

REPORT NUMBER 4193

**ASSESSMENT OF WATERPROOFING MEMBRANE
TO AS/NZS 4858:2004**

4193
Aussietex III Waterproofing Membrane

In Confidence to:

Conceal Concrete Waterproofing Pty Ltd
January 2008



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
Telephone: 61 3 9252 6000 Facsimile: 61 3 9252 6244 Web: <http://www.cmse.csiro.au>

07 February, 2008

Our Ref: EN13 / 1605 03/0211

TEST REPORT No. 4193

Requested by: Conceal Concrete Waterproofing Pty Ltd
Client: Kalpesh Jamnadas
on (date): 07 December, 2007
Product Descriptions: Aussietex III Waterproofing Membrane
Manufacturer: Conceal Concrete Waterproofing Pty Ltd

Sampling Details

Date: December 2007
How (methods): Delivered to Highett

While CSIRO takes care in preparing the reports it provides to clients, it does not warrant that the information in this particular report will be free of errors or omissions or that it will be suitable for the client's purposes. CSIRO will not be responsible for the results or any actions taken by the client or any other person on the basis of the information contained in the report or any opinions expressed in it.

The reproduction of this test report is only authorised in the form of a complete photographic facsimile. Our written approval is necessary for any partial reproduction.

This test report consists of 11 pages.

SUMMARY OF ASSESSMENTS REPORTED

AS/NZS 4858:2004 Wet Area Membranes

Appendix A, Durability of waterproof membranes

Appendix B, Resistance of Waterproofing Membranes to Cyclic Movement

AS 3558.-1999, Water Absorption

ASTM E96, Moisture Vapour Transmission

SUMMARY OUTCOME

The Aussietex III Waterproofing Membrane sample material submitted by Conceal Concrete Waterproofing Pty Ltd met the requirements for a Class III membrane as required by AS/NZS 4586:2004.



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
Telephone: 61 3 9252 6000 Facsimile: 61 3 9252 6244 Web: <http://www.cmse.csiro.au>

REPORT NO: 4193
ISSUE DATE: 07 February, 2008
MANUFACTURER: Conceal Concrete Waterproofing Pty Ltd
PRODUCT DESC: Aussietex III Waterproofing Membrane

Page 2 of 11

SUMMARY OF RESULTS

AS/NZS 4858:2004 Wet Area Membranes

Appendix A: Assessment of Durability of waterproof membranes

The sample requires an elongation at break strain percentage greater than 196% at 56 days.

Note: (196% equates to 50% of control elongation at break strain percentage).

Durability of membranes: Elongation to break	Strain %	
Control	392 %	Class III
Water Immersion	405 %	PASS
Detergent Immersion	409 %	PASS
Bleach Immersion	370 %	PASS
Heat Ageing	427 %	PASS

Conceal Concrete Waterproofing Pty Ltd test sample, Aussietex III Waterproofing Membrane achieves the performance requirements of AS/NZS 4858: 2004 Durability of Membranes for Class III membrane installation.

Appendix B: Assessment of resistance of waterproofing membranes to cyclic movement

Class III type membrane: 2mm gauge length for a 4.0mm extension, repeated 50 cycles.

Requirement: No Fatigue cracking exhibited.
Result: **PASS**

ASTM E96 Water Vapour Transmission (WVT): **5.38g/m²/24h**

Appendix C: Suitability of waterproofing membranes when used over particle board

Appendix C will not be required as the Aussietex III Waterproofing Membrane has a water vapour transmission below 8g/m²/24h.

AS 3558.1 Methods of testing plastics & composite materials sanitary plumbing fixtures:

Method 1: Determination of water absorption characteristics

Water absorption:	Sample 1	1.72 %	
	Sample 2	1.51 %	
	Sample 3	1.32 %	Mean 1.52 %

Conclusion: Aussietex III Waterproofing Membrane does not require a 'Suitability over particleboard' to pass the requirements of AS/NZS 4858 Wet area membranes.



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
Telephone: 61 3 9252 6000 Facsimile: 61 3 9252 6244 Web: <http://www.cmse.csiro.au>

REPORT NO: 4193
ISSUE DATE: 07 February, 2008
MANUFACTURER: Conceal Concrete Waterproofing Pty Ltd
PRODUCT DESC: Aussietex III Waterproofing Membrane

Page 3 of 11

TEST CARRIED OUT IN ACCORDANCE WITH
AS4858:2004 Wet Area Membranes
Appendix A: Assessment of Durability of waterproof membranes

Test Date: 12 December, 2007

RESULTS: Location: Ceramic Tile Laboratory
Conditions: 7 days at 23°C 55%RH
Sample Number: 4193 - 1 (Numbered 1 to 5)
Samples: Average of 5 samples
Load rate: 150mm/min

Elongation at Break

CONTROL SET

Sample Number	Sample Thickness Mean (mm)	Maximum Load (N)	Maximum Extension (mm)	Maximum Stress MPa	Maximum Strain %
4193 - 1 1 to 5	1.0	39.73	129.51	6.31	392

Requirement for Class III: The specimens have an average percentage strain of $\geq 300\%$.

Classification: Class III (High Extensibility)

CSIRO



Industrial Research Services

Materials Science & Engineering, 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
Telephone: 61 3 9252 6000 Facsimile: 61 3 9252 6244 Web: <http://www.cmse.csiro.au>

REPORT NO: 4193
ISSUE DATE: 07 February, 2008
MANUFACTURER: Conceal Concrete Waterproofing Pty Ltd
PRODUCT DESC: Aussietex III Waterproofing Membrane

Page 4 of 11

TEST CARRIED OUT IN ACCORDANCE WITH
AS4858:2004 Wet Area Membranes
Appendix A: Assessment of Durability of waterproof membranes

Test Date: 06 February, 2008

RESULTS: Location: Ceramic Tile Laboratory
Conditions: 7 days at 23°C 55%RH
Sample Number: 4193 - 3 (Numbered 1 to 9)
Samples: Average of 3 samples
Load rate: 150mm/min
Solution: 1L of deionised water

Elongation at Break

WATER IMMERSION

Period & Sample Number	Sample Thickness Mean (mm)	Maximum Load (N)	Maximum Extension (mm)	Maximum Stress MPa	Maximum Strain %
7 Days 4193 - 3 1 to 3	1.1	27.04	132.59	4.13	402
28 Days 4193 - 3 4 to 6	1.1	22.68	131.54	4.61	399
56 Days 4193 - 3 7 to 9	0.9	26.81	133.77	4.78	405

Requirement: The sample requires an elongation at break strain greater than 196% at 56 days without additional bond relief. Between 98% and 196% additional bond strength is required. Less than 98% - fail.

Result: 405 % **PASS**