

CERTIFICATE

Material Fire Test Certificate

IGNL-6156-05-03C I01 R00

DATE OF TEST 09.08.2022
 ISSUE DATE 16.08.2022
 EXPIRY DATE 15.08.2027

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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 3 Cooper Place
 Queanbeyan NSW 2620
 Australia
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 Test body is the test location



Specimen Identification

Resilience

Specimen Description

The sponsor described the specimen as 60 oz Solution Dyed Nylon loop pile carpet. It is composed of solution dyed nylon. It is of loop pile construction with a pile height of 11 mm and a carpet width of 3.66 m. It has a density of 2040 gsm. Its primary backing is composed of woven synthetic, and its secondary backing is composed of 7 oz jute. It is to be tested with Dual Bond using Airstep Dura Bond underlay.

The specimen was received as a roll of dark grey coloured twist pile carpet attached to a beige weaved backing on a predominantly white, multicoloured underlay. The carpet specimens were glued to the underlay using Roperts R95 Dual Bond carpet adhesive. The underlay was then glued to a wooden substrate. As directed by the sponsor, Ignis Labs fabricated the specimens to the test dimensions from the raw material provided. The carpet had a measured nominal thickness of 10.93 mm, and the underlay had a measured nominal thickness of 3.83 mm. The test specimens, including the substrate, had a total nominal thickness of 22.59 mm.

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. Specimen 1 was tested along the production direction and specimens 2-4 were 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 against the production direction demonstrated a worse result and as such an additional two tests were completed in that direction. All specimens against the production direction exhibited equivalent performance. Specimens 1-3 failed to reach flameout within the 30-minute test duration, while specimen 4 reached extinguishment at exactly 30 minutes. Sustained flaming of specimens was observed starting from 277, 271, 224, and 190 seconds for specimens 1 to 4 respectively. Melting of the carpet surface was observed prior to ignition. Charring and melting were observed on the carpet surface after testing. The substrate was not exposed during or after testing.

Calculations

Parameters	Unit	With Product Direction	Specimen		
			Against Product Direction		
		1	2	3	4
Specimen number					
Test duration	min	30.00	30.00	30.00	30.00
Time to reach 50mm	s	450	278	227	192
Flameout time	min	-	-	-	-
Flame spread at 10 min	mm	160	300	280	340
Flame spread at 20 min	mm	310	410	430	460
Flame spread at 30 min	mm	310	460	450	460
Flame spread at flameout	mm	310	460	450	460
Maximum light attenuation	%	61.62	60.73	69.67	73.97
HF-10	kW/m ²	10.23	7.51	7.90	6.65
HF-20	kW/m ²	7.32	5.11	4.82	4.38
HF-30	kW/m ²	7.32	4.38	4.53	4.38
CHF	kW/m ²	-	-	-	-
Critical heat flux	kW/m ²	7.4	4.4	4.6	4.4
Smoke obscuration integration	%×min	302.52	549.66	573.92	635.32

Result

Parameters	Unit	Results
Average flame spread	mm	456.67
Average critical heat flux	kW/m ²	4.4
Average smoke obscuration integration	%×min	586.3


 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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