

## SUMMARY OF THE PERFORMANCES OF THE FIVE INNOVATIVE SYSTEMS

	Cladding sandwich panel (150mm)	Pitch roofing sandwich panel (150mm)	Double skin system	Facade cladding	Flat roofing sandwich panel (200mm)
<b>Mechanical span validated</b>	6m 14.97 kN	6m 19.29 kN	6m	2m	3m
<b>Diaphragm 3m x3m</b>	4.8 kN/150mm	8.2 kN / 150mm	29.8 kN / 150mm	n/a	10 kN / 150mm
<b>Seismic</b>	Pass	Pass	Test stopped (System too rigid)	Test pending	Pass
<b>Thermal (Up)</b>	0.38 W/m <sup>2</sup> . K (150mm) 0.29 W/m <sup>2</sup> . K (200mm)	0.35 W/m <sup>2</sup> . K (150mm) 0.28 W/m <sup>2</sup> . K (200mm)	0.24 W/m <sup>2</sup> . K with profile. 0.30 W/m <sup>2</sup> . K with cassettes.	>0.25 W/m <sup>2</sup> . K with wall	0.15 W/m <sup>2</sup> . K
<b>Thermal choc</b>	Pass	Not tested	n/a	n/a	Pass for use in facade
<b>Reaction to fire</b>	Bs1d0	Bs1d0	Bs2d0	Not tested	Bs1d0
<b>Resistance to fire</b>	External wall: EI 30 (i→o) Partition: EI 45	REI 30 25kg/m <sup>2</sup>	External wall: E90 EI30 (i→o) Partition wall: E90 EI45	Not tested depend on type of wall	No pass in the case of roof (80kg/m <sup>2</sup> ) EI 60 cladding
<b>Facade test propagation (with specific test protocol )</b>	Pass	n/a	Not pass (performance dependent on design strategy: implementation and evaluation needed)	Not pass (performance dependent on design strategy: implementation and evaluation needed)	n/a
<b>External fire roof performance</b>	n/a	Tendency Brooft1	n/a	n/a	Broof t1 with insulation and membrane
<b>Smouldering</b>	Yes	yes	Yes	Yes	Yes
<b>Water permeability</b>	Class A 1200 Pa	Class A 1200 Pa	Class A 1200 Pa	Pass Depend on wall	Class A 1200 Pa
<b>Air permeability</b>	$1.1 \leq n p \leq 1.5$ c=0 $1.3 \leq n s \leq 1.7$ c=0	n p 1.4 c = 0 n s 1.2 c = 0	n p 0.8 c = 0.3	Pass Depend on wall	Results for panel: N p 0.8 c 0.2 N s 0.9 c 0.1 Results for panel+insulation+membrane: N p 2.1 c 0 N s 2.0 c 0
<b>Acoustic</b>	R <sub>w</sub> (C,Ctr) 29 (-1 ; -3) dB	R <sub>w</sub> (C,Ctr) 30 (-1 ; -3) dB	R <sub>w</sub> (C,Ctr) 49 (-2 ; -9) dB	>30 db (effect of wall)	R <sub>w</sub> (C,Ctr) 33(-1 ; -4) dB
<b>Fungi test</b>	Sensitive	Sensitive	Sensitive	Sensitive	Sensitive
<b>Durability</b>	Pass Dur2 EN 14509	Pass Dur2 EN 14509	n/a	n/a	Pass Dur2 EN 14509
	Pass demonstrator 2 years	Pass demonstrator 2 years	Pass demonstrator 2 years	Pass demonstrator 2 years	Pass demonstrator 2 years
<b>Climate change-total A-D (kg CO2 equiv/UF)</b>	Panel 200 mm 23,9 Panel 150 mm 22,6	Panel 200 mm 25,9 Panel 150 mm 24,6	36,3	32,0	43,3
<b>Wood fiber sourcing</b>	PEFC label	PEFC label	PEFC label	PEFC label	PEFC label