

Test Report No. 7191044723-MEC13/02-ED
dated 22 Jan 2013



PSB Singapore

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SUBJECT:

Testing of liquid-applied polyurethane waterproofing membrane

TESTED FOR:

Maris Polymers S.A.
Industrial Area Of Inofita
32011 Inofita
Greece

Attn: Mr Lance Khoo

SAMPLE DESCRIPTION:

The following items were received as shown:

Sample	Size	Quantity	Date received
'Mariseal 600'	300 mm x 300 mm	6 pcs	4 Oct 2012
	300 mm x 210 mm	2 pcs	4 Oct 2012
	300 mm x 300 mm	3 pcs	5 Oct 2012
'Mariseal 600A'	500 g	1 tin	4 Oct 2012
'Mariseal 600B'	500 g	1 tin	4 Oct 2012

The test sample was prepared by TÜV SÜD PSB Pte Ltd.
As specified by the client, 'Mariseal 600A' was mixed thoroughly with 'Mariseal 600B' prior to application.

Substrate	Area of application	Quantity
200 mm x 200 mm x 50 mm concrete slab	200 mm x 200 mm	1 pc

TEST METHODS:

Tensile Properties

- Adopted ASTM D412 : 2006 Standard Test Method For Vulcanized Rubbers And Thermoplastic Elastomers-Tension

Test specimen : Dumbbell shape, small die C
Grip length : 50 mm
Crosshead speed : 500 mm/min
No. of determinations : 5



TÜV SÜD PSB

Laboratory:
TUV SUD PSB Pte. Ltd.
Testing Services
No.1 Science Park Drive
Singapore 118221

Phone : +65-6885 1333
Fax : +65-6776 8670
E-mail: testing@tuv-sud-psb.sg
www.tuv-sud-psb.sg
Co. Reg : 199002667R

Regional Head Office:
TUV SUD Asia Pacific Pte. Ltd.
3 Science Park Drive, #04-01/05
The Franklin, Singapore 118223
TUV®



Tear Strength

2. ASTM D624 : 2000 Standard Test Method For Tear Strength Of Conventional Vulcanized Rubber And Thermoplastic Elastomers

Test specimen : Tear test specimen
Grip length : 25.4 mm
Crosshead speed : 500 mm/min
No. of determinations : 5

Puncture Strength

3. ASTM E154 : 2008a Standard Test Methods For Water Vapor Retarders Used In Contactwith Earth Under Concrete Slabs, On Walls, Or As Ground Cover

Test size : 300 mm x 300 mm
Crosshead speed : 6 mm/min
No. of determinations : 3

Hydrostatic Pressure

4. DIN 16726 : 1986 Plastic Roofing Felt And Waterproofing Sheet Testing
Section 5.11 : Behaviour Under Hydrostatic Pressure

Apparatus : Slotted disc pressure tester
Test specimen dimensions : Ø130 mm
Test condition : 3 bar for 1 hour
No. of determinations : 1

Adhesion-to-substrate

5. Adopted ASTM D4541 : 2009 Standard Test Method For Pull-Off Strength Of Coatings Using Portable Adhesion Testers

Substrate : 200 mm x 200 mm x 50 mm concrete slab
Test area : 50 mm x 50 mm
Crosshead speed : 5 mm/min
No. of determinations : 3

CONDITIONING:

Unless otherwise specified, all test specimens were conditioned at $23 \pm 2^\circ\text{C}$, $70 \pm 15\%$ relative humidity and tested at $23 \pm 2^\circ\text{C}$, $65 \pm 5\%$ relative humidity.

Ed

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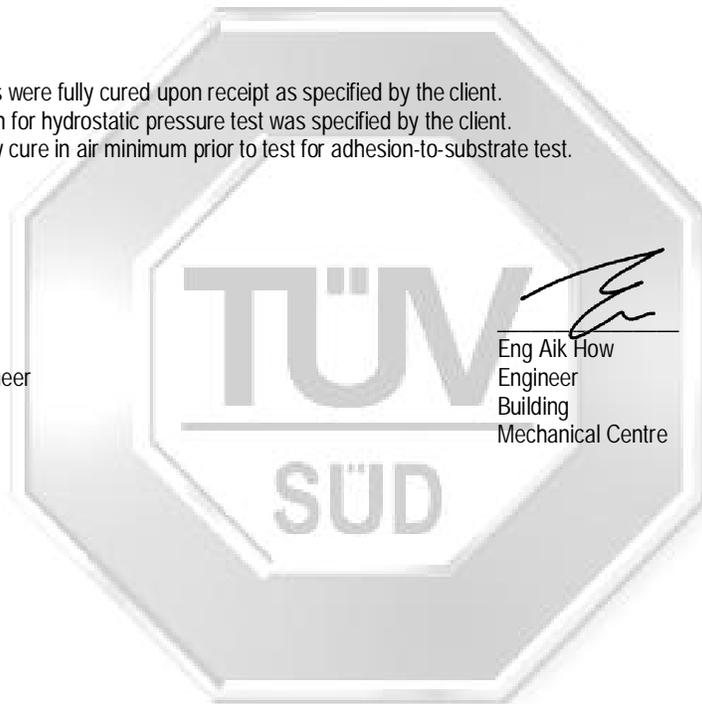
TEST RESULTS:

Test	Unit	'Mariseal 600'
1.		
a. Maximum Tensile Strength, median	N/mm ²	7.4
b. Elongation At Break, median	%	2473.1
c. Tensile Modulus Of Elasticity, median	N/mm ²	1.0
2. Tear Resistance, average	N/mm	20.1
3. Puncture Strength, average	N	291.6
4. Hydrostatic Pressure	-	No rupture
5. Adhesion-to-substrate, average	N/mm ²	1.1

REMARKS:

1. The cured sheets were fully cured upon receipt as specified by the client.
2. The test condition for hydrostatic pressure test was specified by the client.
3. Test age : 14-day cure in air minimum prior to test for adhesion-to-substrate test.

Eddie Suwand
Senior Associate Engineer



Eng Aik How
Engineer
Building
Mechanical Centre



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July 2011

