

TEST: ASTM E648

Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

SCOPE/PURPOSE OF TEST

To measure the ability of a flooring material categorized as "interior floor finish" to limit the progression of a fire through a corridor. The test attempts to simulate a situation where the flooring material in the corridor would be subjected to igniting flames and radiant heat emanating from a fire in a room adjacent to the corridor. The test was designed to achieve a more realistic rating for flooring materials which had been previously tested by the ASTM E84 Tunnel Test, which tests all materials in the ceiling of the test chamber.

BRIEF DESCRIPTION OF TEST

A test specimen, $9'' \times 41''$, is placed on the floor of the test chamber. A gas-fired radiant heater is situated above the test specimen. The exposed specimen face, $8'' \times 40''$, experiences a heat flux of about 1.1 watts/cm² at the point closest to the radiant heater. The heat experienced by the specimen declines until it reaches a low of about 0.1 W/cm² at the far end of the specimen.

A multi-flamelet burner sits 2" above the near end of the test specimen. After a 5 minute period, the multi-flamelet burner is placed in contact with the near end of the test specimen. If flaming is indicated on the specimen, the test is continued to the point where the flaming or surface burning extinguishes. This point of extinguishment is referred to as the "critical radiant flux at flameout". The less distance the specimen burns, the higher the "critical radiant flux" value. The higher the value, the better the classification of the tested material.

CLASSIFICATION SYSTEM

Values which are usually cited by model building codes written by NFPA (National Fire Protection Agency) and ICC (International Code Council) for interior floor finish materials:

Class	Minimum Critical Radiant Flux at Flameout
1	0.45 W/cm ²
2	0.22 W/cm ²



ASTM E648

Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

Sketches of Tests: ASTM E648 Building Codes: ASTM E648 Rail Cars: ASTM E648 Buses/Vans: ASTM E648 (CAD) TM: ASTM_E648

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Received:04/28/2017 Completed:05/09/2017 Lette	er: M JB	P.O.#:	Test Report #:	3-18549-0-			
Client's Lot No.: Temporary Surface Protection. Date of Mfg.: April 2017. Style: Skudo HT Mat. Composition: 100% Polyester Identification Non-Woven Textile with High Traffic Coating. (see continuation)							
Tested For: Brendon Smith		Key Test:	ASTM E 648 (BLDG)	WIT 795			
Skudo USA 2330 Alberta Drive, # 200 Dallas, TX 75229			1-(972)-993-0777 1-()	Ext:			
CLIENT'S IDENTIFICATION (continuation):							
[Release paper removed prior to testing	· -						
ASTM E 648: LE 2015; V 09/15 PC: NFPA 101: LE 2015; V 04/15 NFPA 5000: LE 2015; V 04/15 IBC: LE 2015; V 03/15	48H or 96H	NTR 04/12	/dl SM/mg				
APPROXIMATE THICKNESS OF MATERIAL (as mo	easured by G	ovmark): 0.038"					
BRIEF DESCRIPTION OF TEST: The test spe radiant heater is situated above the te specimen at the test starting point. A lowered to impinge on the end of the ter The test continues until all burning of distance (flame front progession) is con 0" point to the 40" point. The heat fla	st specimen. fter a 5 min st specimen. the specimer mpared agains	A multi-flamele ute preheat perio n extinguishes (f st a graph which	et burner is posit: od, the multi-flame Elameout). The spe contains heat flux	ioned above the elet burner is ecimen burn			
TEST PERFORMED: ASTM E 648 - Standard ' Using a Radiant Heat Energy Source (NFP.			ant Flux of Floor	Covering Systems			
SPECIMEN PREPARATION:							
<pre>[x] Each specimen was laid flat over (a cement asbestos substitute).</pre>			[PC: 48H]	I			
[] Each specimen was bonded to a 1/- (a cement asbestos substitute) u			[PC: 96H] nesive.				
[] Each specimen, with self adhesive to a 1/4" Etera board (a cement of			[PC: 96H]	I .			
[] Each specimen was placed over a animal hair 50 oz/yd² cushioning		d jute and	[PC: 48H]	I			
(Pa	ge 1 of 3)						



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Received:04/2	28/2017	completed:0	5/09/2017	Letter: M	JB	P.O.#	:			Test Report	t #:		3-18549-0
Client's dentification				tection. Date raffic Coatin				e: Sku	do H7	Mat. Comp	osition:	100% F	Polyester
Sested For:	Brendor	n Smith					Key	Fest:	ASTM	1 E 648 (BLI	DG) W	IT	79
	Skudo US		• • • •									-	
		erta Drive, #	200							2)-993-0777		Ext:	
	Dallas, T	X 75229						Fax:	1-()-				
RESULTS:		T	D										
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		at Flame		Crit	ical		Flame		_				
					ant Fl	ux	Flame		-				
Specime		(inches)			ts/cm²		(mm:ss						
							10.00						
1 2		2.1 3.0).97).96		10:00						
3		3.7).95		10:00						
5		5.7	5.1			-	10.00						
				Avg: 0	.96								
Note: As	measur	ed from t:	ime zero	(insertion	of sp	ecimen	into c	hambe	er).				
10000. 115	measur		LUIC ZCIO	(1115010101	I OI SP	CCIMCII		namot					
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Page 3

Received:04/28/2017 Completed:05/09/2017 Letter: M	JB P.O.#: Test Report #: 3-18549-0-
Client'sLot No.: Temporary Surface Protection. Date ofIdentificationNon-Woven Textile with High Traffic Coating.	f Mfg.: April 2017. Style: Skudo HT Mat. Composition: 100% Polyester (see continuation)
Tested For: Brendon Smith Skudo USA	Key Test: ASTM E 648 (BLDG) WIT795
2330 Alberta Drive, # 200 Dallas, TX 75229	Tel: 1-(972)-993-0777 Ext: Fax: 1-()
a -	
REMARKS: Test was conducted in the presence of	Wayne Aaron (Texchem U.K. Limited).
CONCLUSION: Based on the above Results and Cod	e Classification, the item tested is assigned a:
<pre>[x] Class I rating [] Class II rating [] Fails to achieve a minimum classificatio</pre>	on thereby rendering the product unsuitable
in terms of code requirement	
with the procedures and equipment specified abo	s were obtained after testing specimens in accordance ove.
GOVMARK // /pm /mo	TEXC-UK/SKU-TX/SKU-AU
(Page 3 of	÷ 3)
Douglas W. Lipp	MAY 1 0 2017

The results contained in this report relate only to item(s) tested. The test report shall not be reproduced, except in full, without written approval from Govmark.





