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TEST CERTIFICATE

Customer: **Builditeco Holdings Pty Ltd**
Innovative Building Solutions

Sample Board Product: **18mm thick Magnesium Oxide Board**

AS Test Specification: AS1770.1: 2002, Table 3.1 For Residential & Office Imposed Floor Actions

Date of Test: 26 May 2014

Objective of Test:
The objective of the static load test is to test the sample sheet board product for use as a flooring board in accordance with the concentrated load criteria for floors (1.8kN for residential floors, and 2.7kN for office floors) as specified in Table 3.1, AS 1170.1: 2002, and Table C1 (Suggested Serviceability Limit State Criteria), AS/NZS 1170.0:2002.

Board Sheet Properties
- 48% Magnesium Oxide Board
- 24% Perlite
- 28% Timber Saw Dust
- 4 layers of fiberglass mesh, 2 layers front and 2 layers back embedded
- Density 1100kg/m^3

Test Procedure:
The 900mmx1800mmx18mm board sheet is simply supported on a continuous three spans across 4 joists. A 100mmx100mm square steel plate with a 1.5m long tube was installed at the centre of the span. The steel plate was used as a bearing plate for the imposed floor actions of 1.80kN and 2.70kN using the gym weights (20kg each) placed onto the tube.

Results of Testing:

Loads	Outer Span @ 600mm	Interior Span @ 600mm
1.80kN (residential floors)	Maximum Deflection @ 1.80kN=3.40mm Residual Deflection=0	Maximum Deflection @ 1.80kN=3.0mm Residual Deflection=0
2.70kN (office floors)	Maximum Deflection @ 2.70kN=4.0mm Residual Deflection=0	Maximum Deflection @ 2.70kN=3.50mm Residual Deflection=0

Loads	Outer Span @ 450mm	Interior Span @ 450mm
1.80kN (residential floors)	Maximum Deflection @ 1.80kN=1.70mm Residual Deflection=0	Maximum Deflection @ 1.80kN=1.5mm Residual Deflection=0
2.70kN (office floors)	Maximum Deflection @ 2.70kN=2.3mm Residual Deflection=0	Maximum Deflection @ 2.70kN=2.0mm Residual Deflection=0

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AS Standards

Table 3.1 (AS1170.1:2002)

Type of Occupancy	Specific Use	Uniform Load	Concentrated Load
Residential	General area, bedroom, hospital wards, hotel rooms, toilet areas	2.0kPa	1.80kN
Offices & Work Areas	Offices for general use	3.0kPa	2.70kN

Table C1 (Suggested Serviceability Limit State Criteria) AS/NZS 1170.0:2002

Element	Serviceability Parameter	Maximum Deflection
Magnesium Oxide Board Sheet	Midspan Deflection	Span/200=600/200=3.0mm Span/200=450/200=2.30mm

Conclusion:

This is to certify that the **18mm Magnesium Oxide Board** pass and meet the concentrated load criteria for floors as specified in Table 3.1, AS 1170.1:2002, and the maximum deflection for Serviceability Limit State Criteria as specified in Table 3.1 (AS1170.0:2002). Therefore the board sheet is suitable for use as flooring boards in buildings.

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