TEST REPORT
CERAMIC TILES - DETERMINATION OF RESISTANCE TO STAINS
UNI EN ISO 10545-14: 2015

Test report n. 0420/2017/1
Date of report: 02/08/2017
Customer: FLORIM CERAMICHE S.p.a.
Via Canaletto, 24
41042 FIORANO MODENASE (MO)
Requested on: 02/01/2017
Our ref.number: 19233
Execution place of tests: Scandiano (RE)
Description of the sample:
"Ceramic tiles marked: Serie Onix of cerim, articolo white lucido, formato 60x60 cm, marchio Cerim"
Sampling: carried out by the customer
Receipt date of samples: 02/02/2017
Execution date of tests: start: 02/02/2017  end: 02/08/2017
Test specification: UNI EN ISO 10545 - 14:2015
Determination of resistance to stains

Warnings: This test report can not be reproduced in part, without our written consent.
The reported results relate only to the samples tested.
The information included in quotation marks was provided by the customer.
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Principle: determination of the resistance to stains by maintaining test solutions and materials in contact with the proper surface of the tiles for a suitable length of time; the surfaces are then subjected to defined cleaning methods, and finally inspected for visual changes.

N. samples tested: 5

Test results:

<table>
<thead>
<tr>
<th>Staining agents</th>
<th>Sample 1 Class</th>
<th>Sample 2 Class</th>
<th>Sample 3 Class</th>
<th>Sample 4 Class</th>
<th>Sample 5 Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stains leaving a trace (pastes)</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Green staining agent in light oil</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Stains having chemical/oxidizing action</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Iodine, alcoholic solution 13 g/l</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Stains forming a film</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olive oil</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Classification procedure of the test of resistance to stains:

Class 5: Procedure A, stain removed with warm water (55 ± 5) °C, allowed to flow for 5 min
Class 4: Procedure B, stain removed manually using a natural non-abrasive sponge and weak cleaning agent, (pH 6.5-7.5) (Ajax liquid)
Class 3: Procedure C, stain removed mechanically for 2 min using a strong cleaning agent containing abrasive (pH 9-10) (Clif)
Class 2: Procedure D, stain removed by immersing the sample in a suitable solvent for 24 hours.
Class 1: stain not removed

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