TCNA TEST REPORT NUMBER: TCNA-820-13

TEST REQUESTED BY: ARTO
Attn: Armen Alajian
15209 So Broadway
Gardena, CA 90248

TEST SUBJECT MATERIAL: Identified by client as: “Roman”

TEST DATE: 1/7/2014

TEST PROCEDURE: ANSI A137.1 Section 9.6.1 “Wet Dynamic Coefficient of Friction (DCOF)”
- Three (3) pieces of tile were tested in all four directions.
- The SBR sensor was verified using a standard tile prior to testing.
- Testing was performed under wet conditions using 0.05% SLS water
- Testing was conducted under laboratory conditions at approximately 70°F and 50% relative humidity using a calibrated BOT 3000 device.

TEST RESULTS: The individual and average DCOF data for each tile were as follows:

<table>
<thead>
<tr>
<th>Direction</th>
<th>Tile 1</th>
<th>Tile 2</th>
<th>Tile 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction 1</td>
<td>0.85</td>
<td>0.80</td>
<td>0.81</td>
</tr>
<tr>
<td>Direction 2</td>
<td>0.82</td>
<td>0.78</td>
<td>0.75</td>
</tr>
<tr>
<td>Direction 3</td>
<td>0.81</td>
<td>0.81</td>
<td>0.74</td>
</tr>
<tr>
<td>Direction 4</td>
<td>0.77</td>
<td>0.79</td>
<td>0.76</td>
</tr>
<tr>
<td>Average</td>
<td>0.81</td>
<td>0.80</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Katelyn Simpson
Laboratory Manager
1/14/2014
TEST REQUESTED BY: ARTO

TEST SUBJECT MATERIAL: Identified by client as: “Roman”

TEST METHOD: ANSI A137.1-2012 Section 9.6.1: “Wet Dynamic Coefficient of Friction (DCOF)”

ANSI SPECIFICATIONS*:

According to the ANSI A137.1 standard for ceramic tile, "Unless otherwise specified, tiles suitable for level interior spaces expected to be walked upon when wet shall have a wet DCOF of 0.42 or greater when tested using SLS solution as per the procedure in section 9.6.1. However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects. The specifier shall determine tiles appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers’ guidelines and recommendations.”

This paragraph is excerpted from Section 6.2.2.1.10 of the standard. For the complete section, including necessary information for specifiers, this section can be viewed and downloaded at no cost at http://www.tcnatile.com/images/pdfs/6.2.2.1.10_A137.1COF_Website.pdf