



CERTIFICATE

Material Fire Test Certificate

IGNL-8009-05-03C I01 R00

DATE OF TEST 07.12.2023
08.12.2023
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EXPIRY DATE 02.01.2029

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
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Australia
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Test body is the test location



Specimen Identification

Crossley AB – Dunlop Excellay underlay

Specimen Description

The sponsor described the test specimen as 48 oz Solution Dyed Nylon twist pile carpet. It is composed of solution dyed nylon. It is to be tested conventionally on Dunlop Excellay underlay.

The specimen was received as a roll of dark grey coloured twist pile carpet attached to a beige woven backing on a multicoloured underlay with a yellow facing. 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 13.01 mm, and the underlay had a measured nominal thickness of 7.10 mm. The test specimens had a total nominal thickness of 20.11 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. 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 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 157, 150, 159, and 152 seconds for specimens 1 to 4 respectively. Melting was observed ahead of the flame front. Charring and melting were observed on the carpet surface after testing.

Calculations

Parameters	Unit	Specimen			
		With Product Direction			Against Product Direction
Specimen number		1	2	3	4
Test duration	min	30.00	30.00	30.00	30.00
Time to reach 50mm	s	197	200	213	190
Flameout time	min	-	-	-	-
Flame spread at 10 min	mm	350	310	350	280
Flame spread at 20 min	mm	450	410	450	390
Flame spread at 30 min	mm	500	460	510	480
Flame spread at flameout	mm	500	460	510	480
Maximum light attenuation	%	68.65	37.25	65.72	25.49
HF-10	kW/m ²	6.34	7.16	6.34	7.78
HF-20	kW/m ²	4.50	5.12	4.50	5.52
HF-30	kW/m ²	3.73	4.35	3.58	4.04
CHF	kW/m ²	-	-	-	-
Critical heat flux	kW/m ²	3.8	4.4	3.6	4.0
Smoke obscuration integration	%×min	395.26	178.37	331.88	170.35

Result

Parameters	Unit	Results
Average flame spread	mm	490
Average critical heat flux	kW/m ²	4.0
Average smoke obscuration integration	%×min	301.84

Test Supervisor
Darren Laker

Technical Lead
Jessica Ying

Version: IGNL-QF-031-Issue 03 Revision 01

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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