



TEST REPORT

Report Number
24-0530-01

Report Type
Original

Report Date
03/07/2024

Reference
Quality reference Hempwood

Customer
Tom Mathys
FIBONACCI LLC
Rockwood Road 302
42071 MURRAY, KY
UNITED STATES

Notes

The results only apply to the tested samples. Ghent University is not responsible for the sampling. Ghent University holds no responsibility for information provided by the client (denoted by ^(cl)). Results from test methods denoted by * are ISO 17025 accredited, cf. Belac 055-test. Conclusion, comments and opinions denoted by * are ISO 17025 accredited, cf. Belac 055-test. For accredited tests, measurement uncertainty is available upon request. When checking conformity, measurement uncertainty is not taken into account, unless otherwise stated. Standard-required information that - to enhance readability - is not included in the report, can always be requested. This report is only valid when it is digitally signed. This report can be shared only in its complete and unaltered form and in consent with the customer.



MATERIAL and INFORMATION

Name ^(ci)	Date of receipt
Quality reference Hempwood	03/06/2024

OBJECTIVE

Determination of the fire behaviour.

METHODS and CONDITIONS

Ignitability - Single flame

Standard:	ISO 11925-2 (2020)*
Specimen:	The specimen is not cleaned before the test. The strictest test condition is chosen as default: the specimen is put loose laid on a fibre cement board (according to EN 13238). Together they are mounted vertically into the test frame.
Method:	A surface flame attack is applied during 15 s. Time of burning and/or glowing are observed, as well as whether the flame tip reaches the 150 mm boundary line above the flame application point within 20 s after the start of the test. In order to meet the requirements for the class Efl, the boundary line should not be reached for any of the specimens tested.
Number of tests:	6
Conditioning samples:	23 ± 2 and 50 ± 5 % R.H.
Disclaimer:	The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test. They are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Fire behaviour - radiant panel

Standard:	EN ISO 9239-1 (2010)*
Specimen:	The specimen is put loose laid on a fibre cement board (according to EN 13238). The specimen is not cleaned before the test.
Method:	During the test, the specimen is irradiated by a gas radiator at an angle of 30°. A small flame is used to ignite the specimen. The specimen is ignited during 10 minutes. In case of inflammable specimens, the test lasts until the flame is extinguished, but 30 minutes at the most. The criterion is the burned length, from which the critical radiant flux is deduced using a calibration curve. The average flux values are rounded to the nearest 0.2 (kW/m ²) as specified in ISO 9239-1
Number of tests:	4
Conditioning samples:	23 ± 2 and 50 ± 5 % R.H.
Disclaimer:	The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test. They are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The tests were finished in week 26/2024.

RESULTS

Ignitability - Single flame

Test Date: 17/06/2024

Lengthwise

Test piece	Burning time (min:s)	After glowing time (min:s)	150 mm reached within 20 s
1	00:15	00:00	No
2	00:15	00:00	No
3	00:15	00:00	No

Crosswise

Test piece	Burning time (min:s)	After glowing time (min:s)	150 mm reached within 20 s
1	00:15	00:00	No
2	00:16	00:00	No
3	00:16	00:00	No

Fire behaviour - radiant panel

Test Date: 27/06/2024

Direction of test piece:	Crosswise	Lengthwise	Lengthwise	Lengthwise	Average of the test pieces Lengthwise
Flame spread after 10 min (mm)	190	170	200	150	
Flame spread after 20 min (mm)	340	330	350	330	
Flame spread after 30 min (mm)	360	370	400	400	
Flame spread after extinction (mm)	360	370	400	400	
Flame time	30min 00s	30min 00s	30min 00s	30min 00s	
Critical heat flux CHF at extinction (kW/m ²)	6.0	5.8	5.2	5.2	5.4
Total smoke production at end of test (%.min)	96	60	53	69	61



Didier Van Daele
Head of Floor covering and Fire Tests

Enclosure to Test report 24-0530-01

Classification EN 13501-1

Warning: As such, this statement cannot be used for CE labelling purposes, because an additional classification report according to EN 13501-1 is required.

Classification	EN 11925-2 (Ignition time 15 s)	ISO 9239-1 (test time = 30 min)	Result
	F_s after 20 s	Critical flux	
B _{fl}	F _s ≤ 150 mm	≥ 8.0 kW/m ²	
C _{fl}	F _s ≤ 150 mm	≥ 4.5 kW/m ²	X
D _{fl}	F _s ≤ 150 mm	≥ 3.0 kW/m ²	
E _{fl}	F _s ≤ 150 mm	No demand	
F _{fl}	No demand	No demand	

Additional classification in relation to smoke production

Smoke development	Class	Result
< 750%.min	s1	X
> 750%.min	s2	