

CERTIFICATE

Material Fire Test Certificate

IGNL-8037-03-01C I01 R00

DATE OF TEST 17.05.2024
 ISSUE DATE 30.05.2024
 EXPIRY DATE 29.05.2029

AS/NZS 1530.3-1999
 Simultaneous determination of ignitability,
 flame propagation, heat release and smoke
 release

SPONSOR
Respira Built
 8 Rupert Street
 Collingwood VIC 3066

TEST BODY
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Test body is the test location



NATA Accredited Laboratory
 Number: 20534 Site number: 24604
 Accredited for compliance with
 ISO/IEC 17025 - Testing

Specimen Name

Respira Block

Specimen Description

The sponsor described the tested specimen as a hemp-lime based building block. It has a nominal composition of hemp and lime. It has a nominal thickness of 80 mm and a nominal density of 330 kg/m³. It is beige in colour and has an end use as insulative infill cladding.

The received specimens were beige blocks. The blocks had measured height of 195 mm and a measured width of 502 mm and a measured thickness of 81.75 mm. It had a measured density of 369 kg/m³. The blocks were cut down to a width of 450 mm by the sponsor. Each specimen consisted of three blocks stacked vertically with no fixing method applied. The blocks were symmetric. Ignis Labs was not responsible for the sampling stage. All specimens were sampled and fabricated by the test sponsor. Test results apply to specimens as received.

Test Method

Six samples were tested in accordance with Australian Standard 1530, Method for fire tests on building components and structures, Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release, 1999. For the test, each sample was clamped to the specimen holder in four places. A woven metal radiant panel was used in lieu of ceramic tiles. In the smoke monitoring system, a helium-neon laser was applied as the light source and a detector with peak responsivity between 900 and 1000 nm.

Observations

The tested specimens exhibited equivalent results, and none ignited. Light smoke was observed from 160 seconds, and charring was observed from 220 seconds into the test. Very small flashes of flames were observed between the top two blocks after 12 minutes in specimen 5 test, but no sustained flaming was observed. After the test, the centre of the specimens was charred and discoloured.

Results

Parameter	Sym	Unit	Results								
Specimen number			1	2	3	4	5	6	7	8	9
Ignition time	T _i	min	NA	NA	NA	NA	NA	NA	-	-	-
Flame propagation time	T _f	s	-	-	-	-	-	-	-	-	-
Heat release integral		kJ/m ²	-	-	-	-	-	-	-	-	-
Optical density (ignition)	D	/m	-	-	-	-	-	-	-	-	-
Optical density (non ignition)	D _{NI}	/m	0.02	0.02	0.00	0.02	0.01	0.01	-	-	-
Smoke release (ignition)	Log ₁₀ (D)		-	-	-	-	-	-	-	-	-
Smoke release (non ignition)	Log ₁₀ (D) _{NI}		-1.64	-1.78	-2.48	-1.74	-2.09	-2.15	-	-	-

Calculation

Parameter	Mean	Standard error
Ignition time	-	-
Flame propagation time	-	-
Heat release integral	-	-
Optical density (ignition)	-	-
Optical density (non ignition)	0.01	0.00
Smoke release	-1.98	0.13

Result

Indices	Range	Result
Ignitability	0-20	0
Spread of Flame	0-10	0
Heat Evolved	0-10	0
Smoke Developed	0-10	1

The results only apply to the specimen mounted as described in this report.



Test Supervisor
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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 information contained in this document is provided for the sole use of the recipient and no reliance should be placed on the information by any other person. In the event that the information is disclosed or furnished to any other person, Ignis Labs Pty Ltd accepts no liability for any loss or damage incurred by that person whatsoever as a result of using the information. The results only apply to the specimen mounted as described in this report. The results of this fire test 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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