

Laboratorio prove, Centro di Ricerca, Sperimentazione, Consulenza e Controllo qualità

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TEST REPORT n. 4333/2021/I

**CERAMIC TILES - DETERMINATION OF MODULUS OF RUPTURE AND BREAKING STRENGTH
UNI EN ISO 10545-4:2019**

Date of report: 07/27/2021

Customer: **FLORIM CERAMICHE S.p.a.**
Via Canaletto, 24
41042 FIORANO MODENESE (MO)

Requested on: 07/09/2021

Our ref.number: 30972

Execution place of tests: Scandiano (RE)

Description of the sample: "Ceramic tiles 60x120 cm
marked: Serie Match Up Articolo SUGAR GRIP formato 60x120 cm, spessore 20
mm, superficie GRIP, marchio Cerim"

Sampling: carried out by the customer

Receipt date of samples: 07/13/2021

Execution date of tests: start: 07/21/2021 end: 07/22/2021

Test specification: UNI EN ISO 10545-4:2019
Determination of modulus of rupture and breaking strength

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 breaking load, breaking strength and modulus of rupture of tile by applying a force at a definite rate to centre of the tile, the point of application being in contact with the proper surface of the tile.

Used method: see principle

N. of samples tested: 3

Preparation of the test: The test was performed on whole tiles
Number of tiles: 3
N. of samples tested for each tile: 1
Length of the samples: $l = 1196$ mm
Width of the samples: $B = 596$ mm

Experimental conditions: Roller diameter: $d = 20$ mm
Thickness of the coating roller: $t = 5$ mm
Distance between the support point and the edge: $l_1 = 10$ mm
Distance between the points of support: $l_2 = 1176$ mm
Width of the sample: $B = 596$ mm

Test results:

Breaking load F

n. sample	F [N]
1	5288
2	5169
3	5248

Average breaking load: $F_m[N]= 5235$

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Test results:

Breaking strength S

n. sample	S[N]
1	10433
2	10199
3	10356

Breaking strength average: $S_m[N] = 10329$

Modulus of rupture R

n. sample	R[N/mm ²]
1	47,8
2	45,7
3	47,4

Average modulus of rupture: $R_m[N/mm^2] = 47,0$



The Director
Giulia Gaido

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