TEST REPORT: 20186767/3

Modena, 19/10/18

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

MATERIAL and/or SAMPLE to be tested
porcelain tiles;

Denomination
serie Exalt of Cerim articolo Amber Sympony naturale spessore 10 mm formato 60x120 cm marchio Cerim;

Date of sample reception
25/09/2018;

Kind of test executed
Determination of Chemical Resistance

Referring standards
UNI EN ISO 10545-13:2017

Shifting from standards
No one

Equipment
Forced ventilation stove cod. MCP C43

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 Chemical Resistance

Beginning date: 08/10/2018
Analysis ending date: 12/10/2018

Sample: Ceramic tiles, marked « serie Exalt of Cerim articolo Amber Sympony naturale spessore 10 mm formato 60x120 cm marchio Cerim »

Classification

Normal classification

HB Pencil test (untreated tile)

Remove?

NO

Use alternative classification

YES

Chemical attack

Household chemicals and swimming pool salts

Low concentration acids and alkalis

High concentration acids and alkalis

Visual examination

Visible effect?

NO

HB pencil test (heated tile)

Remove?

NO

Reflection test?

Blurree?

YES

Class A

NO

Class C

NO

Class B

YES

Alternative visual classification

HB pencil test (untreated tile)

Remove?

NO

Use normal classification

YES

Chemical attack

Household chemicals and swimming pool salts

Low concentration acids and alkalis

High concentration acids and alkalis

Visual examination

Visible effect?

NO

Partial or complete loss of original surface?

YES

Class C

NO

Class B

Class A

Class C

Class B

Class A

Examiner p.i. Bortolai Alberto
MODENA CENTRO PROVE
MODENA CENTRO PROVE
MODENA CENTRO PROVE

Directo
San'Uzione dr. Giuseppe
### RESULTS

<table>
<thead>
<tr>
<th>TEST SOLUTIONS</th>
<th>Period of Test</th>
<th>CLASS OF RESISTANCE Sample 1</th>
<th>CLASS OF RESISTANCE Sample 2</th>
<th>CLASS OF RESISTANCE Sample 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium chloride 100 g/l</td>
<td>24 hours</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Sodium hypochlorite solution 20 mg/l</td>
<td>24 hours</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Citric acid solution 100 g/l</td>
<td>24 hours</td>
<td>LA</td>
<td>LA</td>
<td>LA</td>
</tr>
<tr>
<td>Hydrochloric acid solution 3% (V/V)</td>
<td>(96±1) hours</td>
<td>LA</td>
<td>LA</td>
<td>LA</td>
</tr>
<tr>
<td>Potassium hydroxide 30 g/l</td>
<td>(96±1) hours</td>
<td>LA</td>
<td>LA</td>
<td>LA</td>
</tr>
<tr>
<td>Hydrochloric acid solution 18% (V/V)</td>
<td>(96±1) hours</td>
<td>HA</td>
<td>HA</td>
<td>HA</td>
</tr>
<tr>
<td>Lactic acid 5% (V/V)</td>
<td>(96±1) hours</td>
<td>HA</td>
<td>HA</td>
<td>HA</td>
</tr>
<tr>
<td>Potassium hydroxide 100 g/l</td>
<td>(96±1) hours</td>
<td>HA</td>
<td>HA</td>
<td>HA</td>
</tr>
</tbody>
</table>

### REQUIREMENTS UNI EN 14411:2016

GROUP: Bla

UNI EN 14411:2016 Annex: G

<table>
<thead>
<tr>
<th>CHEMICAL RESISTANCE</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing with household chemicals, swimming pool salt</td>
<td>minimum classe B</td>
</tr>
<tr>
<td>Testing with products at low acid and alkalis concentration</td>
<td>declared value</td>
</tr>
<tr>
<td>Testing with products at high acid and alkalis concentration</td>
<td>declared value</td>
</tr>
</tbody>
</table>

Type of chemical attack: contact on proper surface