

## **TEST REPORT**

**DATE: 03/27/2012 TEST NUMBER**: 146452

	ASTM E648-08 Standard Test Method for Critical Radiant Flux of
TEST METHOD CONDUCTED	Floor Covering Systems Using A Radiant Heat Energy Source, also
	referenced as NFPA 253 and FTM Standard 372

DESCRIPTION OF TEST SAMPLE			
IDENTIFICATION 8.0 over Moisture Guard			
CONSTRUCTION	Laminate Flooring		
REFERENCE	MANUFACTURER: Mohawk - Unilin Flooring		

## **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	Loose Laid Over Pad	
ADHESIVE	N/A	<b>CONDITIONING</b> Minimum of 96 hours at 70 ± 5° F and 50 ±		
			relative humidity	

	Distance Burned	Time To Flame Out	Critical Radiant Flux
Specimen 1	24 cm	46 minutes	0.84 watts/square cm
Specimen 2	20 cm	59 minutes	0.95 watts/square cm
Specimen 3	21 cm	47 minutes	0.92 watts/square cm

Average Critical Radiant Flux	0.90 Watts/Square Cm	
Standard Deviation	0.05 Watts/Square Cm	
Coefficient of Variation	5.14 %	

<sup>\*</sup> NOTE: Meets or exceeds Class 1 rating as specified in NFPA Life Safety Code 101 and IBC 804.2 Classification.

APPROVED BY:

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714 Glenwood Place Dalton, GA 30721 Phone: 706-226-3283 Fax: 706-226-6787 email: protest@optilink.us