

Test Report No. 7191058019-MEC13/02A-ED
dated 26 Aug 2013



PSB Singapore

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SUBJECT:

Testing of fibre cement boards submitted by Everest Industries Ltd

TESTED FOR:

Everest Industries Limited
The Genesis, A-32
Mohan Cooperative Industrial Estate
Mathura Road
New Delhi 110048
India

Attn: Mr Subrata Dutta

TEST METHODS:

1. Adopted ASTM D1037 : 2006a Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials

Section 11 - Tension Perpendicular To Surface (Internal Bond)

Cross-reference ASTM D4541 : 2009 Standard Test Method For Pull-Off Strength Of Coatings Using Portable Adhesion Testers
Cross-reference BS EN 319 : 1993 - Particleboards And Fibreboards - Determination Of Tensile Strength Perpendicular To The Plane Of The Board
2. Adopted ASTM D1037 : 2006a Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials

Section 16 - Direct Screw Withdrawal

DESCRIPTION OF SAMPLE:

Fibre Cement board 'Everest Board'



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The Franklin, Singapore 118223
TUV®



REMARKS:

1. The test samples were cut to 50 mm x 50 mm from 305 mm x 152 mm and stacked to a thickness of 25 mm minimum (3-ply) with epoxy adhesive for inter laminar bond strength test.
2.
 - a. The test samples 152 mm x 76 mm were stacked to a thickness of 25 mm minimum (2-ply) with epoxy adhesive for direct screw withdrawal test.
 - b. The screw was embedded to 16 threads or 17 mm depth into the test sample.
3. The average values of two directions for inter laminar bond strength and direct screw withdrawal tests are reported as requested by the client.

A handwritten signature in black ink, appearing to read 'Eddie Suwand'.

Eddie Suwand
Senior Associate Engineer

A handwritten signature in black ink, appearing to read 'Eng Aik How'.

Eng Aik How
Engineer
Building
Mechanical Centre



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TEST RESULTS:

'Everest Board', size 50 mm x 50 mm, 3-ply

Section 11 - Tension Perpendicular To Surface (Internal Bond)

Direction : Grain

Crosshead speed : 5 mm/min

Sample Reference	1	2	3
Maximum Load (N)	1273.96	1087.50	1404.30
Length of Specimen (mm)	50	50	50
Width of Specimen (mm)	50	50	50
Inter Laminar Bond Strength (MPa)	0.51	0.43	0.56
Average Inter Laminar Bond Strength (MPa)	0.50		

Direction : Across Grain

Sample Reference	1	2	3
Maximum Load (N)	1698.82	1675.71	1631.84
Length of Specimen (mm)	50	50	50
Width of Specimen (mm)	50	50	50
Inter Laminar Bond Strength (MPa)	0.68	0.67	0.65
Average Inter Laminar Bond Strength (MPa)	0.67		

Average Inter Laminar Bond Strength, two directions (MPa)	0.59
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TEST RESULTS:

'Everest Board', size : 152 mm x 76 mm, 2-ply

Section 16 - Direct Screw Withdrawal

Direction : Grain

Crosshead speed : 1.5 mm/min

Sample Reference	1	2	3	4	5
Maximum Load (N)	1276.50	1345.01	1209.09	1197.54	1266.98
Average Maximum Load (N)	1259.02				

Direction : Across Grain

Sample Reference	1	2	3	4	5
Maximum Load (N)	1452.93	1327.30	1279.80	1305.28	1272.71
Average Maximum Load (N)	1327.60				

Average Maximum Load, two directions (N)	1293.31				
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July 2011

