



TEST REPORT

TR N°: 126/13

DATE 23/05/2013

Spett.li
DOM CERAMICHE S.p.A.
S.S. 569, 167/a
41014 SOLIGNANO MO

EN 101 : 1982

DETERMINATION OF SCRATCH HARDNESS MOHS SCALE

This norm defines a method of test for determining the scratch hardness with Mohs scale.

Mineral's test

Mineral	Scratch Hardness Mohs	Mineral	Scratch Hardness Mohs
Talc	1	Feldspar	6
Gypsum	2	Quartz	7
Calcite	3	Topaz	8
Fluorite	4	Corundum	9
Apatite	5	Diamond	10

Samples arrived 14/05/2013 (sampling executed by Costumer)

DESCRIPTION TILES : 25x100 cm
TYPE : DLO2520 LOGWOOD CREAM

Test start 20/05/2013
Test finished 20/05/2013

	Scratch Hardness Mohs
Test tile n°: 1	8,0
2	8,0
3	8,0

Responsabile delle Prove
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GEOCERAMIC RESEARCHES
LABORATORIO TECNOLOGICO
40050 MONTE SAN PIETRO (BO) - ITALY

Register of Qualified Laboratories (Article 4 of Law 46/82)
Decree of the Ministry of University and Scientific and Technological
Research of 25/03/1990.

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UNI EN ISO 10545-7 : 2000

CERAMIC TILES
DETERMINATION OF RESISTANCE TO SURFACE ABRASION
GLAZED TILES

Principle: determination of the abrasion resistance of the glaze of tiles by rotation of an abrasive load on the surface and the assessment of the wear by means of visual comparison of abraded test specimens and non-abraded tiles.

Samples arrived 14/05/2013 (sampling executed by Costumer)

DESCRIPTION TILES : 25x100 cm
TYPE : DLO2520 LOGWOOD CREAM

Test start 15/05/2013
Test finished 16/05/2013

Instrumentation used : Surface abrasion apparatus – Cod. GR AS/005.

DETERMINATION OF RESISTANCE TO SURFACE ABRASION

Classification : **V**
Note : (visual not failure at 12.000 revolutions – stains removed)

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TEST REPORT

TR N°: 161/13

DATE 26/06/2013

Spett.li
 DOM CERAMICHE S.p.A.
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 41014 SOLIGNANO MO

ASTM C 1028-07

DETERMINATION OF STATIC COEFFICIENT OF FRICTION

(test method for evaluating the static friction's coefficient of ceramic tile and other like surfaces by the horizontal dynamometer pull meter method, ASTM C 1028)

A block of wood with a 3"x3"x1,8" section of standard neolite cement liner attached was placed on the surface to be test. A weight was placed on the block of wood. Using a dynamometer, the force in pounds required to cause the test assembly to slip parallel to the test surface was measured. Four measurements were taken on each of three test surfaces, each measurements perpendicular to the previous one. The twelve measurements thus obtained were averaged to obtain the static coefficient of friction for each test conditions.

Samples arrived 18/06/2013 (sampling executed by Costumer)

DESCRIPTION TILES : 16x100 cm
 TYPE : DLO1610 LOGWOOD WHITE

Test start 25/06/2013
 Test finished 25/06/2013

Test conditions	Sample N°	Position N	Position E	Position S	Position W	Average (Kg)	C.O.F. (*)
Dry neolite	1	14,6	15,7	15,2	15,6		
Dry neolite	2	14,7	15,2	15,3	15,1		
Dry neolite	3	15,1	14,7	15,0	15,0	15,1	0,65
Wet neolite	1	11,6	12,8	12,2	11,6		
Wet neolite	2	11,8	12,4	12,0	11,9		
Wet neolite	3	12,1	11,7	11,6	12,2	12,0	0,61

(*) Coefficient of friction; neolite correction factor applied

Dry Neolite average C.O.F. (*) 0,65
 Wet Neolite average C.O.F. (*) 0,61

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REFERENCE VALUES (The Ceramic Tile Institute identities tile in the following 3 categories):

1. Anti-slip ($\geq 0,60$)
2. Conditionally Slip resistant ($0,50 < 0,60$)
3. Questionable ($\leq 0,50$)

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TEST REPORT

TR N°: 148/13

DATE 19/06/2013

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**B.C.R.A. METHOD
 SLIPPERY**

The test has been carried out using measuring instrument TORTUS® of the coefficient of dynamic friction between a sliding element and the surface of test.

Operating conditions:

- Speed of advance (mm/s): 17 - Loaded junior clerk to sliding element (g): 200

Samples arrived 30/05/2013 (sampling executed by Customer)

DESCRIPTION TILES : 16x100 cm
 TYPE : DLO1620 LOGWOOD CREAM

Test start 07/06/2013
 Test finished 07/06/2013

Covering material of sliding element	Superficial test of condition	Coefficient of friction (μ)			
Leather	Dry	0,50			
Hard rubber standard	Wet (water + bathing agent)	0,52			
Singles test of coefficient of friction					
with leather:		0,46	0,57	0,48	0,52
with hard rubber standard		0,51	0,50	0,52	0,53

REFERENCE VALUE

μ < 0.20
 0.20 < μ > 0.40
 0.40 < μ > 0.74
 μ > 0.74

(B.C.R.A. REP. CEC. 6/81)

Danger slippery
 Excessive slippery
 Satisfaction friction
 Excellent friction

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Requirement ("Regulations of performance dell' art.1 of the law 9 January 1989, n.13" - Decree Ministerial 14/06/89, n° 236 Art. 8.2.2)

μ (coefficient of friction) :

- for leather sliding element to dry paving : > 0.40
 - for hard rubber sliding element to wet paving : > 0.40

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NORM DIN 51130 : 2004

Determination of anti-slippery characteristic
Work's zone with high risk of slippery
Procedure of test walking – inclined platform.

The test regard work's zone with high risk of slippery; the procedure it previews a slanted plan that it comes covered from the subject participants to the test, whose surface is paved with the material in object, preventively greased with having oil 10 viscosity SAE W 30. During the execution one determines if the material in examination can be suitable for puts down it in specific atmospheres of job. The medium degree of inclination correspondent to the feeling of insecurity of the operator who walks on the plan, defines the classification of the material in one of the five groups that serve like parameter in order to establish the effectiveness degree anti-slippery.

Samples arrived 14/05/2013 (sampling executed by Costumer)

DESCRIPTION TILES : 25x100 cm
TYPE : DLO2520 LOGWOOD CREAM

Test start 17/05/2013
Test finished 17/05/2013

Slide angle : **12,9°**

Classification : **R10**

LEGEND:

Total of the medium values

from 6° to 10°
over 10° until 19°
over 19° until 27°
over 27° until 35°
over 35°

Group classification

R 9
R 10
R 11
R 12
R 13

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