

TEST REPORT

DATE:10-10-2024
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TEST NUMBER:0311813

CLIENT	Yangzhou Tuntex Fiber Technologies Co., LTD.
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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	Nexlon Carpet Tile
CONSTRUCTION	Multi-Level Loop Pile
BACKING	Duraback

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	35 cm	16 minutes	0.57 watts/square cm
Specimen 2	34 cm	11 minutes	0.59 watts/square cm
Specimen 3	32 cm	10 minutes	0.63 watts/square cm

Average Critical Radiant Flux	0.60 Watts/Square Cm
Standard Deviation	0.02 Watts/Square Cm
Coefficient of Variation	4.18 %

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

APPROVED BY: 



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