TEST REPORT: 20198607/4

Modena, 11/12/19

CUSTOMER
FLORIM CERAMICHE SPA - - VIA CANALETTO 24 - 41042 - FIORANO MODENESE - MO

MATERIAL and/o SAMPLE to be tested
porcelain tiles;

Denomination
serie Rock salt of cerim articolo Danish smoke spessore 10 mm superficie naturale marchio Cerim;

Date of sample reception
18/11/2019;

Date of sample acceptation
18/11/2019;

Kind of test executed
Determination of Modulus of rupture and Breaking strength

Referring standards
UNI EN ISO 10545-4:2019

Shifting from standards
No one

Equipment
Flexural test machine cod. MCP C152 - Gauge cod. MCP C145 - Metric band-mill cod. MCP C56

Subcontracted phases
No one

Sampling made by
Customer

The test results showing in this Report are only referred to the sample taken by our staff or supplied by the Customer. He commits himself to reproduce integrally this document. Partial reproduction is forbidden.
The times of retain of the samples was indicated in the offer related to the test report.
DETERMINATION OF MODULUS OF RUPTURE AND BREAKING STRENGTH

Beginning date : 02/12/2019
Analysis ending date : 03/12/2019

SAMPLE : Ceramic tiles, marked «serie Rock salt of cerim articolo Danish smoke spessore 10 mm superficie naturale marchio Cerim »

RESULTS

The test has been performed on entire samples

Width of the test specimen \( b \) 580 mm
Dimension of tile \( L \) 600 mm
Diameter of rod \( d \) 20 mm
Thickness of rubber \( t \) 5 mm
Overlap of tile beyond the edge supports \( l_t \) 10 mm

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>Unit of measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tile n°</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Span between the support rods ( l_2 )</td>
<td>mm</td>
<td>580</td>
<td>580</td>
<td>580</td>
</tr>
<tr>
<td>Width of the test specimen ( b )</td>
<td>mm</td>
<td>580</td>
<td>580</td>
<td>580</td>
</tr>
<tr>
<td>Minimum thickness of the specimen ( h )</td>
<td>mm</td>
<td>9.0</td>
<td>9.2</td>
<td>9.2</td>
</tr>
<tr>
<td>Breaking load ( F )</td>
<td>N</td>
<td>2889</td>
<td>2814</td>
<td>2834</td>
</tr>
<tr>
<td>Breaking strength ( S )</td>
<td>N</td>
<td>2889</td>
<td>2814</td>
<td>2834</td>
</tr>
<tr>
<td>Modulus of rupture ( R )</td>
<td>N/mm(^2)</td>
<td>53.5</td>
<td>49.9</td>
<td>50.2</td>
</tr>
</tbody>
</table>

Breaking load \( F \) average value (N) = 2846
Breaking strength \( S \) average value (N) = 2846
Modulus of rupture \( R \) average value (N/mm\(^2\)) = 51.2

REQUISITI UNI EN 14411:2016

<table>
<thead>
<tr>
<th>SPESORE</th>
<th>REQUISITO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORZA DI ROTTURA</td>
<td></td>
</tr>
<tr>
<td>Spessore ≥ 7,5 mm</td>
<td>&gt; 1300 N</td>
</tr>
<tr>
<td>Spessore &lt; 7,5 mm</td>
<td>&gt; 700 N</td>
</tr>
<tr>
<td>MODULO DI ROTTURA*</td>
<td></td>
</tr>
<tr>
<td>Valore medio</td>
<td>&gt; 35 N/mm(^2)</td>
</tr>
<tr>
<td>Valore singolo</td>
<td>&gt; 32 N/mm(^2)</td>
</tr>
</tbody>
</table>

(*) Non applicabile per piastrelle aventi forza di rottura > 3000 N