to 1000mm.
6 Conclusion

This test has no pass/fail criteria. The test showed that the Royal Interlocking Carpet has a Critical Radiant Flux of less than 0.13 W/cm².

INTERTEK

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Reviewed by: Mark Crawford
Chemist, Verification Center
APPENDIX A

intertek

ASTM F 643
Data Sheet

Client: Greatmats Corp. Project: Up 100 2 x 2215 Date 11/10/10
Temperature (°F) 72.5 %R.H. 5.8
Specimen D (including thickness): 47.2% x 4.0 x 0.75

Calibration: Electrically Temp. Source Chamber Temperature: 2270°F
Check: Flame Height: 2270° Air Flow Rate: 52.4

<table>
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<tr>
<th>Flame Front Advancing</th>
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<tr>
<td>Time to Maximum Distance</td>
<td>20.605</td>
<td>20.100</td>
<td>20.405</td>
</tr>
<tr>
<td>All Flame Out</td>
<td>20.605</td>
<td>20.100</td>
<td>20.405</td>
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<tr>
<td>Maximum Distance, cm</td>
<td>100.4</td>
<td>100.4</td>
<td>100.4</td>
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<tr>
<td>Critical Radiant Flux, W/m²</td>
<td>28.7</td>
<td>28.7</td>
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<table>
<thead>
<tr>
<th>Observations (Minutes)</th>
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<tr>
<td>Smoking</td>
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<td>Discoloration</td>
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<tr>
<td>Deformation</td>
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<td>2:23</td>
<td>12:00</td>
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<tr>
<td>Burning</td>
<td>3:10</td>
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<tr>
<td>Ignition</td>
<td>5:10</td>
<td>3:10</td>
<td>5:10</td>
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Other Notes: Thought to show white flame.
Sampler burned to first fracture.

Signed / Date / Name / Approval / Date

Form G10-12B-142
## REVISION SUMMARY

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