THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

School of Civil Engineering

Certificate of Structural Performance

Borg Manufacturing 9mm Structapanel- square flat edge.

The design methodology and criteria for applications using the 9mm Structapanel™ panels are based upon the results of full scale testing undertaken in 2020 at the Queensland University of Technology, and have been prepared in accordance with widely recognised engineering principles and are based upon use of the following documents:

1. AS1684 – 2021 SAA National Timber Framing Code
2. AS1720.1 – 2010 SAA Timber Structures Code – Part 1 Design Methods

When installed in accordance with the manufacturer's specification using 35mm long nails, 9mm Structapanel™ panels will comply with the requirements of the Building Code of Australia. The certified design properties (derived from full scale testing) for walls up to 2.7m in height, constructed of timber framing of grade JD5 (MGP10) or better, (using 2400 x 900, 2400 x 1200, 2700 x 900 and 2700 x 1200 panels) are as follows, when such loads are determined in accordance with AS1170 (parts 1 - 4):

Type 1 panels: 150/150/300 – WITHOUT tie down rods: minimum racking resistance of 3.4 kN/m

- nailing pattern and nominal fixings of the bottom plate to the floor or slab are similar to Detail (g), Table 8.18, Parts 2 and 3, AS1684.

Type 2 panels: 150/150/300 – WITH M12 tie down rods: minimum racking resistance of 6.4 kN/m

- M12 tie-down rods at each end of the braced wall, with anchors rated to 13kN at 1200mm c/c maximum spacings, and
- nailing pattern similar to Method A, Detail (h), Table 8.18, Parts 2 and 3, AS1684.

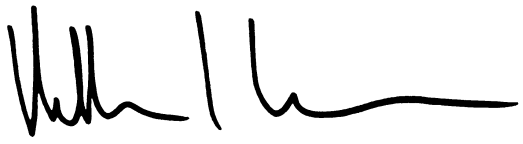
Type 3 panels: 50/150/300 – WITHOUT tie down rods: minimum racking resistance of 6.0 kN/m

- nailing pattern and anchors rated to 13kN at 1200mm maximum spacings similar to Method B, Detail (h), Table 8.18, Parts 2 and 3, AS1684.

Type 4 panels: 50/150/300-– WITH M12 tie down rods: minimum racking resistance of 7.2 kN/m

- M12 tie-down rods at each end of the braced wall, with anchors rated to 13kN at 1200mm c/c maximum spacings.

Product substitution is permitted for panel products of equivalent or lesser bracing capacity. This includes plywood (9mm F8; 7mm F11; 6mm F14; 4.5mm F27) and hardboard (4.5mm) products noted in Table 8.18 of AS 1684 – 2021 (Parts 2 and 3). 9mm Structapanel™ panels can also be used for short panels in accordance with AS1684 Section: 8.3.6.5, which specifies that the bracing capacity is reduced by 50% for walls of 600mm length, with a linear increase in capacity up to full capacity at 900mm length.



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Nov 30, 2021

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