



NZWTA



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herein have been
performed in accordance
with the laboratory's
scope of accreditation

No. 1195405.4

(Please quote this number in all correspondence)

CLIENT:
Win Flooring Limited
154J Harris Road
East Tamaki, Auckland 2013

SAMPLE RECEIVED FROM:
Win Flooring Limited

Date Received: 12.9.17

Attn.: Derek Li

SAMPLE DESCRIPTION:
Yellow laminate underlay, 10mm/95 kg.

Client Order No.:

Client Reference:

1 of 3

AS 4288: 2003 SOFT UNDERLAYS FOR TEXTILE FLOOR COVERINGS.

ISO 9073-3 1989 DETERMINATION OF BREAKING FORCE AND EXTENSION

- 5 warp and 5 weft, 50 mm width samples
- Crosshead speed 100mm/min

	Average Results	Performance Requirements	Compliance to Standard
Breaking Force - Warp	5.16 kg (50.7 Newton)	Min. 40 Newton (4.1 kg)	Pass
S.D.	0.23		
CV%	4.47		
Breaking Force - Weft	4.26 kg (41.8 Newton)	Min. 40 Newton (4.1 kg)	Pass
S.D.	0.20		
CV%	4.58		
% Extension - Warp	18.7%	Max. 20% at 40 Newton	Pass
S.D.	0.99		
CV%	5.28		
% Extension - Weft	16.6%	Max. 20% at 40 Newton	Pass
S.D.	1.84		
CV%	11.0		

AS 2111.1. 1996 DETERMINATION OF THICKNESS OF TEXTILE FLOOR COVERINGS

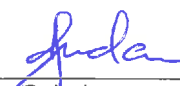
- 10 tests in conditioned state

	Thickness	Performance Requirements	Compliance to Standard
Average (mm)	10.1	Maximum Range (min. to max): Non-fibrous – 3mm Fibrous & combined – 4mm	Pass
Minimum (mm)	10.0		
Maximum (mm)	10.1		
Range	0.13	Thickness must not deviate to original thickness by: Non-fibrous – 12% max Fibrous & combined – 15% max.	
S.D.	0.04		
CV%	0.42		

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L A Greer
Signatory


C Judan
Signatory

20/09/2017

New Zealand Wool Testing Authority Ltd

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Ahuriri, Napier 4144, New Zealand

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AS/NZS 2111.14 DETERMINATION OF THICKNESS LOSS AFTER PROLONGED, HEAVY STATIC LOADING OF TEXTILE FLOOR COVERINGS

- 5 samples, tested in conditioned state
- Load applied for 24 hours at 700 kPa pressure

	Thickness Loss (mm)	% Thickness Loss	Performance Requirements	Compliance to Standard
2 Minutes Recovery	0.89	8.82	After 24 Hours Recovery: Non-fibrous – 15% max. Fibrous & combined – 40% max.	Pass
60 Minutes Recovery	0.42	4.20		
24 Hours Recovery	0.15	1.49		

AS/NZS 2111.2 DETERMINATION OF THICKNESS LOSS UNDER DYNAMIC LOADING OF TEXTILE FLOOR COVERINGS

- 2 samples tested in conditioned state
- 1000 impacts applied

	Thickness Loss (mm)	% Thickness Loss	Performance Requirements	Compliance to Standard
Average	0.44	4.32	Non-fibrous – 15% max. Fibrous – 40% max. Combined – 20% max.	Pass
S.D.	0.12			

AS 4288: 2003 SOFT UNDERLAYS FOR TEXTILE FLOOR COVERINGS.

APPENDIX B- METHOD FOR DETERMINING OF RESISTANCE TO BREAKING AND CRACKING

	Breaking & Cracking	Performance Requirements	Compliance to Standard
Warp	No crack in foam (felts excluded)	No cracks longer than 50mm No cracks in any backing material	Pass
Weft	No crack in foam (felts excluded)		Pass

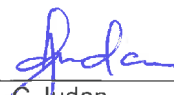


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AS 4288-2003 - SOFT UNDERLAYS FOR TEXTILE FLOOR COVERINGS APPENDIX A

4 samples tested in conditioned state

	Results
Average Initial Thickness at 2 kPa	10.1 mm
Average Thickness at 2 kPa After Dynamic Loading	9.75 mm
Average Deflection Before Dynamic Loading at 100 kPa	6.97 mm
Average Deflection After Dynamic Loading at 100 kPa	7.15 mm
Average Work of Compression Before Dynamic Loading	249 J/m ²
Average Work of Compression After Dynamic Loading	182 J/m ²
% Retention of Original Work of Compression	73.0%

	Performance Requirements	Compliance to Standard
Deflection After Dynamic Loading at 100 kPa:	1.5 mm minimum	Pass
	9.0 mm maximum	Pass
Work of Compression After Dynamic Loading:	50 J/m ² minimum	Pass
	200 J/m ² maximum	Pass
Retention of Original Work of Compression:	40% minimum	Pass

Designation and description of intended use/application as per Figure 1 of AS 4288-2003:

Luxury – luxury use, domestic /commercial where high energy absorption is desirable.

Classification:

- LR Light residential use, not suitable for stairs
- GR General Residential use
- L Luxury use, domestic/commercial where high energy absorption is desirable
- GC General commercial use, suitable for normal foot and wheel traffic
- HC Heavy commercial use, suitable for heavy foot and wheel traffic and castor chairs

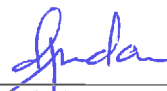


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