



LAB N° 1170

**TEST REPORT**

**CERAMIC TILES - DETERMINATION OF RESISTANCE OF MODULUS OF RUPTURE AND BREAKING STRENGTH  
UNI EN ISO 10545-4: 2014**

Test report n. 5057/2018 /I

Date of report: 11/30/2018

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

Requested on: 11/20/2018

Our ref.number: 23817

Execution place of tests: Scandiano (RE)

Description of the sample: "Ceramic tiles 60x60 cm  
marked :Serie Stontech 4.0 formato 60x60 superficie naturale marchio  
Floor gres"

Sampling: carried out by the customer

Receipt date of samples: 11/22/2018

Execution date of tests: start: 11/22/2018 end: 11/23/2018

Test specification: UNI EN ISO 10545-4:2014  
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: 7

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:  $l_2 = 577$  mm  
Width of the sample:  $b = 597$  mm

Test results: **Breaking load F**

n. sample	F [N]
1	3740
2	3554
3	3581
4	3607
5	3536
6	3836
7	3251

Average breaking load:  $F_m[N] = 3586$



**Breaking strength S**

n. sample	S [N]
1	3615
2	3435
3	3461
4	3486
5	3418
6	3707
7	3142

Breaking strength average:  $S_m[N] = 3466$



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Test results: **Modulus of rupture R**

n. sample	R[N/mm <sup>2</sup> ]
1	60,1
2	60,9
3	58,8
4	57,9
5	58,0
6	61,6
7	54,5

Average modulus of rupture:  $R_m$ [N/mm<sup>2</sup>]= 58,8



THE DIRECTOR  
*M.L. Simichini*

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