



Slip Check to AS 4586-2013 Allura Puzzle

Report Number: R21527e-2 Report Date: 30 July 2020 Total Number of Pages 3

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Issued by

Safe Environments Pty Ltd Unit 4, 40 Bessemer Street Blacktown NSW 2148

Prepared for

Forbo Flooring Systems 23 Ormsby Place Wetherill Park NSW 2164 Approved by

Dale Rowell Authorised Signatory

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Slip Resistance Classification of New Pedestrian Surface Materials

AS 4586-2013 Appendix A (Wet Pendulum Test)

The slip resistance classification has been determined for unused surfaces using specific conditions. Factors such as usage, cleaning systems, applied coatings and patterns of wear may affect the characteristics of the surface after classification. Standards Australia Handbook 198:2014 *Guide to the specification and testing of slip resistance of pedestrian surfaces* provides guidance for the selection of slip resistant pedestrian surfaces classified in accordance with AS 4586-2013. It is recommended that this test report be read in conjunction with AS 4586 and HB 198.

| Requested by: Client Address: | Forbo Flooring Systems 23 Ormsby Place Wetherill Park NSW 2164 | | |
|--|--|--------------|--------------------------------|
| Product Manufacturer: | Forbo Flooring Systems | | |
| Product Description: | Allura Puzzle | | |
| Test conducted according to: Location: Conducted by: | AS 4586:2013 Appendix A 4/40 Bessemer Street, Blackt Yuliana Vargolomova | own NSW 2148 | |
| Date: | 30 July 2020 | Temperature: | 17°C |
| Sample: | Unfixed | Cleaning: | None |
| Rubber slider used: | Slider 96 | Conditioned: | Grade P 400 paper dry followed |
| Slope of specimen: | Tested on a flat level surface | | by wet lapping film |
| Direction of Test: | NA | | |

| | Specimen 1 | Specimen 2 | Specimen 3 | Specimen 4 | Specimen 5 |
|----------------------------|------------|------------|------------|------------|------------|
| Mean BPN of last 3 swings: | 40 | 38 | 38 | 39 | 37 |

| Reported SRV of Sample: | 38 | |
|-------------------------|----|--|
| Class: | P3 | |



30 July 2020





Test Report No. R21527e-2 Accelerated Wear Slip Resistance Test

AS 4586-2013 Appendix A: incorporating accelerated wear conditioning to evaluate in-service wear

The purpose of the accelerated wear condition is to assist specifiers to better understand how the slip resistance of an individual product may alter with wear, thus helping to differentiate between products that might otherwise have seemingly similar slip resistance characteristics. AS 4586 does not provide guidance on the conduct of such accelerated wear tests; however, Appendix A3 states that *"if a product Standard or specification contains a requirement for the permanence of slip resistance, this requirement shall be determined after the appropriate accelerated again or wear testing procedure"*. The conditioning protocol primarily used within industry is based on method developed by Strautins¹. The results are intended to be used as an informative guide to the selection of surfaces within a quality management system; please refer to AS 4586, HB 198 and Strautins (2008) for further information.

| Test Method: | AS 4586 Appendix A: Test sample description, operating and equipment parameters outlined on previous page | | |
|------------------------|--|--------------|-----------------------|
| Sample Preparation: | Safe Environments in-house SOP – Accelerated Wear Slip Testing | | |
| Abrasive pad: | 3M Scotchbrite Heavy Duty Scour Pad No. 86 (water wet) | | |
| Machine | Gardco D12VFI washability and wear-testing machine | | |
| Mass of friction boat: | 1000 ±50g | Area: | 100 ±10mm x 100 ±10mm |
| Cycle Rate: | 50 ±5 cycles per min | Path length: | 300 ±50 mm |

| Wear Cycles | Specimen 1 | Specimen 2 | Specimen 3 | Specimen 4 | Specimen 5 | Mean | Class |
|-------------|------------|------------|------------|------------|------------|------|-------|
| 0 | 40 | 38 | 38 | 39 | 37 | 38 | P3 |
| 100 | - | - | - | - | - | NA | NA |
| 500 | 26 | 36 | 34 | 38 | 36 | 34 | P2 |
| 1000 | - | - | - | - | - | NA | NA |
| 5000 | - | - | - | - | - | NA | NA |

¹ **Strautins, Carl J** (2008) 'Sustainable Slip Resistance: An Opportunity for Innovation', Qualicer '08, Xth World Congress on Ceramic Tile Quality, Castellon Spain. Publication available upon request.