

## Slip Check to AS 4586-2013 Apex Series

**Report Number: R32212**

**Report Date: 8 October 2024**

**Total Number of Pages 3**

Safe Environments quality management system is certified to ISO 9001:2015

Accredited for compliance with ISO/IEC 17025 – Testing

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**Issued by**

Safe Environments Pty Limited  
6/7 Inglewood Place  
Norwest NSW 2153

**Approved by**



Carl Strautins  
Authorised Signatory

8 October 2024

# Test Report No. R32212

## 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 under 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, HB 197 & HB 198.

Requested by:  
Client Address:

Product Manufacturer:  
Product Description: Apex Series

Test conducted according to: AS 4586:2013 Appendix A  
Sampling Procedures: Performed by client and tested as received.  
Location: 6/7 Inglewood Place, Norwest NSW 2153

Conducted by: Ratan Venkatesan

|                     |                                |              |                                                    |
|---------------------|--------------------------------|--------------|----------------------------------------------------|
| Date:               | 08 October 2024                | Temperature: | 22°C                                               |
| Sample:             | Unfixed                        | Cleaning:    | None                                               |
| Rubber slider used: | Slider 96                      | Conditioned: | Grade P 400 paper dry followed by wet lapping film |
| Slope of specimen:  | Tested on a flat level surface |              |                                                    |
| Direction of Test:  | N/A                            |              |                                                    |

|                            | Specimen 1 | Specimen 2 | Specimen 3 | Specimen 4 | Specimen 5 |
|----------------------------|------------|------------|------------|------------|------------|
| Mean BPN of last 3 swings: | 53         | 52         | 51         | 45         | 49         |

|                                |           |
|--------------------------------|-----------|
| <b>Reported SRV of Sample:</b> | <b>50</b> |
| <b>Class:</b>                  | <b>P4</b> |

The expanded uncertainty ( $U_{95}$ ) at the 95% level of confidence with a coverage factor ( $k$ ) of 2 has been estimated to be 3 BPN or 8 %, whichever is the greater; sampling uncertainty has not been included. The expanded uncertainty should be considered when interpreting results or assessing conformity. Results relate only to items tested.

8 October 2024

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### Accelerated Wear Slip Resistance Test

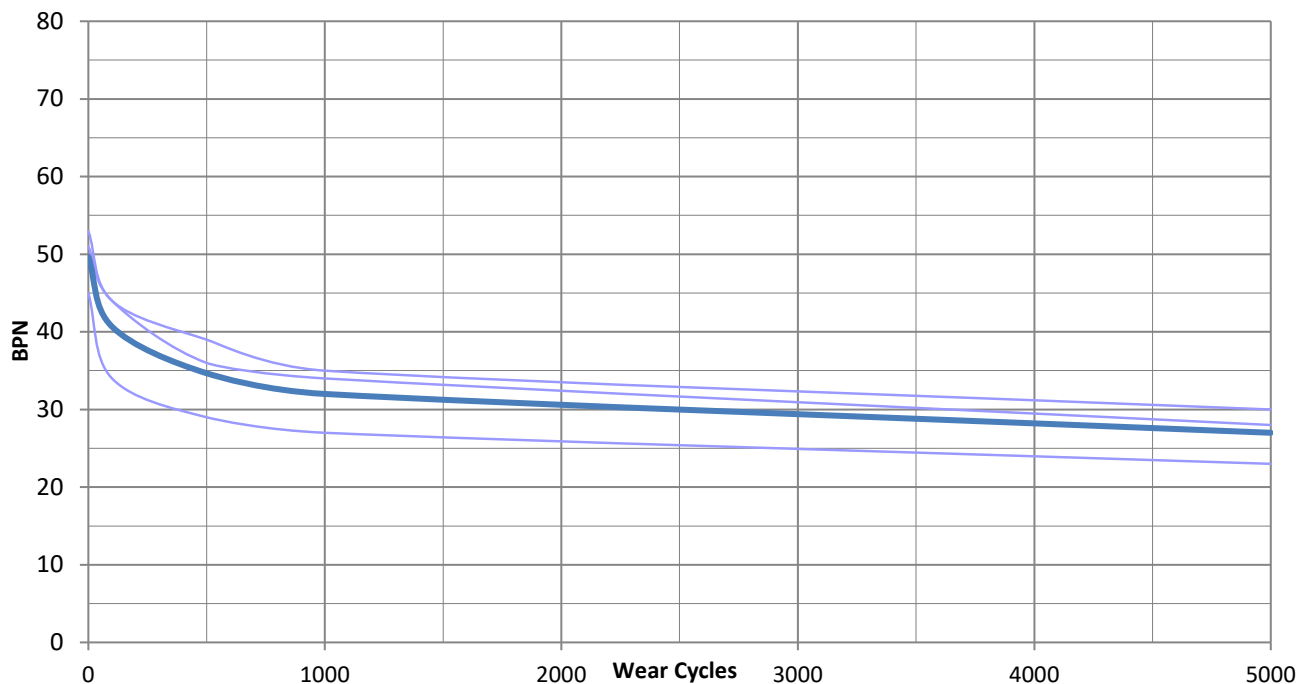
AS 4586-2013 Appendix A: (Modified) Accelerated wear conditioning to evaluate in-service wear

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 4586:2013 does not provide guidance on the conduct of such accelerated wear tests; however, Paragraph 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 wear testing procedure”. The conditioning protocol primarily used within industry is based on method developed by Strautins<sup>1</sup>. The results are intended to be used as an informative guide to the selection of surfaces within a quality management system, assessing the potential classification after wear; please refer to AS 4586, HB 198 and Strautins (2008) for further information.

|                        |                                                                |              |                       |
|------------------------|----------------------------------------------------------------|--------------|-----------------------|
| Test Method:           | Safe Environments in-house SOP – Accelerated Wear Slip Testing |              |                       |
| Abrasive pad:          | 3M Scotchbrite Heavy Duty Scour Pad No. 86 (water wet)         |              |                       |
| Machine                | Garco 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 3 | Specimen 4 | Mean BPN | Class |
|-------------|------------|------------|------------|----------|-------|
| 0           | 53         | 51         | 45         | 50       | P5    |
| 100         | 44         | 44         | 34         | 41       | P3    |
| 500         | 39         | 36         | 29         | 35       | P3    |
| 1000        | 35         | 34         | 27         | 32       | P2    |
| 5000        | 30         | 28         | 23         | 27       | P2    |

**BPN vs Wear Cycles**



<sup>1</sup> 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.