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TEST REPORT

DA0331

TESTING OF ROCKCOTE RESENE HYDROPLAST MATERIAL

CLIENT
Rockcote Resene Limited
10B Abros Place
Burnside
Christchurch
New Zealand

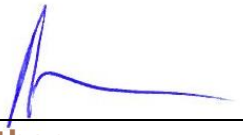
LIMITATION

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.

SIGNATORIES



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Reviewer

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1. DESCRIPTION OF MATERIAL TESTED

The client supplied Hydroplast test samples formed from a two-part flexible cement-based membrane which was brown in colour. These samples were prepared at a thickness of 2.8 mm by the client in accordance to their installation instructions and featured a glassfibre reinforcing mesh.

2. DESCRIPTION OF TEST PROCEDURE

Testing was completed following AS/NZS 4858:2004. Test specimens were prepared in accordance with AS 1145.3 (type 5 specimen) and were conditioned for 7 days at 23 ± 2°C and 65 ± 15% relative humidity prior to being control tested, and exposed to deionised water for a period of 7, 28 and 56 days respectively. The specimens were then wiped dry and tested for tensile strength and elongation at break. Heat ageing was also conducted and involved conditioning the test specimens in an oven set at 50±2°C for a period of 7 days followed by 2 days at 23 ± 2°C and 65 ± 15% relative humidity before being tested for strength and elongation at break. An Instron 5569 Universal testing machine with a 10kN load cell was used to provide a crosshead speed of 5 mm/min, a set gauge length of 75mm was used for each test. Test results are recorded in tables 1-5 and a summary in table 6.

Water absorption testing was completed on the product in accordance with AS3558.

Water vapour transmission rate testing was completed on the product using the testing carried out in accordance with ASTM E96 desiccant method.

3. RESULTS

Table 1: Control test results

Exposure period	Tensile strength (MPa)	Elongation at break (mm)
Controls Machine direction 7 days at 23 ± 2°C and 65 ± 15%RH	12.3	2.3
	12.2	2.5
	11.6	2.5
	11.1	2.5
	15.7	2.1
	18.2	2.4
Average	**13.5**	**2.4**
Standard deviation	**2.8**	**0.2**

Table 2: 7 day exposure test results

Exposure period	Tensile strength (MPa)	Elongation at break (mm)
Deionised water Machine direction 7 days at 23 ± 2°C	5.8	2.8
	6.0	2.9
	6.5	2.6
	5.6	2.8
	8.2	2.6
	8.3	2.4
Average	**6.7**	**2.7**
Standard deviation	**1.2**	**0.2**

Table 3: 28 day exposure test results

Exposure period	Tensile strength (MPa)	Elongation at break (mm)
Deionised water Machine direction 28 days at 23 ± 2°C	5.8	2.1
	5.3	1.7
	6.7	1.8
	6.3	2.3
	5.6	1.8
	5.2	1.7
Average	**5.8**	**1.9**
Standard deviation	**0.6**	**0.3**

Table 4: 56 day exposure test results

Exposure period	Tensile strength (MPa)	Elongation at break (mm)
Deionised water Machine direction 56 days at 23 ± 2°C	5.5	1.7
	6.0	2.0
	5.0	1.4
	8.1	1.5
	5.8	1.4
	5.8	1.6
Average	**6.0**	**1.6**
Standard deviation	**1.1**	**0.3**

Table 5: Heat ageing test results

Exposure	Tensile strength (MPa)	Elongation at break (mm)
Machine direction 7 days heat ageing at 50±2°C & 2 days at 23±2°C and 65±15% RH	19.6	4.1
	11.8	3.5
	20.1	4.7
	13.1	2.8
	11.3	3.5
	12.9	2.8
Average	**14.8**	**3.6**
Standard deviation	**4.0**	**0.7**

Table 6: Test result summary

Sample		% elongation at break in parallel direction	
7 days	Control at 23±2°C and 65%RH	3.2	
Exposure period		**Average % retention of elongation at break in parallel direction**	**Pass/fail**
7 days		112	Pass
28 days	Deionised water at 23±2°C	80	Pass
56 days		67	Pass
7 days	Heat ageing at 50±2°C & 2 days at 23±2°C and 65±15% RH	148	Pass

Table 7: Water absorption

Sample	Water Absorption		
	Mass (m1)	Mass (m2)	% Mass Difference
1	34.620	35.210	1.70
2	32.287	32.878	1.83
3	32.141	32.724	1.81
Mean			**1.78**

Table 8: Water vapour transmission rate

Sample	WVTR (g/m^2/24 hours)
1	3.6
2	1.8
3	2.0
Mean	**2.5**