

20 October 2009

Client: Tasman Insulation New Zealand Limited

TEST CERTIFICATE FOR HARVI-FOIL® MEDIUM DUTY (130)

This product has been tested for the properties below according to AS/NZS4200.1:1994.

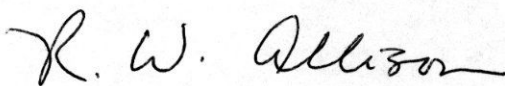
Tested by Scion:

1. **Tensile strength** according to AS/NZS 4200.1 Based on AS 1301.448
Machine direction - greater than 9.5 kN/m
Lateral direction - greater than 6.0 kN/m
2. **Edge-tear resistance** according to AS/NZS 4200.1 Based on Tappi standard T470.
Machine and lateral directions: Greater than 65 N
3. **Folding endurance** according to AS/NZS 4200.1 Based on AS/NZS 1301.423
Not less than –
2.00 (i.e $\log_{10}100$) in the machine direction
1.70(i.e $\log_{10}50$) in the lateral direction
4. **Resistance to dry delamination** according to AS/NZS 4201.1
Pass (all 10 test pieces are without delamination)
5. **Resistance to wet delamination** according to AS/NZS 4201.2
Pass (all 10 test pieces are without delamination)
6. **Shrinkage** according to AS/NZS 4201.3
Less than 0.5%
7. **Resistance to water penetration** according to AS/NZS 4201.4
No staining with a head of dye solution of at least 100mm

Tested by the University of Western Australia:

- Emittance** according to AS/NZS 4201.5 Based on ASTM E408-71
Albar inside – reflective (not greater than 0.05)
Albar outside – reflective (not greater than 0.05)

The results from testing at Scion, UWA and AWTA are from the samples as supplied to Scion by Tasman Insulation New Zealand Limited.



Dr R W Allison
Project Leader