



Registered Testing Authority - CSIRO

28 August 2014

Our Ref. EN13 / 1683 03/0212

TEST REPORT No. 7128.6As

Requested by: Forbo Flooring Systems
23 Ornsby Place
Wetherill Park
NSW 2164
on (date): 7 August 2014
Manufacturer: Forbo Flooring Systems
Product Desc.: Allura Flex Tile

Sampling details:
Where: Delivered
Date: 7 August 2014
By whom: Courier
How (methods): N/A

The results reported relate only to the sample(s) tested and the information received. No responsibility is taken for the accuracy of the sampling unless it is done under our own supervision. CSIRO cannot accept responsibility for deviations in the manufactured quality and performance of the product. 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 of 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 6 pages

SUMMARY OF SLIP RESISTANCE TESTS PERFORMED:

		Result	Class
AS 4586:2013	Slip resistance classification of new pedestrian surface materials		
	Appendix A: WET Pendulum (Slider 96). Mean SRV:	29	P2 (Y*)
	Appendix B: DRY (FFT). Mean COF:	0.65	D1 (F*)
	Appendix A,B: Dual classification:		P2 (Y*),D1 (F*)
AS 4586:2013	Slip resistance classification of new pedestrian surface materials		
	Appendix C: WET/BAREFOOT Ramp		
	Mean angle of inclination:	14°	A
AS 4586:2013	Slip resistance classification of new pedestrian surface materials,		
	Appendix D: OIL-WET Ramp		
	Corrected mean overall acceptance angle:	11°	R 10
	(*) = AS 4568:2004 classification		

In order to interpret the classifications, please refer to Standards Australia Handbook 198, An Introductory Guide to the Slip Resistance of Pedestrian Surface Materials, which recommends minimum classifications for a wide variety of locations.

It is important to realise that test results obtained on unused factory-fresh samples may not be directly applicable in service, where proprietary surface coatings, contamination, wear and subsequent cleaning all influence the behaviour of the pedestrian surface.



REPORT NO: 7128.6As
ISSUE DATE: 28 August 2014
MANUFACTURER: Forbo Flooring Systems
PRODUCT DESC: Allura Flex Tile

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

WET PENDULUM TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS 4586:2013 (Appendix A)

Test Date: 8 August 2014

RESULTS:	Location:	Slip Resistance Laboratory	Slider used:	96
	Sample:	Unfixed	Conditioned with grade P400 paper, dry	
	Cleaning:	Deionized water		
	Temperature:	23.5°C		

Pendulum Friction Tester: Stanley (S/N: 0312, calibrated 03/06/2014)
Test conducted by: Khanh Ho

	Specimen				
	1	2	3	4	5
Last 3 swings (BPN)	31	32	31	30	30
	29	31	29	29	29
	28	30	28	28	28
Averages	29	31	29	29	29

Mean SRV : 29

CLASS :

P2 (Y*)

(*) = AS 4568:2004 classification



REPORT NO: 7128.6As
ISSUE DATE: 28 August 2014
MANUFACTURER: Forbo Flooring Systems
PRODUCT DESC: Allura Flex Tile

Page 3 of 6

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

DRY FLOOR FRICTION TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS 4586:2013 (Appendix B)

Test Date: 8 August 2014

RESULTS Location: Slip Resistance Laboratory
Sample: Sample Unfixed
Cleaning: Deionized water
Temperature: 23°C
Slider 96
Conditioned with grade P400 paper, dry
FFT measurements taken over 2 passes of 800mm each

Floor Friction Tester: Tortus Mk II (S/N: 224)
Test conducted by: Khanh Ho

Run 1: Average COF: 0.65
Run 2: Average COF: 0.66
Mean COF: 0.66

According to AS 4586 the Dry Coefficient of Friction shall be reported as :
(mean rounded to the nearest 0.05)

0.65

CLASS :

D1 (F*)

(*) = AS 4568:2004 classification



REPORT NO: 7128.6As
ISSUE DATE: 28 August 2014
MANUFACTURER: Forbo Flooring Systems
PRODUCT DESC: Allura Flex Tile

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

WET/BAREFOOT RAMP TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS 4586:2013 (Appendix C)

Test Date: 14 August 2014

Location: Slip Resistance Laboratory Test conducted by: KH, AG

Sample Fixed

Joint width: 0 mm

Surface structure: Smooth
 Profiled
 Structured

RESULTS

	Critical angle mean	Reported mean
Mean angle of inclination:		
Verification Board WB-A:	11.28 °	11 °
Verification Board WB-B:	17.48 °	17 °
Verification Board WB-C:	24.73 °	24 °
Mean angle of inclination of Test Board:	14.93 °	14 °

CLASSIFICATION:

Quality Group:

A



REPORT NO: 7128.6As
ISSUE DATE: 28 August 2014
MANUFACTURER: Forbo Flooring Systems
PRODUCT DESC: Allura Flex Tile

Page 5 of 6

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

OIL-WET RAMP TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS 4586:2013 (Appendix D)

Test Date: 15 August 2014

Location: Slip Resistance Laboratory Test conducted by: KH, AG

Sample Fixed

Joint width: 0 mm

Surface structure: Smooth
 Profiled
 Structured

RESULTS

Corrected mean overall acceptance angle: 11 °

Displacement space: not tested

CLASSIFICATION:

Slip Resistance Assessment Group:

R 10

Displacement Space Assessment Group:

-

Test shoe used: Lupos Picasso



Infrastructure Technology

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

REPORT NO: 7128.6As
ISSUE DATE: 28 August 2014
MANUFACTURER: Forbo Flooring Systems
TILE DESC: Allura Flex Tile

Page 6 of 6

Date and Place 28 August 2014, Highett, Vic

Name, Title and Digital Signature:

KHANH HO
Technical Officer
Tel: 61 3 92526119
Fax: 61 3 92526244
Email: Khanh.Ho@csiro.au
