

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

TEST SUMMARY

Objective

Assessment of supplied sample to AS/NZS 4858:2004

Project

Assessment of ACTFLEX 988 CWP to AS/NZS 4858:2004

Report Number

0250-1 AS/NZS 4858:2004

Customer

NAME	FORSPEC Protective Coatings
ADDRESS	22/872 Canterbury Road Roselands, NSW, 2196
CONTACT PERSON	James Gilto
EMAIL	admin@actechpc.com.au
TELEPHONE	0424424178
MOBILE	

Name of test material

ACTFLEX 988 CWP

Description of test material

2-part cementitious acrylic polymer waterproofing

Date of receipt of test material

18/07/2023

*"This report shall not be reproduced except in full without prior approval of XTec Gen
Laboratories"*

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

Testing Facility and Location

NAME	XTec Gen Pty Ltd
ADDRESS	30-32 Park Avenue Woodville North 5012
ABN	22634729294

LIMITATION

The test results reported here relate only to the items tested.

CUSTOMER SUPPLIED INFORMATION & DATA

2 coats @ 1.15mm. expected dry film 1.5mm

Dry Film Supplied

TERMS AND CONDITIONS

This report is issued in accordance with the Terms and Conditions as detailed and agreed in the *XTecGen Test Request and Sample Submission Form*.

SIGNATORIES

Author

Michael Bakanyozo

Head Laboratory Technician

Reviewer

Eric Scardigno

Laboratory Manager

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

SUMMARY OF TESTS

AS4858 Requirements:

PROPERTY	METHOD	RESULT	ASSESSMENT CRITERIA	ASSESSMENT
Acceptance of Cyclic movement	AS4858 Appendix B	No failures observed	AS 4858 Appendix B Paragraph B4	PASS
Durability ¹ : Control Elongation at break	AS1145.3	239 %	AS 4858 Table 5.1	Class II
Durability ¹ : Control Tensile Strength		2.31 MPa		
Durability ¹ : Water Immersion Elongation at break	N/A	81 %	AS 4858 Table A1	CONDITIONAL PASS
Durability ¹ : Water immersion Tensile Strength		1.86MPa		
Durability ¹ : Bleach Immersion Elongation at break		76%		CONDITIONAL PASS
Durability ¹ : Bleach Immersion Tensile Strength		1.91MPa		
Durability ¹ : Detergent Immersion Elongation at break		86%		CONDITIONAL PASS
Durability ¹ : Detergent Immersion Tensile Strength		1.92MPa		
Durability ¹ : Heat aging Elongation at break	N/A	168%	AS 4858 Table A1	PASS

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number
0250-1 AS/NZS 4858:2004

Issue Date
27/10/2023

Expiry Date
27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

Durability ¹ : Heat aging Tensile Strength		2.73MPa		
Water Absorption	AS 3558.1 (with sample size modified to be 50mm x 50mm by the thickness used in practice).	3.81%	AS 4858 Table 8.1	
Moisture vapour transmission rate	ASTM E96 Desiccant method	1.99g/m ² /24 hours	AS 4858 Table 8.1	Additional testing as per AS4858.1 Table 8.1 (e) is not required to establish suitability for use over particleboard.
†Suitability for use over particleboard	AS4858 Appendix C	Test not performed	AS 4858 Appendix C Paragraph C5	Test not performed

¹Durability of membranes is a combined group of assessments as detailed in AS4858 Appendix A, Table A4.

†This symbol indicates tests for which XTecGen Laboratory was not NATA accredited for at time of testing.

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

CYCLIC MOVEMENT

Date of test: 07/08/2023-11/08/2023

Testing:

Testing carried out in accordance with AS 4858 Appendix B “Assessment of resistance of waterproofing membranes to cyclic movement”

Additions, deviations and/or exclusions from AS 4858 Appendix B:

Nil

Test Parameters:

PARAMETER	VALUE
Membrane class	II
Number of cycles	50
Cycle time	2 Hours
Cycle expansion	4.39mm
Sample Size	65 mm x 25 mm
Sample span	2 mm between plates
Sample thickness	1.208mm

Test Results:

TEST RESULT	VALUE
Number of cycles completed	50
Surface crazing	Nil
Surface tears	Nil
Membrane rupture	Nil

Test Observations:

DAY	DATE	NUMBER OF CYCLES	Failure Observed	
			RUPTURE/HOLING	OTHER
1	7/08/2023	0	☐ Yes ☒ No	
2	8/08/2023	12	☐ Yes ☒ No	
3	9/08/2023	24	☐ Yes ☒ No	
4	10/08/2023	36	☐ Yes ☒ No	
5	11/08/2023	50	☐ Yes ☒ No	

Passing requirement: “Any rupture holing the specimen or extending through the thickness for more than 1mm in from the edge of the specimen shall be taken as a failure and the number of cycles to failure shall be reported. If failure does not occur after 50 cycles it shall be reported together with the

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number

0250-1 AS/NZS 4858:2004

Issue Date

27/10/2023

Expiry Date

27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

types of any surface defects that have been induced and the number of cycles at which onset of the defect occurred”

Result: Pass. Meets the requirement for CSIRO moving joint test as per AS 4858.1 Appendix B.

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

DURABILITY OF MEMBRANE

CONTROL SET

Date of test: 26/07/2023

Testing: Test carried out in accordance with AS 1145.3.

Additions, deviations and/or exclusions from AS 1145.3: Nil

Test Parameters:

PARAMETER	VALUE
Ambient temperature (conditioning)	25.8-24°C
Ambient humidity (conditioning)	49.0-47.3% RH
Ambient temperature (testing)	25.4°C
Ambient humidity (testing)	30.9% RH
Accuracy grading of test machine	A
Specimen type	Type 5
Elongation measurement type:	Electronic internal measurement
Method of preparation of specimens	Dry Film supplied
Orientation of specimens to direction of cast	Parallel to direction of casting blade
Clamping device:	Pneumatic jaws
Testing speed:	50mm/min

Test Results:

Replicate	Sample thickness (mm)	Maximum Extension (mm)	Maximum Stress (MPa)	Maximum Strain (%)
1	1.31	109.2	2.22	290
2	1.33	107.0	2.24	261
3	1.34	102.3	2.32	216
4	1.35	97.0	2.34	197
5	1.39	93.6	2.45	229
Mean	1.34	101.8	2.31	239
Std Deviation	0.03	6.6	0.09	37

Requirement for Class III (high extensibility): $\geq 300\%$ elongation at break

Requirement for Class II (medium extensibility) 60-299% elongation at break

Requirement for Class I (low extensibility) $< 60\%$ elongation at break.

Classification: Class II

*"This report shall not be reproduced except in full without prior approval of XTec Gen
Laboratories"*

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

DURABILITY OF MEMBRANE

WATER IMMERSION

Date of test: 16/08-04/10-2023

Testing:

Test carried out in accordance with AS 4858 Table A1.

Additions, deviations and/or exclusions from AS 4858 Table A1:

Nil

Test Parameters:

PARAMETER	VALUE
Ambient temperature (conditioning)	24.0-25.8°C
Ambient humidity (conditioning)	47.3-49.0% RH
Ambient temperature (testing)	21.0-25.4°C
Ambient humidity (testing)	29.2-51.3% RH
Minimum accuracy grading of test machine	A
Specimen type	Type 5
Elongation measurement type:	Electronic internal measurement
Method of preparation of specimens	Dry film supplied
Orientation of specimens to direction of cast	Parallel to direction of casting blade
Clamping device:	Pneumatic jaws
Testing speed:	50mm/min

Test Results:

Sample Number	Sample thickness (mm)	Maximum Extension (mm)	Tensile strength (MPa)	Elongation at break (%)
1	1.325	43.1	1.95	73
2	1.359	46.8	1.94	120
3	1.347	40.3	1.91	83
7 Day Means	1.34	43.4	1.93	92
7 Day Std Devs	0.02	3.3	0.02	25
4	1.41	39.8	1.86	92
5	1.44	39.6	1.87	80
6	1.43	33.1	1.81	73
28 Day Means	1.43	37.5	1.85	82
28 Day Std Devs	0.02	3.8	0.03	9
7	1.56	39.2	1.84	90

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number
0250-1 AS/NZS 4858:2004

Issue Date
27/10/2023

Expiry Date
27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

8	1.46	35.6	1.91	80
9	1.52	34.9	1.84	73
56 Day Means	1.51	36.6	1.86	81
56 Day Std Devs	0.05	2.3	0.04	9

Passing Requirement: *“Elongation at break shall not be less than 50% of that of the controls for the bond breakers given in Table 6.1 [AS4848]. For an elongation between 50% and 25% of the controls the membrane requires additional bond relief above that given in [AS4858] Table 6.1. A failure is for less than 25% retention of elongation at break of the controls”.*

To pass this condition an elongation at break value of 60% or greater is required.

Result: 81% CONDITIONAL PASS

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

DURABILITY OF MEMBRANE

BLEACH IMMERSION

Date of test: 16/08-04/10-2023

Testing:

Test carried out in accordance with AS 4858 Table A1.

Additions, deviations and/or exclusions from AS 4858 Table A1:

Nil

Test Parameters:

PARAMETER	VALUE
Ambient temperature (conditioning)	24.0-25.8°C
Ambient humidity (conditioning)	47.3-49.0% RH
Ambient temperature (testing)	21.0-25.4°C
Ambient humidity (testing)	29.2-51.3% RH
Minimum accuracy grading of test machine	A
Specimen type	Type 5
Elongation measurement type:	Electronic internal measurement
Method of preparation of specimens	Dry film supplied
Orientation of specimens to direction of cast	Parallel to direction of casting blade
Clamping device:	Pneumatic jaws
Testing speed:	50mm/min

Test Results:

Sample Number	Sample thickness (mm)	Maximum Extension (mm)	Tensile strength (MPa)	Elongation at break (%)
1	1.38	28.1	1.85	57
2	1.38	35.3	1.85	69
3	1.36	26.9	1.83	59
7 Day Means	1.37	30.1	1.84	61
7 Day Std Devs	0.01	4.6	0.01	6
4	1.41	37.6	1.84	133
5	1.49	37.9	1.77	79
6	1.46	39.7	1.81	108
28 Day Means	1.45	38.4	1.81	107
28 Day Std Devs	0.04	1.2	0.03	27
7	1.56	37.0	1.86	89

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number
0250-1 AS/NZS 4858:2004

Issue Date
27/10/2023

Expiry Date
27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

8	1.56	30.8	1.85	71
9	1.33	27.7	2.04	67
56 Day Means	1.48	31.8	1.91	76
56 Day Std Devs	0.13	4.7	0.11	12

Passing Requirement: *“Elongation at break shall not be less than 50% of that of the controls for the bond breakers given in Table 6.1 [AS4848]. For an elongation between 50% and 25% of the controls the membrane requires additional bond relief above that given in [AS4858] Table 6.1. A failure is for less than 25% retention of elongation at break of the controls”.*

To pass this condition an elongation at break value of 60% or greater is required.

Result: 76% CONDITIONAL PASS

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

DURABILITY OF MEMBRANE

DETERGENT IMMERSION

Date of test: 16/08-4/10/2023

Testing:

Test carried out in accordance with AS 4858 Table A1.

Additions, deviations and/or exclusions from AS 4858 Table A1:

Nil

Test Parameters:

PARAMETER	VALUE
Ambient temperature (conditioning)	24.0-25.8°C
Ambient humidity (conditioning)	47.3-49.0% RH
Ambient temperature (testing)	21.0-25.4°C
Ambient humidity (testing)	29.2-51.3% RH
Minimum accuracy grading of test machine	A
Specimen type	Type 5
Elongation measurement type:	Electronic internal measurement
Method of preparation of specimens	Dry film supplied
Orientation of specimens to direction of cast	Parallel to direction of casting blade
Clamping device:	Pneumatic jaws
Testing speed:	50mm/min

Test Results: Detergent Immersion

Sample Number	Sample thickness (mm)	Maximum Extension (mm)	Tensile strength (MPa)	Elongation at break (%)
1	1.27	38.5	1.95	93
2	1.29	35.6	1.94	59
3	1.22	31.0	1.95	72
7 Day Means	1.26	35.0	1.94	75
7 Day Std Devs	0.03	3.8	0.01	17
4	1.25	34.2	1.98	159
5	1.20	39.4	2.06	124
6	1.29	33.8	1.90	100
28 Day Means	1.25	35.8	1.98	128
28 Day Std Devs	0.04	3.1	0.08	30
7	1.39	34.9	1.94	89

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number
0250-1 AS/NZS 4858:2004

Issue Date
27/10/2023

Expiry Date
27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

8	1.40	37.6	1.93	87
9	1.44	38.0	1.90	83
56 Day Means	1.41	36.8	1.92	86
56 Day Std Devs	0.03	1.7	0.02	3

Passing Requirement: *“Elongation at break shall not be less than 50% of that of the controls for the bond breakers given in Table 6.1 [AS4848]. For an elongation between 50% and 25% of the controls the membrane requires additional bond relief above that given in [AS4858] Table 6.1. A failure is for less than 25% retention of elongation at break of the controls”.*

To pass this condition an elongation at break value of 60% or greater is required.

Result: 86% CONDITIONAL PASS

“This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories”

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing
20678

DURABILITY OF MEMBRANE

HEAT AGING

Date of test: 18/08/2023

Testing:

Test carried out in accordance with AS 4858 Table A1.

Additions, deviations and/or exclusions from AS 4858 Table A1:

Nil

Test Parameters:

PARAMETER	VALUE
Ambient temperature (conditioning)	24-25.8°C
Ambient humidity (conditioning)	47.3-49% RH
Ambient temperature (testing)	24.3°C
Ambient humidity (testing)	35.8% RH
Accuracy grading of test machine	A
Specimen type	Type 5
Elongation measurement type:	Electronic internal measurement
Method of preparation of specimens	Dry Film supplied
Orientation of specimens to direction of cast	Parallel to direction of casting blade
Clamping device:	Pneumatic jaws
Testing speed:	50mm/min

Test Results:

Number of replicates	Sample thickness (mm)	Maximum Extension (mm)	Tensile strength (MPa)	Elongation at break (%)
1	1.30	70.1	2.75	151
2	1.30	66.9	2.84	168
3	1.41	82.8	2.61	185
Mean	1.33	73.3	2.73	168
Std Deviation	0.06	8.4	0.12	17

Passing Requirement: "Elongation at break shall not be less than 50% of the result recorded for the control"

To pass this condition an elongation at break value of 120% or greater is required.

Result: 168% PASS

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

WATER ABSORPTION

Date of test: 15-16/08/2023

Testing:

Test carried out in accordance with AS 3558.1.

Additions, deviations and/or exclusions from AS 3558.1:

Per AS 4858, sample dimensions modified to be 50mm*50mm.

Test Results:

SAMPLE	THICKNESS (mm)	WATER ABSORPTION		
		MASS (m1) (g)	MASS (m2) (g)	MASS DIFFERENCE (%)
1	1.27	5.3591	5.5423	3.42
2	1.29	5.393	5.6179	4.17
3	1.36	5.7313	5.9511	3.84
Mean	1.30	5.49	5.70	3.81
Std Deviation	0.05	0.21	0.22	0.38

Result: 3.81%

*"This report shall not be reproduced except in full without prior approval of XTec Gen
Laboratories"*

Report number

0250-1 AS/NZS 4858:2004

Issue Date

27/10/2023

Expiry Date

27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

WATER VAPOUR TRANSMISSION RATE

Date of test: 13/09-27/09/2023

Testing:

Test carried out in accordance with ASTM E96 Desiccant Method.

Additions, deviations and/or exclusions from ASTM E96 Desiccant Method:

Nil

Test Parameters:

PARAMETER	VALUE
Test temperature:	22.8-24.2°C
Test humidity:	47.8-53.4% RH
Cup design:	Round cup with sealing flange
Sealant:	Paraffin Wax
Desiccant:	Anhydrous Calcium Chloride

Test Results

SAMPLE	THICKNESS (mm)	SIDE OF SPECIMEN HIGHER VAPOUR PRESSURE WAS APPLIED TO	REGRESSION		WATER VAPOUR TRANSMISSION RATE (g/m ² /24 hours)
			EQUATION	r ² VALUE	
1	1.23	Side A, top of cast film	Mass _(g) =0.0003x(Time _{hr})+170.11	0.9972	2.16
2	1.24	Side A, bottom of cast film	Mass _(g) =0.0002x(Time _{hr})+194.47	0.9971	1.45
3	1.33	Side B, top of cast film	Mass _(g) =0.0004x(Time _{hr})+193.43	0.999	2.89
4	1.29	Side B, bottom of cast film	Mass _(g) =0.0002x(Time _{hr})+169.23	0.9984	1.44
Mean	1.27				1.99
Std Deviation	0.05				0.69

*"This report shall not be reproduced except in full without prior approval of XTec Gen
Laboratories"*

Report number
0250-1 AS/NZS 4858:2004

Issue Date
27/10/2023

Expiry Date
27/10/2026

TEST REPORT



Accredited for compliance with ISO/IEC 17025 – Testing
20678

Passing requirement: If $>8\text{g/m}^2/24$ hours, additional testing referred to in [AS 4858.1 Table 8.1] (e) will be required to establish suitability for use over particleboard.

Result: $1.99\text{ g/m}^2/24$ hours Additional testing as per AS4858.1 Table 8.1 (e) is not required to establish suitability for use over particleboard.

END OF REPORT

"This report shall not be reproduced except in full without prior approval of XTec Gen Laboratories"

Report number	Issue Date	Expiry Date
0250-1 AS/NZS 4858:2004	27/10/2023	27/10/2026