Professional Testing Laboratory, Inc.

# TEST REPORT

**DATE: 10/31/2006** **TEST NUMBER**: 103832

| | |
|---|---|
| **CLIENT** | Designweave |

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| **TEST METHOD CONDUCTED** | ASTM E648-03 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using A Radiant Heat Energy Source, also referenced as NFPA 253 and FTM Standard 372 |

| | **DESCRIPTION OF TEST SAMPLE** |
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| **IDENTIFICATION** | Z6451 Velvet EW24 |
| **COLOR** | ----- |
| **ROLL** | ----- |
| **CONSTRUCTION** | Cut & Loop Pile |
| **FIBER** | ----- |
| **BACKING** | EcoWorx |
| **REFERENCE** | TEST NO: 102306-14 |

**GENERAL PRINCIPLE**

This procedure is designed to measure the critical radiant flux at flame out of horizontally mounted floor covering systems exposed to a flaming ignition in a test chamber which provides a graded radiant heat energy environment. The imposed radiant flux simulates the thermal radiation levels likely to impinge on the floors of a building whose upper surfaces are heated by flames from a fully developed fire in an adjacent room or compartment. The test result is an average critical radiant flux (watts/square cm) which indicates the level of radiant heat energy required to sustain flame propagation in the flooring system once it has been ignited. A minimum of three test specimens are tested and the results are averaged. Theoretically, if a room fire does not impose a radiant flux that exceeds this critical level on a corridor floor covering system, flame spread will not occur.

The NFPA Life Safety Code 101 specifies as Class 1 Critical Radiant Flux of .45 watts/sq cm or higher and Class 2 Critical Radiant Flux as .22 - .44 watts/sq cm.

| **FLOORING SYSTEM ASSEMBLY** | | | |
|---|---|---|---|
| **SUBSTRATE** | Mineral-Fiber/Cement Board | **UNDERLAYMENT** | Direct Glue Down |
| **ADHESIVE** | Sure Set 5000 | **CONDITIONING** | Minimum of 96 hours at 70 ± 5º F and 50 ± 5% relative humidity |

This test report relates to the installation in accordance with the criteria set forth in the report. Any variation in the installation criteria may produce different results.

| | Distance Burned | Time To Flame Out | Critical Radiant Flux |
|---|---|---|---|
| **Specimen 1** | 39 cm | 25 minutes | 0.49 watts/square cm |
| **Specimen 2** | 40 cm | 22 minutes | 0.48 watts/square cm |
| **Specimen 3** | 42 cm | 25 minutes | 0.44 watts/square cm |

| | |
|---|---|
| **Average Critical Radiant Flux** | 0.47 Watts/Square Cm |
| **Standard Deviation** | 0.03 Watts/Square Cm |
| **Coefficient of Variation** | 5.63 % |

**** NOTE: Meets or exceeds Class 1 rating as specified in NFPA Life Safety Code 101.***

**APPROVED BY:** Gary Asbury

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