TEST REPORT: 20201960/2

Modena, 26/03/20

CUSTOMER

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

MATERIAL and/o SAMPLE to be tested

PORCELAIN TILES;

Denomination

Serie Buildtech 2.0 articolo Mud CE soft formato 60x60 cm spessore 10 mm marchio Floor gres;

Date of sample reception

07/02/2020;

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: 17/02/2020
Analysis ending date: 21/02/2020

Sample: Ceramic tiles, marked «Serie Buildtech 2.0 articolo Mud CE soft formato 60x60 cm spessore 10 mm marchio Floor gres»

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 (treated tile)
        - Remove? NO → Blurred? YES → Class A
        - YES → Class B
      - YES → Reflection test?
        - NO → Class A
        - YES → Class C
  - NO → HB pencil test (untreated tile)
    - Remove? NO → Blurred? YES → Class A
    - YES → Class B

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? NO → Household chemicals and swimming pool salts
        - Low concentration acids and alkalis
        - High concentration acids and alkalis
        - Partial or complete loss of original surface?
          - NO → Class A(V)
          - YES → Class B(V)
      - YES → Reflection test?
        - NO → Class A(V)
        - YES → Class C(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>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>LB</td>
<td>LB</td>
<td>LB</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>HB</td>
<td>HB</td>
<td>HB</td>
</tr>
</tbody>
</table>