



# TEST REPORT

## DC18320-04-1

### REPORT ON TENSILE BOND STRENGTH OF A MEMBRANE

#### CLIENT

SOPREMA  
Candida Building 4  
61 Constellation Drive  
Mairangi Bay  
Auckland 0630  
New Zealand

All tests and procedures reported herein, unless indicated, have been performed in accordance with BRANZ ISO9001:2015 Certification



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## LIMITATION

The results reported here relate only to the item/s tested.

## TERMS AND CONDITIONS

This report is issued in accordance with the Terms and Conditions as detailed and agreed in the BRANZ Services Agreement for this work.



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# 1. SCOPE

Tensile bond strength testing of a Soprema membrane which has been bonded to a metal skinned SIPs panel.

# 2. PRODUCT

The client supplied one unaged membrane sample bonded to a metal skinned SIPs panel. The BRANZ sample number and product description is given in table 1.

**Table 1. Samples and sample descriptions.**

| BRANZ Sample number | Customer product descriptions   |
|---------------------|---|
| 24/898              | Product: Flagon EP/PV-F<br>Thickness: 1.5 mm + Fleece<br>System: TPO water proofing membrane<br>Adhesive: Polyurethane adhesive.<br>Substrate: Steel faced insulation panel |

# 3. METHOD

Tensile bond strength was carried out on an Instron 6800 series Universal testing machine with Instron Bluehill software control. A 2 kN load cell and crosshead speed of 1 mm/minute was used. Two-part epoxy resin was used to glue six 50 x 50 mm steel test dollies to the supplied test material. The perimeter of each dolly was cut through to the metal SIPs layer using a sharp knife.



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## 4. RESULTS

The tensile bond strength test results are given in Table 2. Images of the adhesive bond failure is given in Figure 1.

**Table 2. SOPREMA Flagon EP/PV-F tensile bond results.**

| Sample no. | Peak Load (N) | Tensile Strength (kPa) | Average Tensile Strength (kPa) |
|------------|---------------|------------------------|--------------------------------|
| 1          | 561.1         | 224.4                  | 225.0                          |
| 2          | 606.7         | 242.7                  |                                |
| 3          | 557.1         | 222.8                  |                                |
| 4          | 651.4         | 260.6                  |                                |
| 5          | 501.8         | 200.7                  |                                |
| 6          | 496.4         | 198.6                  |                                |

**Figure 1. SOPREMA Flagon EP/PV-F tensile bond samples (24/898).**

