

**ACCELERATED WEAR TESTING - SLIP RESISTANCE**  
**Pangaea Polished Concrete 10mm Veneer**

**Prepared for:** Pangaea Australia  
ATTENTION: Craig Guilfoyle  
35 Bridge Road  
RICHMOND VIC 3121

**Introduction:**

You requested that we carry out an Accelerated Wear Testing (AWT) on the supplied sample.

An initial Wet Pendulum Test was carried out to the requirements set out in AS 4586: 2013 [1]<sup>1</sup> using a Slider 96 rubber with the full report attached in Appendix 1.

Accelerated Wear Testing [2] was then conducted up to a total of 10000 cycles on all five (5) specimens.

The Wet Pendulum Test was continued on all five (5) specimens at each stage of the AWT process after periods of 100, 500, 1000, 5000, 7000 and 10000 cycles

**Sample Description:** Pangaea Polished Concrete 10mm Veneer  
**Sample Size:** 150x150 mm.  
**No. of Specimens:** 5 off (Sampling conducted by client)  
**Test Location:** ATTAR – 44-48 Rocco Drive, Scoresby, VIC.  
**Test Date:** 1 September 2022

**AWT Parameters:**

Stroke Length: 400 mm  $\pm$ 50 mm  
Speed: 50 cycle per minute  $\pm$ 5 cycles  
Wear Pad Type: 3M Scotch Brite No. 96 (green) pad  
Wear Pad Size: 100x100 mm  $\pm$ 10 mm  
Boat Weight: 1000g  $\pm$ 50 g  
Lubricant: Potable water

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<sup>1</sup>The numbers in brackets refer to papers, reports or articles listed in the Reference section of this report.

**Test Results:**Wet Pendulum Test:

The full report for the Wet Pendulum Test conducted on the sample supplied is attached in Appendix 1. The results are summarised as follows:

|  |           |          |          |          |          |
|--|-----------|----------|----------|----------|----------|
| <b>Specimen Number:</b>                    | <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
| <b>Mean British Pendulum Number (BPN):</b> | 63        | 61       | 60       | 60       | 61       |
| <b>Slip Resistance Value (SRV):</b>        | <b>61</b> |          |          |          |          |
| <b>Classification:</b>                     | <b>P5</b> |          |          |          |          |

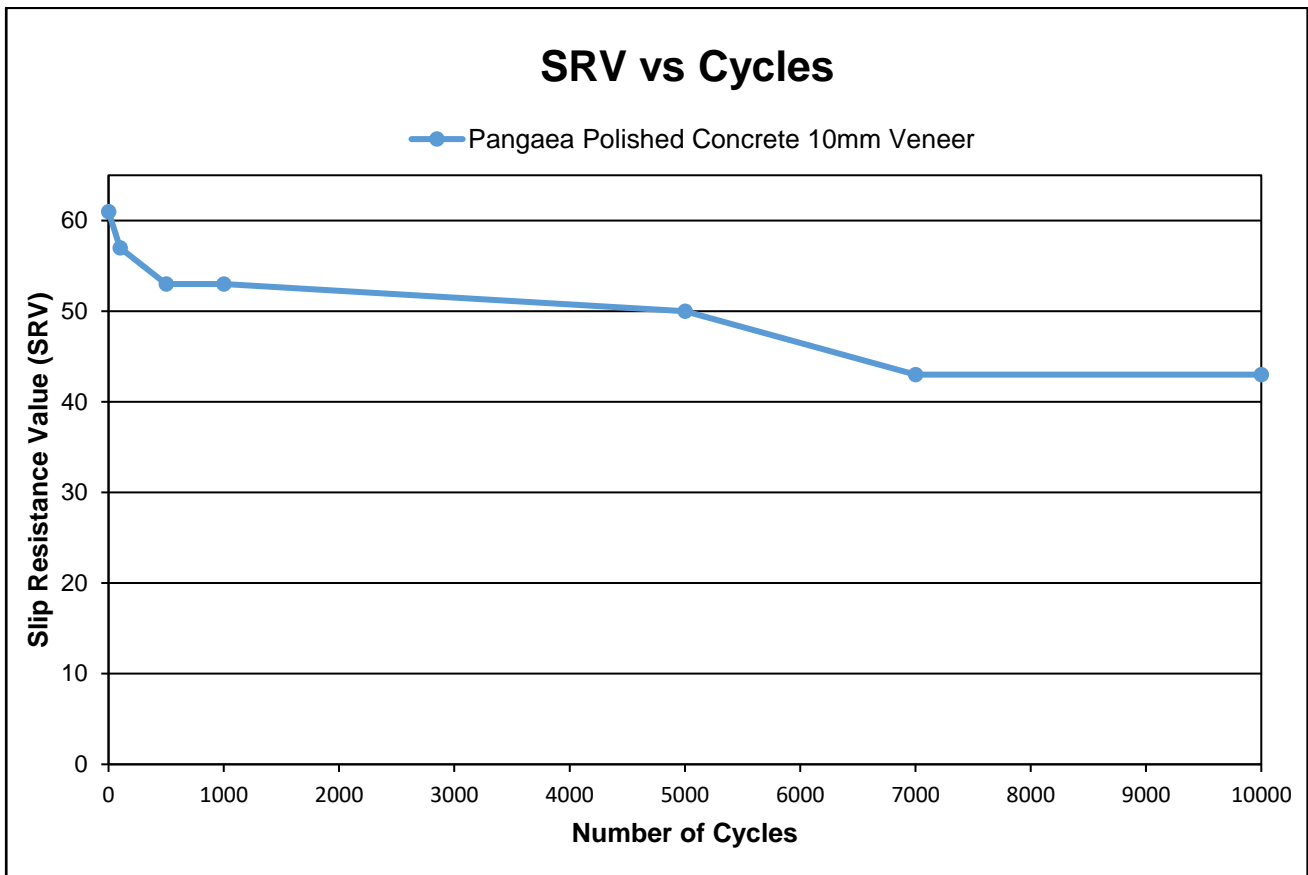
These results apply only to the areas and specimens tested. Where alternatives are permitted by the standard, the choice of rubber slider used may also influence the test results obtained.

Accelerated Wear Test:

The test results for the Accelerated Wear Testing conducted on all five (5) specimens is detailed in the table as follows:

| Number of Cycles | Specimen Number |    |    |    |    | SRV       | Classification |
|------------------|-----------------|----|----|----|----|-----------|----------------|
|                  | 1               | 2  | 3  | 4  | 5  |           |                |
| <b>0</b>         | 63              | 61 | 60 | 60 | 61 | <b>61</b> | <b>P5</b>      |
| <b>100</b>       | 60              | 59 | 55 | 56 | 55 | <b>57</b> | <b>P5</b>      |
| <b>500</b>       | 56              | 52 | 53 | 54 | 52 | <b>53</b> | <b>P4</b>      |
| <b>1000</b>      | 55              | 51 | 53 | 53 | 51 | <b>53</b> | <b>P4</b>      |
| <b>5000</b>      | 53              | 49 | 50 | 50 | 48 | <b>50</b> | <b>P4</b>      |
| <b>7000</b>      | 50              | 38 | 42 | 45 | 41 | <b>43</b> | <b>P3</b>      |
| <b>10000</b>     | 49              | 36 | 42 | 46 | 41 | <b>43</b> | <b>P3</b>      |

These results apply only to the areas and specimens tested. Where alternatives are permitted by the standard, the choice of rubber slider used may also influence the test results obtained.



Prepared By:

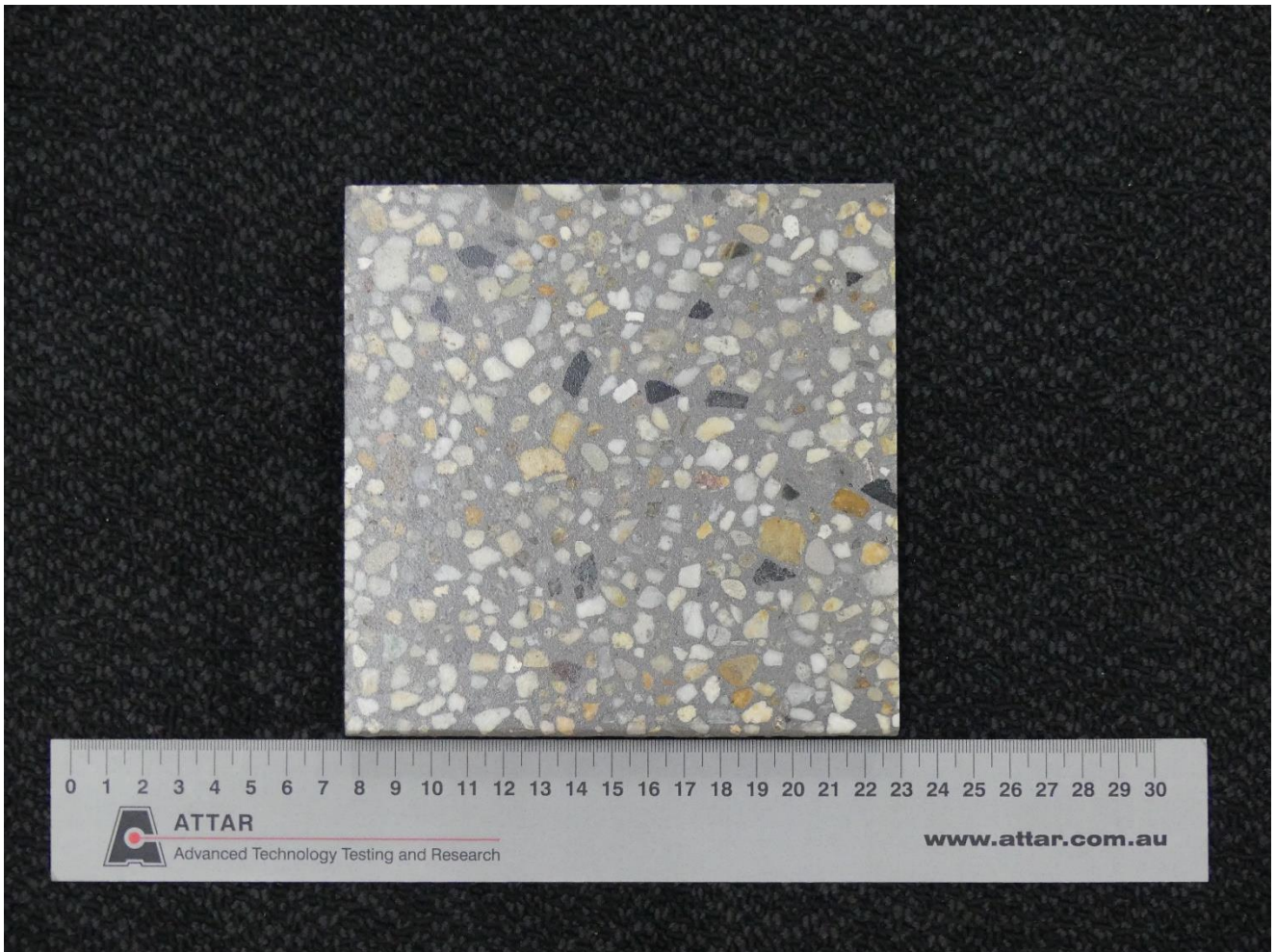
Marcus Braché  
Senior Engineering Technician  
Approved Signatory

Reviewed by:

Dale Siegle  
Compliance and Test Technician  
Approved Signatory

#### References:

1. Australian Standard AS 4586: 2013 Slip Resistance classification of new pedestrian surface materials, Standards Australia, Sydney, New South Wales.
2. ATTAR Accelerated Wear Test Procedure ETP023.



**Figure 1:** Pangaea Polished Concrete 10mm Veneer.



## **APPENDIX 1**

**Contents:**

**Reference:**

**Total Pages:**

Wet Pendulum Slip Resistance Test

REPORT 18315.1

3



## WET PENDULUM SLIP RESISTANCE TEST

### Pangaea Polished Concrete 10mm Veneer

**Prepared for:** Pangaea Australia  
Craig Guilfoyle  
35 Bridge Road  
RICHMOND VIC 3121

**Specimen Description:** Pangaea Polished Concrete 10mm Veneer, 150x150 mm.

**No. of Specimens:** 5 off (Sampling Conducted by Client)

**Specimen Preparation:** Washed with water and pH neutral detergent, rinsed then dried.

**Test Condition & Slope:** Unfixed, N/A

**Test Direction:** Test direction not applicable.

**Air Temperature:** 22°C

**Test Standard:** AS 4586:2013 Slip resistance classification of new pedestrian surface materials, Appendix A - Wet Pendulum Test

**Test Location:** ATTAR 44-48 Rocco Drive, Scoresby, VIC, 3179

**Test Date:** 17 August 2022

**Test Equipment:** Munro Stanley Pendulum Skid Resistance Tester Serial Number 0320, Calibrated 03/05/2022.

**Slider Rubber:** Slider 96 Batch No. #13 prepared on P400 & 3µm lapping film.

**Test Personnel:** Dale Siegle

| Specimen Number                    | 1  | 2  | 3  | 4  | 5  |
|------------------------------------|----|----|----|----|----|
| Mean British Pendulum Number (BPN) | 63 | 61 | 60 | 60 | 61 |
| Slip Resistance Value (SRV)        | 61 |    |    |    |    |
| Classification                     | P5 |    |    |    |    |

These results apply only to the specimens tested and it is recommended that before selection of flooring or paving materials the effect of service conditions, including maintenance procedures and wear on their slip resistance be checked. Where alternatives are permitted by the standard, the choice of rubber slider used may also influence the test results obtained.

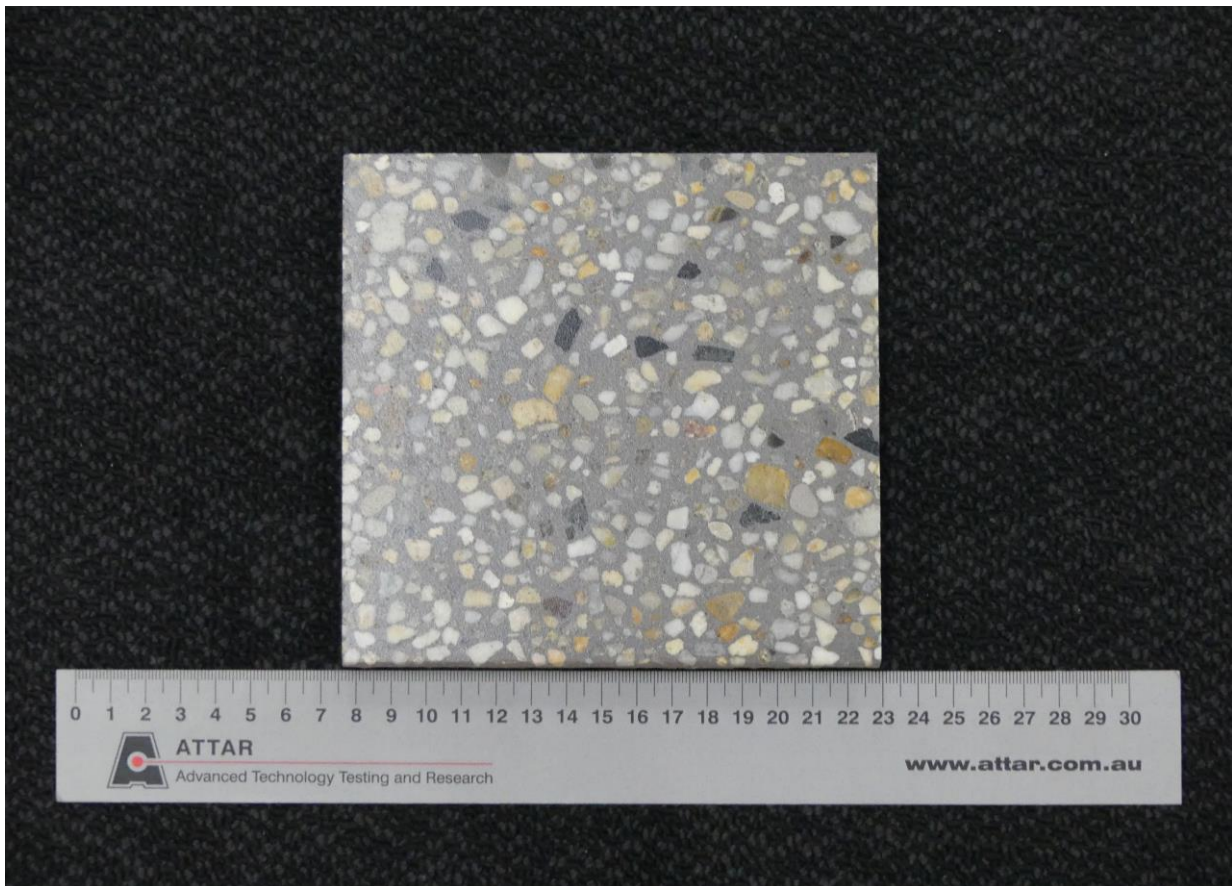
Reviewed By:



Marcus Braché  
Senior Engineering Technician  
Approved Signatory



Dale Siegle  
Technical Consultant - Compliance Services  
Approved Signatory



**Figure 1:** Pangaea Polished Concrete 10mm Veneer



## **CLASSIFICATION CRITERIA – AS 4586 – 2013** **Wet Pendulum Test - Appendix A**

### **Slip resistance**

When this Standard is used for the testing and classification of the slip resistance of carpets (or carpet-like products) in potentially wet locations, the carpet shall be tested using the wet pendulum test method set out in Appendix A of AS 4586, and shall be reported as such.

When this AS 4586 is used for the testing and classification of the slip resistance of carpets in dry locations, the test shall be carried out in the dry condition using the pendulum test method set out in Appendix A of AS 4586, modified in accordance with Paragraph A2, and shall be reported as such.

The 'dry floor friction' test method in Appendix B of AS 4586 is not suitable for heavily profiled surfaces or carpets.

### **Compliance**

The surface shall comply with the stated classification for the test method and test rubber that is nominated and declared by the manufacturer or supplier.

**TABLE 2: CLASSIFICATION OF PEDESTRIAN SURFACE MATERIALS  
ACCORDING TO THE AS 4586 WET PENDULUM TEST**

| Class | Pendulum SRV (see Note 1) |           |
|-------|---------------------------|-----------|
|       | Slider 96                 | Slider 55 |
| P5    | >54                       | >44       |
| P4    | 45-54                     | 40-44     |
| P3    | 35-44                     | 35-39     |
| P2    | 25-34                     | 20-34     |
| P1    | 12-24                     | <20       |
| P0    | <12                       |           |

#### NOTES:

- 1 While Slider 96 or Slider 55 rubbers may be used, the test report shall specify the rubber that was used.
- 2 It is expected that these surfaces will have greater slip resistance when dry.
- 3 SDV may be calculated by using the tables that are given in Appendix F of AS 4586, and the minimum SRV that is considered appropriate for a level surface (see examples given in Appendix F of AS 4586).

### **Means of demonstrating compliance**

Pedestrian surfaces that are classified in accordance with Table 2 shall meet the following criteria:

- (a) The mean test results shall be as follows:
  - (i) For the classifications in Table 2, the mean of the test results shall be—
    - (A) within the relevant criteria set out in the table; and
    - (B) each individual result shall be equal to or above the lower limit for the classification or, if below the classification, within the mean of the result minus 20%.If either criteria is not met, the lot shall be considered to be of lower classification.
- (b) The classification in accordance with Table 2 shall be determined by—
  - (i) selecting and testing at least five specimens at random as specified in Appendices A and B of AS 4586; or
  - (ii) carrying out continuous testing and process control in accordance with AS 3942.
- (c) When testing individual lots, if a particular test fails to produce the expected classification it shall be permissible to—
  - (i) disregard the first sample, resample a minimum of 10 specimens from the whole lot, retest and apply the criteria to the new sample; or
  - (ii) subdivide the lot into smaller lots of different quality, resample, retest and reclassify each of the smaller lots.