TEST REPORT: 20193414/3

Modena, 15/05/19

CUSTOMER

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

MATERIAL and/o SAMPLE to be tested

porcelain tiles;

Denomination

Serie I CLASSICI DI REX Articolo CALACATTA GOLD GLOSSY Magnum spessore 6mm formato 60X120 cm marchio Rex;

Date of sample reception

18/04/2019;

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 : 03/05/2019  
Analysis ending date : 07/05/2019

SAMPLE : Ceramic tiles, marked «Serie I CLASSICI DI REX Articolo CALACATTA GOLD GLOSSY Magnum spessore 6mm formato 60X120 cm marchio Rex»

CLASSIFICATION

**Normal classification**

- HB Pencil test (untreated tile)
  - Remove? NO
    - Chemical attack
      - Household chemicals and swimming pool salts
      - Low concentration acids and alkalis
      - High concentration acids and alkalis
      - Visual examination
        - Visible effect? YES
          - HB pencil test (heated tile)
            - Remove? NO
              - Blurr? YES
                - Class C
              - NO
                - Class B
            - NO
              - Reflection test?
                - YES
                  - Class A
                - NO
                  - Class B
    - YES
      - Use alternative classification

**Alternative visual classification**

- HB pencil test (untreated tile)
  - Remove? YES
    - Use normal classification
  - NO
    - Chemical attack
      - Household chemicals and swimming pool salts
      - Low concentration acids and alkalis
      - High concentration acids and alkalis
      - Visual examination
        - Visible effect? YES
          - Partial or complete loss of original surface?
            - YES
              - Class C (v)
            - NO
              - Class B (v)
          - NO
            - Class A (v)
# 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>LB</td>
<td>LB</td>
<td>LB</td>
</tr>
<tr>
<td>Hydrochloric acid solution 3% (V/V)</td>
<td>(96±1) hours</td>
<td>LB</td>
<td>LB</td>
<td>LB</td>
</tr>
<tr>
<td>Potassium hydroxide 30 g/l</td>
<td>(96±1) hours</td>
<td>LB</td>
<td>LB</td>
<td>LB</td>
</tr>
<tr>
<td>Hydrochloric acid solution 18% (V/V)</td>
<td>(96±1) hours</td>
<td>HB</td>
<td>HB</td>
<td>HB</td>
</tr>
<tr>
<td>Lactic acid 5% (V/V)</td>
<td>(96±1) hours</td>
<td>HB</td>
<td>HB</td>
<td>HB</td>
</tr>
<tr>
<td>Potassium hydroxide 100 g/l</td>
<td>(96±1) hours</td>
<td>HB</td>
<td>HB</td>
<td>HB</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

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Examiner
p.i. Bortolai Alberto

MODENA CENTRO PROVE
P.I. De Pasquale Roberto

MODENA CENTRO PROVE
Drecto
t Sani'Unione dr. Giuseppe

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