

TEST REPORT

DC20899-01-1

REPORT ON MATERIALS TESTING FOSROC SA80 TAPE TO AS/NZS 4858:2004

CLIENT
Parchem Construction Supplies Pty Ltd,
7 Lucca Road,
Wyong,
NSW, 2259
Australia

All tests and procedures reported herein, unless indicated, have been performed in accordance with the laboratory's scope of accreditation

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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.

SCOPE OF LABORATORY ACCREDITATION

This section will contain details on the approach report signatories have taken to clearly present ‘out of scope’ test and procedure information within this report – if any.

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1. SCOPE

Testing of supplied waterproofing membrane to the requirements of **AS/NZS 4858:2004** ***Wet area membranes.***

Test schedule as determined by AS/NZS 4858:2004	
Membrane property requirement	Test method
Moisture vapour transmission rate	ASTM E96
Water absorption	AS 3558.1
Acceptance of cyclic movement	AS/NZS 4858:2004 Appendix B, assessment of resistance of waterproofing membranes to cyclic movement.
Durability	AS/NZS 4858:2004 Appendix A assessment of durability of waterproofing membranes

2. PRODUCT

Product name: Fosroc SA80 Jointing Tape

Product type: Reinforcing tape to be used with liquid membrane.

The test specimens were received on 11/08/2025 and assigned the following BRANZ sample designations, 25/368.

Images of the supplied test materials are given in Figure 1.

The client supplied 2 rolls of the SA80 Jointing Tape.
The method of sample preparation and sampling was unknown.

Figure 1: As received test materials.

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3. SUMMARY

The membrane tested met the requirements of AS/NZS 4858:2004. The product classification is given below. The product classification and results summary are given below in Table 1 and 2.

Table 1: Membrane classification.

Membrane Classification		
Class	Elongation at break AS 1145.3	Reinforcement included as part of the system
II - Medium Extensibility	60-299%	Yes*

*This product provides reinforcing for a liquid membrane system.

Table 2: AS/NZS 4858:2004 results summary.

TEST	Test result		Conformance
Moisture Vapour Transmission Rate	0.22 g/m^2/day		Recorded value
Water absorption (maximum)	2 %		Recorded value
Resistance to Cyclic Movement	Class II		PASS
Thickness	0.81 mm		Recorded value
Durability			
Control (% elongation)	Control	78.2	Recorded value
Deionised water (% elongation)	7 days	78.9	PASS
	28 days	70.0	
	56 days	82.5	
Detergent (% elongation)	7 days	76.9	PASS
	28 days	76.7	
	56 days	65.5	
Bleach (% elongation)	7 days	75.1	PASS
	28 days	85.8	
	56 days	74.6	
Heat Ageing (% elongation)	7 days at 50°C	77.0	PASS

All testing was completed between 13/08/2025 and 19/12/2025.

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4. RESULTS

4.1 Moisture vapour transmission rate

Testing was carried out in accordance with ASTM E96 desiccant method. Test results are given in Table 3.

Test deviations.

No deviations were recorded.

Test conditions

Average temperature (°C)	23.3
Average humidity (%RH)	49
Product type	Heterogeneous
Cup type	Dry
Sealant	Paraffin

Table 3: Moisture Vapour Transmission Results.

Sample	Thickness, mm	WVTR (g/m2d)
A	0.80	0.26
B	0.81	0.19
C	0.80	0.21
Average	0.80	0.22

The average vapour flow (WVTR) of the three samples is 0.22 g/m²/24 hours.

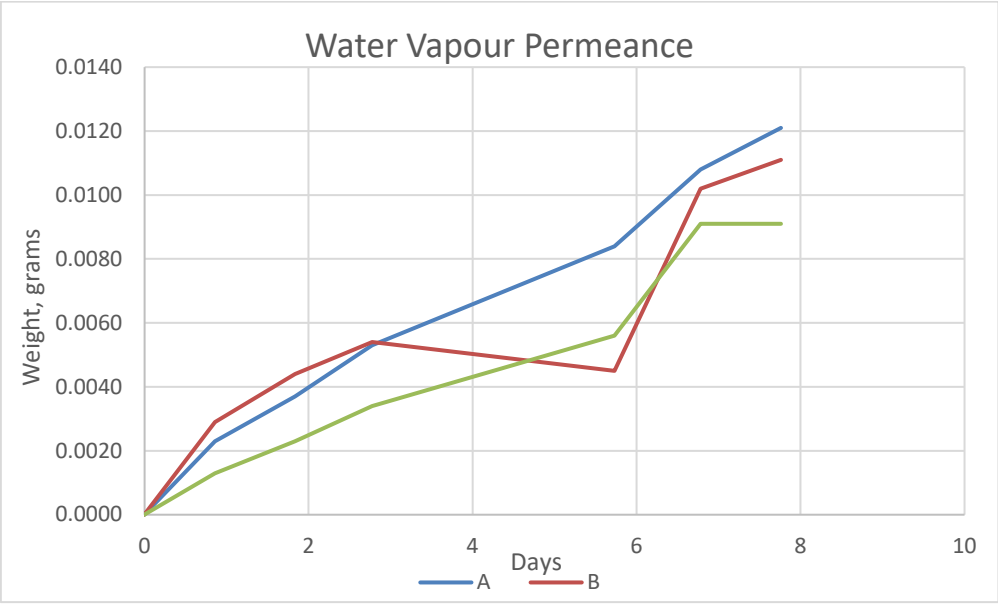

Figure 2: Water vapour permeance plot

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Due to the low or near zero WVTR, the resolution requirements of ASTM E96-22 section 6 cannot be met.

4.2 Resistance to Cyclic Movement

Testing carried out in accordance with AS/NZS 4858 Appendix B. Test results are given in Table 4.

Test deviations.

No deviations were recorded.

Test conditions

Material class	II
Cycle time	2 hours
Cyclic extension (mm)	0.78
Rate of extension (mm/min)	0.013
Number of cycles completed:	50

Table 4: Resistance to cyclic movement results

Observation date	Cycle count	Daily observation and defects observed
11/07/2025	0.5	Test running correctly
15/07/2026	50	No damage found at full extension

Acceptance criteria:

Any rupture causing a hole in the specimen or extending through the thickness of the specimen for more than 1 mm in from the specimen's edge, shall be considered a failure.

The tested membrane meets the requirements of the Resistance to Cyclic Movement test.

4.3 Water Absorption

Testing was carried out in accordance with AS 3558.1. With modifications as described in AS/NZS 4858. Test results are given in Table 5.

Test deviations.

To account for the water held within the fleece backing, each sample was weighted before testing, immediately after testing, and after 24h drying at50°C after testing. Water absorption was calculated by using Wet Weight after test and post-test dried weight.

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Table 5: Water absorption test results

Sample	Initial dry weight (g)	Wet weight (g)	Dry weight after 24h @ 50C	Water absorption (%)
1	2.350	2.350	2.318	1%
2	2.293	2.289	2.258	1%
3	2.252	2.263	2.225	2%
Average	2.298	2.300	2.267	1%

The maximum recorded % water absorption of the three samples was 2 %.

4.4 Durability

Testing was carried out in accordance with AS/NZS 4858 Appendix A.

Test deviations.

No deviations were recorded.

Test conditions

Test specimen type	Type 2
Specimen preparation method	Roll of Jointing Tape supplied
Average test conditions	23°C ± 2°C 50 %RH ± 10 %RH
Test machine accuracy grading	A
Elongation indicator	Extensometer
Grip type	Pneumatic
Test speed, mm/min	50
Extensometer Gauge Length	25 mm

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4.4.1 Control testing

Table 6: Control tensile results.

Specimen number	Thickness (mm)	Tensile strength (MPa)	% elongation
1	0.85	3.1	83.2
2	0.79	3.5	99.5
3	0.80	3.1	97.1
4	0.83	3.1	67.7
5	0.80	2.9	74.8
6	0.79	2.5	47.2
Average	0.81	3.0	78.2
SD	0.03	0.3	19.6

No specimens have been rejected or replaced.

The average recorded membrane thickness of the six samples was 0.88mm.

The average recorded tensile strength of the six samples was 3.0 MPa.

Membrane classification criteria based on control testing.

Membrane classification	Acceptance limit % elongation at break
Class I	10% - 59%
Class II	60% - 299%
Class III	≥300%

Note: Membranes which achieve a % elongation at break of <10% are not classifiable as per AS/NZS 4858:2004.

The average recorded % elongation at break of the six samples tested was 78.2%. Based on the mean recorded % elongation at break, the membrane meets the requirements of Class II.

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4.4.2 Water immersion

Water immersion tensile test results are given in Table 7.

Table 7: Water immersion tensile results.

Exposure Period	Specimen Number	Thickness (mm)	Tensile Strength (MPa)	% elongation at break
7 day water immersion	1	0.79	3.4	108.2
	2	0.80	3.0	76.7
	3	0.80	3.2	74.2
	4	0.79	3.6	61.6
	5	0.79	3.0	85.3
	6	0.79	3.4	67.6
	Average	0.79	3.3	78.9
	SD	0.01	0.2	16.4
	7 day percentage retention at break			**101%**
28 day water immersion	1	0.80	2.9	73.9
	2	0.82	3.5	60.5
	3	0.80	2.7	58.9
	4	0.82	2.6	96.2
	5	0.76	3.2	82.1
	6	0.78	3.0	48.6
	Average	0.80	3.0	70.0
	SD	0.02	0.3	17.5
	28 day percentage retention at break			**90%**
56 day water immersion	1	0.80	3.2	97.8
	2	0.81	3.1	85.0
	3	0.78	3.1	83.8
	4	0.77	3.7	62.1
	5	0.81	2.6	83.8
	6	0.81	3.2	82.7
	Average	0.80	3.2	82.5
	SD	0.02	0.4	11.5
	56 day percentage retention at break			**105%**

Test observations

No significant change in appearance was noted.

Acceptance criteria for water immersed samples:

The average elongation at break of the exposed specimens shall be ≥50% of that of the control samples for the bond breakers given in Table 6.1 in AS/NZS 4858:2004. Membranes with an average elongation at break for the exposed specimens between <50% and ≥25% of that of the control samples, require additional bond breaker relief above what is given in Table 6.1 in

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AS/NZS 4858:2004. A fail is recorded for membranes that give an average elongation at break for the exposed specimens that is <25% of that of the control samples.

The recorded retention of elongation at break was 105%. Based on the mean retention of % elongation at break this membrane meets the requirements of this test.

4.4.3 Detergent immersion

Detergent immersion tensile test results are given in Table 8.

Table 8: Detergent immersion tensile results.

Test observations

Exposure Period	Specimen Number	Thickness (mm)	Tensile Strength (MPa)	% elongation at break
7 day n8 immersion	1	0.80	3.4	109.0
	2	0.81	2.7	30.2
	3	0.82	2.8	93.8
	4	0.81	2.8	60.5
	5	0.81	2.8	67.6
	6	0.78	3.2	100.1
	Average	0.81	2.9	76.9
	SD	0.01	0.3	29.6
	7 day percentage retention at break			**98%**
28 day n8 immersion	1	0.81	3.6	77.9
	2	0.81	2.8	63.7
	3	0.84	3.2	62.7
	4	0.82	2.9	51.0
	5	0.81	3.0	101.2
	6	0.78	3.0	103.6
	Average	0.81	3.1	76.7
	SD	0.02	0.3	21.7
	28 day percentage retention at break			**98%**
56 day n8 immersion	1	0.80	3.2	68.3
	2	0.82	2.5	42.0
	3	0.79	2.6	70.4
	4	0.79	2.9	73.0
	5	0.81	3.6	90.5
	6	0.82	3.0	48.9
	Average	0.81	3.0	65.5
	SD	0.01	0.4	17.6
	56 day percentage retention at break			**84%**

No significant change in appearance was noted.

Acceptance criteria for detergent immersed samples:

The average elongation at break of the exposed specimens shall be ≥50% of that of the control samples for the bond breakers given in Table 6.1 in AS/NZS 4858:2004. Membranes with an

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average elongation at break for the exposed specimens between <50% and ≥25% of that of the control samples, require additional bond breaker relief above what is given in Table 6.1 in AS/NZS 4858:2004. A fail is recorded for membranes that give an average elongation at break for the exposed specimens that is <25% of that of the control samples.

The recorded retention of elongation at break was 84%. Based on the mean retention of % elongation at break, this membrane meets the requirements of this test.

4.4.4 Bleach immersion

Bleach immersion tensile test results are given in Table 9.

Table 9: Bleach immersion tensile results.

Exposure Period	Specimen Number	Thickness (mm)	Tensile Strength (MPa)	% elongation at break
7 day bleach immersion	1	0.82	2.8	47.8
	2	0.82	3.0	94.1
	3	0.78	3.1	102.5
	4	0.83	2.4	58.6
	5	0.79	3.5	94.3
	6	0.80	3.3	53.6
	Average	0.80	3.0	75.1
	SD	0.02	0.4	24.3
	7 day percentage retention at break			**96%**
28 day bleach immersion	1	0.79	3.5	110.4
	2	0.79	2.8	73.1
	3	0.82	2.8	98.7
	4	0.79	3.2	59.3
	5	0.80	3.1	94.7
	6	0.79	3.0	78.7
	Average	0.80	3.1	85.8
	SD	0.01	0.2	18.8
	28 day percentage retention at break			**110%**
56 day bleach immersion	1	0.80	2.4	71.6
	2	0.81	3.0	73.3
	3	0.82	3.1	79.6
	4	0.78	3.1	88.9
	5	0.77	3.3	61.8
	6	0.79	3.1	72.4
	Average	0.80	3.0	74.6
	SD	0.02	0.3	9.0
	56 day percentage retention at break			**95%**

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Test observations

No significant change in appearance was noted.

Acceptance criteria for bleach immersed samples:

The average elongation at break of the exposed specimens shall be ≥50% of that of the control samples for the bond breakers given in Table 6.1 in AS/NZS 4858:2004. Membranes with an average elongation at break for the exposed specimens between <50% and ≥25% of that of the control samples, require additional bond breaker relief above what is given in Table 6.1 in AS/NZS 4858:2004. A fail is recorded for membranes that give an average elongation at break for the exposed specimens that is <25% of that of the control samples.

The recorded retention of elongation at break was 95%. Based on the mean retention of % elongation at break, this membrane meets the requirements of this test.

4.4.5 Heat aging

Heat aging tensile test results are given in Table 10.

Table 10: Heat ageing tensile results.

Exposure Period	Specimen Number	Thickness (mm)	Tensile Strength (MPa)	% elongation at break
Heat Ageing	1	0.82	2.8	52.4
	2	0.82	2.8	99.4
	3	0.80	2.2	47.3
	4	0.82	2.7	94.7
	5	0.85	2.6	88.4
	6	0.78	3.2	79.6
	Average	0.81	2.7	77.0
	SD	0.02	0.3	22.1
	Heat Ageing percentage retention at break			**98%**

Test observations

No significant change in appearance was noted.

Acceptance criteria for heat aged samples:

The average elongation at break of the exposed specimens shall be ≥50% of that of the control samples.

The recorded retention of elongation at break was 98%. Based on the mean retention of % elongation at break, this membrane meets the requirements of this test.

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5. REFERENCES

AS/NZS 4858:2004 Wet area membranes

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AS 3558.1-1999, Methods of testing plastics and composite materials sanitary plumbing fixtures Determination of water absorption characteristics.

ASTM E96-22, Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials.

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