

CERTIFICATE

Material Fire Test Certificate

IGNL-6115-05C I01 R00

DATE OF TEST 11.05.2022
 ISSUE DATE 17.05.2022
 EXPIRY DATE 16.05.2027

AS ISO 9239.1-2003 Determination of the burning behaviour using a radiant heat source

SPONSOR
Quest Carpets
 43-55 Mark Anthony Drive
 Dandenong South, VIC 3175

TEST BODY
Ignis Labs Pty Ltd
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 Queanbeyan NSW 2620
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 Test body is the test location



Specimen Identification

Eureka

Specimen Description

The sponsor described the specimens as 32 oz multi-level loop pile carpet. It is composed of solution dyed nylon with a primary backing of woven synthetic and a secondary backing of action bac. It has a nominal pile thickness of 10 mm and a nominal mass of 1088 g/m². It is to be tested conventionally on Dunlop Government Red underlay. The received specimens were a dark grey coloured loop pile carpet attached to a beige weaved backing on a multicoloured underlay. The carpet had a measured nominal thickness of 10.10 mm, and the underlay had a measured nominal thickness of 7.15 mm. The test specimens had a total nominal thickness of 16.10 mm. The specimens were received as a roll from which the specimens were fabricated by Ignis Labs. Ignis Labs was not responsible for the sampling stage. All specimens were sampled by the test sponsor. The test results apply to the specimens as received.

Test Method

Four specimens were tested in accordance with Australia Standard AS 9239.1-2003 Reaction to fire tests for floorings, Part 1: Determination of the burning behaviour using a radiant heat source. Specimens 1-3 were tested along the production direction and specimen 4 was tested against the production direction. As requested by the test sponsor, the specimens were tested for 30 minutes only.

Observations

Comparing the critical heat flux values of specimens tested in two directions, the specimen with the production direction demonstrated a worse result and as such an additional two tests were completed in that direction. All specimens tested with the production direction exhibited equivalent performance. None of the specimens reached flameout within the 30-minute test duration. Sustained flaming of specimens was observed starting from 140, 132, 162, and 139 seconds for specimens 1 to 4 respectively. Tearing and melting of the surface was observed prior to the ignition. Flashing was observed on the face of the specimen ahead of the flame front. After the test, the specimens were charred and melted along one half to two thirds of their length.

Calculations

Parameters	Unit	Specimen			
		With Product Direction		Against Product Direction	
		1	2	3	4
Specimen number		1	2	3	4
Test duration	min	30.00	30.00	30.00	30.00
Time to reach 50mm	s	166	165	171	169
Flameout time	min	-	-	-	-
Flame spread at 10 min	mm	480	480	450	430
Flame spread at 20 min	mm	590	580	540	520
Flame spread at 30 min	mm	660	650	630	600
Flame spread at flameout	mm	660	650	630	600
Maximum light attenuation	%	66.59	66.13	72.07	66.45
HF-10	kW/m ²	4.06	4.06	4.47	4.74
HF-20	kW/m ²	2.82	2.93	3.35	3.55
HF-30	kW/m ²	2.25	2.33	2.47	2.72
CHF	kW/m ²	-	-	-	-
Critical heat flux	kW/m ²	2.2	2.4	2.4	2.8
Smoke obscuration integration	%×min	185.91	184.97	185.56	180.71

Result

Parameters	Unit	Results
Average flame spread	mm	646.67
Average critical heat flux	kW/m ²	2.4
Average smoke obscuration integration	%×min	185.48


 Test Supervisor
 Darren Laker


 Technical Lead
 Jessica Ying

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Disclaimer These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test, and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use. The results of these fire tests may be used to directly assess fire hazard, but it should be recognized that a single test method will not provide a full assessment of fire hazard under all fire conditions.

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