

TEST REPORT

DATE: 11-15-2023
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TEST NUMBER: 0302510

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| CLIENT | Joy Carpets & Co |
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| TEST METHOD CONDUCTED | ASTM E648 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 |
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| DESCRIPTION OF TEST SAMPLE | |
|----------------------------|-----------------------------|
| IDENTIFICATION | Injection Dyed Nylon Carpet |
| COLOR | Multi |
| CONSTRUCTION | Machine Tufted Cut Pile |
| FIBER | 100% Nylon |
| BACKING | Woven Polypropylene |

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 | Acrylic | CONDITIONING | Minimum of 96 hours at 70 ±5°F and 50 ± 5% relative humidity |

| | Distance Burned | Time To Flame Out | Critical Radiant Flux |
|-------------------|-----------------|-------------------|-----------------------|
| Specimen 1 | 12 cm | 6 minutes | 0.97 watts/square cm |
| Specimen 2 | 11 cm | 5 minutes | 0.97 watts/square cm |
| Specimen 3 | 14 cm | 6 minutes | 0.96 watts/square cm |

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|--------------------------------------|----------------------|
| Average Critical Radiant Flux | 0.97 Watts/Square Cm |
| Standard Deviation | 0.00 Watts/Square Cm |
| Coefficient of Variation | 0.49 % |

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

APPROVED BY: 



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