Centre for Advanced Composite Materials
Mechanical Testing Laboratory
Department of Mechanical Engineering

Mr. J.B.M.Geurts
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THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
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Date: 3 Sept 2012

Your Ref: Hydrapanel
Our Ref: 2908

KAINDL
PO Box 25-659
St. Heliers
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Attn Barry Smith

Report on Bending Strength Test on the basis of AS/NZS 2908.2

Samples: Ten specimens, 250 x 250 mm, cut from five sheets, were submitted by KAINDL for bending strength testing on the basis of AS/NZS 2908.2. The specimens were placed in a Contherm Model Cat 180 environmental chamber for a period of seven days with a controlled atmosphere of 23 ± 5°C and 50 ± 10% relative humidity in such a manner that all faces were adequately ventilated.

Test Method: The specimens were tested in three-point bending for determination of the modulus of rupture for Type B sheets on the basis of AS/NZS 2908.2 in an Instron 1185 universal testing machine using a support span of 215 mm. The reverse side of the specimens was facing the supports of the bending rig. All specimens were tested a second time with the line of load application at right angles to the first test. The average of the values from testing in both directions was used for determination of the modulus of rupture.

Results: Test results apply only to the specimens tested, and are tabulated on page 2 of this report.

These tests were carried out in the Mechanical Testing Laboratory,
Centre for Advanced Composite Materials, Department of Mechanical Engineering,
The University of Auckland.

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MECHANICAL TESTING LABORATORY
DEPARTMENT OF MECHANICAL ENGINEERING
THE UNIVERSITY OF AUCKLAND.

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Ambient Temp: 23 °C
Material: Hydrapanel
Sample: Type B sheets

Specimen No	Thickness Average (mm)	Width (mm)	Length (mm)	Support Span (mm)	Modulus of Rupture * (MPa)	Max Load (N)
1	7.10	250	250	215	9.38	367
2	7.05	250	250	215	10.50	405
3	7.45	250	250	215	8.78	378
4	6.95	250	250	215	9.80	367
5	7.35	250	250	215	10.99	460
6	7.10	250	250	215	8.38	328
7	7.20	250	250	215	9.07	365
8	7.35	250	250	215	9.00	377
9	6.90	250	250	215	10.24	378
10	7.20	250	250	215	10.84	436
Mean	7.17	250	250	215	9.70	386
Std Dev	0.18	0.00	0.00	0.00	0.91	38.1

* The Modulus of Rupture is the average of the values obtained from testing the samples in two directions.