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:

Panel reference	Vertical top load at 600mm centres (kN)	Tests	Sheathing board thickness (mm)	Perimeter screwing centres (mm)	Intermediate screwing centres (mm)
Y-Wall 9mm sheathing board	0	3	9	150	300
	5	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:

	test determined Rb from BS 5268 – 6.1 factors	Load per stud	Category 1 to BS 5268 -6.1	See notes
	kN/m	*kN*	*kN/m*	
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.