



Main Laboratory Sassuolo

Centro di Ricerca, Sperimentazione, Consulenza e Controllo Qualità

Scandiano, 02/18/2015



TEST REQUESTED BY: **GRUPPO CERAMICHE GRESMALT S.p.A.**

Via Statale 467, 45
42013 Casalgrande
(RE)

Confidential Test Report N. 0523/2015 /I

Our ref.num.: 14053
Date of request: 02/16/2015

TEST SUBJECT MATERIAL

Identified by client as:
"Glazed paver tiles 30x60,4 cm marked:
Serie LINEAR"

Source

Submitted to Laboratory by Client

Date Received

02/16/2015

Time of test execution

start: 02/18/2015

end: 02/18/2015

Detailed of test / method description / test procedure

BOT 3000 "Dynamic Coefficient of Friction (DCOF)"
(Ref. 9.6, Standard ANSI A137.1:2012)

The report relates only to the sample(s) tested. This report must not be reproduced in part without the written permission of Main Laboratory Sassuolo, nor used in any way as to lead to misrepresentation of the results or their implications.

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GRUPPO CERAMICHE GRESMALT S.p.A.

Test specimen

"Glazed paver tiles 30x60,4 cm marked:
Serie LINEAR"

BOT 3000 "Dynamic Coefficient of Friction (DCOF)"
(Ref. 9.6, Standard ANSI A137.1:2012)

TEST PROCEDURE: must be used sensor SBR rubber with characteristics standardized (par. 9.6.1.1.2 and note 3).

Sensor SBR must be controlled using a surface standard before the test.

Three (3) pieces of tile are tested in all four directions (1-2-3-4).

Testing was done in the wet condition using 0.05% SLS water

Testing was conducted in a laboratory at temperature of 20±2 °C and 50±5% relative humidity.

Instrument used is BOT 3000 of the Regan Scientific Instruments.

Dynamic Coefficient

DCOF wet of friction Standard Tiles

Before the test	0,29
After the test	0,30

Test conditions: wet surface (solution SLS 0,05 %), rubber sensor

No.	Position				Average
	1	2	3	4	
1	0,63	0,64	0,63	0,63	0,63
2	0,62	0,62	0,63	0,62	0,62
3	0,65	0,63	0,64	0,65	0,64



THE DIRECTOR
(M. Simioli)



Main Laboratory Sassuolo

Centro di Ricerca, Sperimentazione, Consulenza e Controllo Qualità



Scandiano, 12/13/2013



Messrs **GRUPPO CERAMICHE GRESMALT S.p.A.**

Via Statale 467, 45
42013 Casalgrande
(RE)

Confidential Test Report N. 4748/2013 /I
on ceramic tiles

Our ref.num.: 11003
Date of request: 12/06/2013

Test Specimen

"Panel of dimensions 50 x 100 cm covered with glazed ceramic tiles 30x60,4 cm marked:
Serie LINEAR"

Source

Submitted to Laboratory by Client

Date Received

12/06/2013

Time of test execution

start: 12/10/2013 end: 12/10/2013

Test detail / method description / test procedure

" Determination of the anti-slip characteristics -
Standard DIN 51130:2010 "

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Mod. P232-1 rev.00



LAB N° 1170

Confidential Test Report N. 4748/2013 /I
GRUPPO CERAMICHE GRESMALT S.p.A.

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Date 12/13/2013

Test specimen

"Panel of dimensions 50 x 100 cm covered with glazed ceramic tiles 30x60,4 cm marked:
Serie LINEAR"

Floor test: determination of the anti-slip characteristics:
work areas with high slipping risk.
Procedure for the stamping test inclined plane
(STANDARD DIN 51130:2010)

The test regards the working areas with a high slipping risk: the procedure foresees that a person taking part in the test walks on a an inclined plane, which is floored with the tested material and greased an oil whose viscosity is SAE 10 W 30.

During the execution of the test it is determined if the tested material may be properly laid down in specific work environments.

There is an average inclination which determines the insecurity of the person walking on the inclined plane and causes the classification of the tested material used to determine the sliding resistance.

Inclination angle of the inclined plane: 14,0 °

Classification: R 10

**Table with the ratio of the group classification
and of the inclination degree**

Classification	Inclination angle
n.c. (not classifiable)	lower than 6°
R 9	from 6° to 10°
R 10	over 10° to 19°
R 11	over 19° to 27°
R 12	over 27° to 35°
R 13	over 35°

Mod. P232.1 rev.00



THE DIRECTOR
(M.L. Simioli)

LINEAR

TIPOLOGIA: gres porcellanato colorato in massa

TYPE: gres porcelain, colored body













caratteristiche tecniche

technical characteristics

caracteristiques techniques

technische daten

технические характеристики

caratteristica tecnica technical characteristic caracteristique technique Technische eigenschaft техническая характеристика	norma di riferimento reference standard norme de reference Besugsnorm используемый стандарт	valore richiesto value required valeur requise Geforderter wert требуемое значение	rispondenza alla norma accordance to the norme correspondance à la norme Übereinstimmung an die Norme соответствие требованиям стандарта
assorbimento d'acqua (E) water absorption (E) absorption d'eau (E) Feuchtigkeitsaufnahme (E) водопоглощение (E)	 ISO 10545-3	<= 0,5%	conforme according to conformes Gemä соответствует
forza di rottura (S) breaking strength (S) contrainte de rupture (S) Bruchkraft (S) сопротивление разрыву (S)	 ISO 10545-4	spessore >= 7,5mm >= 1300 N spessore < 7,5mm >= 700 N	conforme according to conformes Gemä соответствует
resistenza alla flessione (R) bending strength (R) résistance a la flexion (R) mechanischer widerstand (R) сопротивление изгибу (R)	 ISO 10545-4	>= 35 N/mm²	conforme according to conformes Gemä соответствует
resistenza all'abrasione profonda deep abrasion resistance resistance a l'usure en profondeur Tiefen-Abriebbeständigkeit стойкость к глубокому истиранию	 ISO 10545-6	<= 175 mm³	conforme according to conformes Gemä соответствует
resistenza agli sbalzi termici thermal shock resistance resistance aux écarts de température Temperaturwechselbeständigkeit стойкость к перепадам температуры	 ISO 10545-9	nessun campione deve presentare difetti visibili no sample must show visible defects aucun échantillon ne doit presenter des défauts visibles Kein Exemplar soll sichtbare Schäden aufweisen ни один образец не должен иметь видимых дефектов	conforme according to conformes Gemä соответствует
resistenza al gelo frost resistance resistance au gel Frostbeständigkeit морозостойкость	 ISO 10545-12	resistenti resistant résistants Widerstandsfähig стойкие	resistenti resistant résistants Widerstandsfähig стойкие
fattore di resistenza alla scivolosità anm-skeed resistance grade gré de resistance à la glissance Rutschfestigkeit сопротивление скольжению	 DIN 51130	secondo i dati del costruttore according to producer's selon les éléments du constructeur laut Angaben des Herstellers согласно данным изготовителя	R 10
caratteristiche dimensionali size characteristics caracteristiques dimensionelle Masseigenschaften геометрические параметры	 ISO 10545-2	lunghezza e larghezza / lenght and width / longueur et largeur +- 0,6 spessore / thickness / épaisseur / Stärke / толщина +- 5 ortogonalità / wedging / orthogonalité +-0,6 planarità / flatness / planéité / Ebenflächigkeit / плоскость +-0,5	conforme according to conformes Gemä соответствует
coefficiente di dilatazione termica lineare linear thermal expansion coefficient coefficient de expansion térmica linear Wärmeausdehnungskoeffizient коэффициент линейного теплового расширения	 ISO 10545-8	metodo di prova disponibile test method available méthode d'essai disponible Verfügbare Prüfmethode предусмотрен метод испытаний	$\alpha <= 7 \times 10^{-6}/^{\circ}\text{C}$
resistenza ai prodotti chimici resistance to chemicals resistance aux produits chimiques Chemikaliendestigkeit устойчивость к воздействию химических агентов	 ISO 10545-13	min. GB-UB	conforme according to conformes Gemä соответствует
resistenza alle macchie stain resistance resistance aux taches Fleckenfestigkeit стойкость к образованию пятен	 ISO 10545-14	classe >= 3	conforme according to conformes Gemä соответствует
durezza superficiale secondo scala Mohs scratch hardness of surface according to Mohs	 EN 101 BS 6431 part 13	≥5	MOHS 7

Secondo la norma EN 14411 (ex ISO 13006) metodi di prova UNI EN ISO 10545 Appendice G per piastrelle ceramiche pressate a secco a basso assorbimento d'acqua E#0,5% Gruppo BIa.

Following the EN 14411 (ex ISO 13006) norms and test cases UNI ISO 10545 appendix G for ceramic tiles dry pressed with low water absorption E#0,5% group BIa.

Selon les normes EN 14411 (ex ISO 13006) méthodes d'essais UNI EN ISO 10545 Appendice G pour carreaux céramiques pressés à sec, à basse absorption d'eau E#0,5% groupe BIa.

Nach der Norm EN 14411 (ex ISO 13006) Prüfmethode UNI EN ISO 10545 Zulage G für trockenengepresste Fliesen mit niedriger Wasseraufnahme E#0,5% Gruppe BIa.