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## BTS2351 CERTIFICATE OF TEST TR230906-1

### Assessment of Water Resistance and Adhesion of the Dunlop Express Wet Area (Liquid Applied) Waterproofing Membrane when Applied to an AQUAMOX base & hob tray

#### 1.0 OBJECTIVE:

1.1 BEAL Testing Services were asked to assess the suitability of a new liquid applied membrane to be applied over a system comprising AQUAMOX Board, AQUAMOX hobs, primer, tapes and AQUAMOX adhesive & sealant. A constructed configuration resembling a small shower base was to be built for which the performance of the new membrane could be assessed.

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1.3 The new membrane was the Dunlop Express Wet Area Waterproofing Membrane.

1.4 The key performances to be assessed were water resistance and durability – the latter assessed by way of pull-off adhesion testing after the substrate had been subjected to 10 days of water contact and 24 hours of conditioning in an environmental chamber set to 23°C and 50% RH.

#### 2.0 METHODOLOGY:

2.01 Testing was undertaken following BEAL Test Procedure TP182 Assessment of water resistance of LAMs and, BEAL Test Procedure TP 105 Coating Adhesion Pull-off testing.

2.02 A small shower tray with 60mm high hobs adhered and tape-sealed to AQUAMOX board was constructed to provide a 480mm x 590mm inside dimension. Very hot water was then poured into the tray to a height of 40mm. Checks for any leakage were made every hour for 4 hours but no leakage was detected. On completion of 10 days, the water was removed.

2.03 To assess the durability of adhesion, a set of 5 x 50mm dia dollies were adhered to the membrane using an epoxy glue and allowed to cure overnight. The dollies were then pulled off the membrane surface, as per TP105.

#### 3.0 CONDITIONS:

3.01 The samples of the AQUAMOX components were subjected to 23°C and 50%RH for 24 hours before the adhesion testing was carried out.

3.02 Testing was carried out in a room conditions.

#### 4.0 CRITERIA:

The criterion for these tests was that there be no signs of leakage after the 10 days, and that the pull-off resistance be greater than 0.5MPa.

#### 5.0 TEST EQUIPMENT:

5.01 The environmental Chamber was a Steridium environmental chamber with programmable temperature and humidity, while the adhesion pull-off tester was a DeFelsko AT model Adhesion tester.

## 6.0 TEST RESULTS:

- 6.01 After being subjected to hot water initially, allowed to cool, then 10 days of cold water with a hydrostatic head from 40mm depth, no leakage was detected.
- 6.02 Test Results using the Defelsko AT Pull-off tester were:

Sample Number	Maximum Force (MPa)
1	0.84
2	0.79
3	0.49
4	0.51
5	0.53
Average	0.63
Standard Deviation	0.16

- 6.03 Interpretation of the results

In the view of BEAL, the range of adhesion results indicate an adequate adhesion of the Dunlop Express Wet Area Waterproofing Membrane when Applied to an AQUAMOX base & hob tray sample.

## 7.0 COMMENT:

- 7.01 Based on the above results, the new waterproofing membrane from Dunlop is suitable for use with the AQUAMOX system, when installed in accordance with the manufacturer's instructions.



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### Building Element Assessment Laboratory Limited

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