

RACKING RESISTANCE SUBSTANTIATION SHEET ISO: 5224

SYSTEM: RCM 9mm YWall.
Test Reference 145976 (QT-34438/1/SL) Ref.1
Test Laboratory: Lucudeon
Test Standard: BS EN 594-2011
Original Test Date: 10/03/2015

Tested panel background

- Supplied 9 mm Y-Wall sheathing boards to be installed onto lightweight steel frames panels supplied, to establish racking resistance in accordance with BS EN 594:2011. Racking strength and stiffness of the panel were determined according to Section 6.5 of BS EN 594:2011.
- The samples were received and tested under racking load when subjected to different vertical top loading conditions, as follows:

<i>Panel reference</i>	<i>Vertical top load at 600mm centres (kN)</i>	<i>Tests</i>	<i>Sheathing board thickness (mm)</i>	<i>Perimeter screwing centres (mm)</i>	<i>Intermediate screwing centres (mm)</i>
Y-Wall 9mm sheathing board	0	3	9	150	300
	0	3	9	150	300

SAMPLE DESCRIPTION:

Each 1.2 mm lightweight gauge steel panel was of overall size 2400 x 2400 mm and comprised of 5 steel studs at nominally 600 mm centres. A head binder was used above the top rail but not fixed to the sheathing.

1.2 m x 2.4 m x 9 mm thick Y-Wall sheathing boards were screwed to the face of the lightweight steel frame at 150 mm centres to the perimeter and 300 mm centres to the internal studs, using 4.8 mm x 38 mm self-drilling screws.

TEST RESULTS:

	<i>test determined Rb from BS 5268 – 6.1 factors</i>	<i>Load per stud</i>	<i>Category 1 to BS 5268 -6.1</i>	<i>See notes</i>
	<i>kN/m</i>	<i>kN</i>	<i>kN/m</i>	
Unloaded	2.52	0	1.68	PASS
Loaded	2.38	5	1.68	PASS

Note – It is likely that if 12 mm or greater board was used it would pass the requirements for BS 5268-6.1. Tests are needed to comply with the standard.

CONCLUSION:

The test results show that the RCM Y-Wall can be used in BS5268 part 6.1/ 6.2 as a category 1 board.



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