**Industrial Research Services**

**Manufacturing & Materials Technology,** 37 Graham Road (PO Box 56), Highett, Victoria 3190, Australia
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**Registered Testing Authority - Building Code of Australia**

26 February 2007 Our Ref: EN13 / 816 03/0211

# TEST REPORT No. 3784.2s

**Requested by:** R Ten Plus Pty Ltd
Client: David Macciolli
**on (date):** 12 February, 2007
**Product Descriptions:** Polished / Glazed Ceramic Control Tile (40x40)
Polished / Glazed Ceramic Treated Tile (40x40)

**Sampling Details**
**Date:** n/a
**How (methods):** By Client
February 2007

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This test report consists of 4 pages.

## SUMMARY OF SLIP RESISTANCE TESTS PERFORMED

| | | | Result | Class |
|---|---|---|---|---|
| AS/NZS 4586:2004 | Slip resistance classification of new pedestrian surface materials | | | |
| | Appendix A: Wet Pendulum (FourS Slider): | | | |
| | Ceramic Control Tile | Mean BPN: | 15 | Z |
| | Ceramic Treated Tile | Mean BPN: | 43 | X |
| AS/NZS 4586:2004 | Slip resistance classification of new pedestrian surface materials | | | |
| | Appendix B: DRY Floor Friction Tester: | | | |
| | Ceramic Control Tile | Mean coefficient of friction: | 0.50 | F |
| | Ceramic Treated Tile | Mean coefficient of friction: | 0.69 | F |

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**Report No:** **3784.2s**
**Issue Date:** 26 February 2007
**Manufacturer:** R Ten Plus Pty Ltd
**Sample Description:** Polished / Glazed Ceramic Tiles, 450x450mm

## SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

## WET PENDULUM TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS/NZS 4586:2004 (Appendix A)

Test Date: 14 February, 2007

RESULTS:

| | | |
|---|---|---|
| Location | Slip Resistance Laboratory | Rubber Slider Used: Type Four S<br>Conditioned with grade P400 paper, dry |
| Sample | Sample Unfixed | |
| Cleaning | Dust residue removed by brush, cleaned with distilled water | |
| Temperature: | 23°C | |

Pendulum Friction Tester: Stanley (Serial #9234, calibrated 13/06/05)
Test conducted by: David Weeks

| | Specimen | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Control | | | | | Treated (with r 10+ anti-slip) | | | | |
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Last 3 swings | 15 | 15 | 15 | 15 | 15 | 46 | 40 | 44 | 43 | 46 |
| | 15 | 15 | 14 | 15 | 14 | 46 | 39 | 43 | 43 | 46 |
| | 15 | 14 | 14 | 14 | 14 | 46 | 39 | 43 | 43 | 46 |
| Averages: | 15 | 15 | 14 | 15 | 14 | 46 | 39 | 43 | 43 | 46 |

| | | |
|---|---|---|
| **Mean BPN** | **15** | **43** |
| **Class :** | **Z** | **X** |

**Comment:**

The surface of the tiles samples were cleaned with distilled water prior to the assessment. The ceramic tiles were of an ivory / beige appearance and the difference in the reflected luminance was minimal.

The measured outcomes were from single tiles and it is only indicative of the potential of the anti-slip treatment for ceramic tiles. There has been no assessment for changes to the surface properties of the treated tiles.

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## SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS

## DRY FLOOR FRICTION TEST METHOD

TEST CARRIED OUT IN ACCORDANCE WITH
AS/NZS 4586:2004 (Appendix B)

Test Date: 14 February, 2007

RESULTS:

| | | |
|---|---|---|
| Location | Slip Resistance Laboratory | Rubber Type: Four S |
| Sample | Sample Fixed | Conditioned with grade P400 paper, dry |
| Cleaning | Antistatic Swipe | |
| Temperature: | 23°C | |

FFT measurements taken over 2 passes of 800mm each

Floor Friction Tester: Tortus MkII (S/N: 224)
Test conducted by: David Weeks

| | | Specimen | |
|---|---|---|---|
| | | **Control** | **Treated (with r 10+ anti-slip)** |
| **Run 1:** | **Average COF:** | **0.50** | **0.69** |
| **Run 2:** | **Average COF:** | **0.51** | **0.68** |
| | **Mean COF:** | **0.50** | **0.68** |
| According to AS/NZS 4586 the dry Coefficient of Friction shall be reported as: (mean rounded to the nearest 0.05) | | **0.50** | **0.70** |
| **Class :** | | **F** | **F** |

**Comment:**

This is a dry assessment of the co-efficient of friction of the surface of the samples. The increased slip resistance is a direct result of changes to the surface structure from the anti-slip treatment and not a chemical reaction when in contact with water.

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Date and Place 26 February 2007 Highett, Victoria

Name, Title and Signature:

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