



RESISTENCIA AL CONTACTO CON SUSTANCIAS QUIMICAS

⊙: Sin cambio;

△: Reblandecimiento o hinchazón;

X : Reblandecimiento o hinchazón abundante;

SUSTANCIAS QUIMICAS	MagFace
H ₂ O	⊙
Saline solution	⊙
Ammonia (10%)	⊙
Na ₂ CO ₃ (2%)	⊙
Motor Oil	⊙
Gear Oil	⊙
Hydraulic Oil	⊙
Machine Oil	⊙
Spindle Lubricating Oil	⊙
HCl (10%)	△
HNO ₃ (10%)	△
H ₂ SO ₄ (3%)	△
CH ₃ COOH (10%)	⊙
NaOH (10%)	⊙
Aromatic Nydrocarbon x HCl (g)	△
Ketone	△
Gasoline	X
CH ₃ COOCH ₂ CH ₃	△
Neutral Detergent	⊙
CH ₃ OH	⊙
CH ₃ CH ₂ OH	⊙
CH ₃ COCH ₃	△
○	X
○CH ₃	X
H ₂ O ₂ (30%)	⊙



CENTRO DI RICERCA E SPERIMENTAZIONE
PER L'INDUSTRIA CERAMICA

Bologna, 10/07/2017

*Messrs
Bassi Group International
S.r.l.
Piazzale degli Alberi 7,
42024 Castelnovo Sotto (RE)*

TEST LABORATORY

TEST REPORT No. 5845/17

Requested by:	Bassi Group International S.r.l. Piazzale degli Alberi 7, 42024 Castelnovo Sotto (RE)
On (date):	08/06/2017
For the sample marked:	"GRES PORCELLANATO".

The results reported relate only to the samples tested.

No responsibility is taken for the accuracy of the sampling unless it is done under our own supervision.

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CENTRO CERAMICO

Test Report No. 5845/17

Date 10/07/2017

Page 2 of 3

Description of the sample: Ceramic tiles 60x60x1.0 cm marked "GRES PORCELLANATO".	
Manufacturer:	-----
Sampling details	
- Where:	-----
- Date:	-----
- By whom:	CUSTOMER
- How (methods):	-----
Date of receipt in laboratory:	21/06/17

TESTS PERFORMED :

		Date of starting	Date of ending
<input checked="" type="checkbox"/>	EN ISO 10545 – 3 :1997	Determination of water absorption, apparent porosity, apparent relative density and bulk density	28/06/17 30/06/17




EN ISO 10545-3 : 1997 - Determination of water absorption, apparent porosity, apparent relative density and bulk density

6.1 - BOILING METHOD

Water absorption (%) of each tiles:

Sample	1	2	3	4	5
E(b)	0.06	0.04	0.04	0.03	0.04

E(b) Average (%):

 Pietro Bruzzi
Technical verification



Prof. Maria Chiara Bignozzi
Director



Bologna, 10/07/2017

Messrs
Bassi Group International
S.r.l.
Piazzale degli Alberi 7,
42024 Castelnovo Sotto (RE)

TEST LABORATORY

TEST REPORT No. 5844/17

Requested by:	Bassi Group International S.r.l. Piazzale degli Alberi 7, 42024 Castelnovo Sotto (RE)
On (date):	08/06/2017
For the sample marked:	"GRES PORCELLANATO".

The results reported relate only to the samples tested.

No responsibility is taken for the accuracy of the sampling unless it is done under our own supervision.

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CENTRO CERAMICO

Test Report No. 5844/17

Date 10/07/2017

Page 2 of 3

Description of the sample: Ceramic tiles 60x60x1.0 cm marked "GRES PORCELLANATO".	
Manufacturer:	-----
Sampling details	
- Where:	-----
- Date:	-----
- By whom:	CUSTOMER
- How (methods):	-----
Date of receipt in laboratory:	21/06/17

TESTS PERFORMED :

		Date of starting	Date of ending
<input checked="" type="checkbox"/>	EN ISO 10545 – Determination of modulus of rupture and breaking strength 4 :2014	28/06/17	28/06/17



EN ISO 10545 - 4 : 2014 - Determination of modulus of rupture and breaking strength

d - diameter of rods (mm):

T - thickness of rubber (mm):

l₁ - overlap of tile beyond the edge supports (mm):

l₂ - span between the support rods (mm):

	1	2	3	4	5	6	7
F - Breaking load (N)	3208	3270	3320	3287	3274	3302	3237
S - Breaking strength (N)	3075	3135	3183	3151	3139	3166	3103
R - Modulus of rupture (N/mm ²)	50.1	53.2	56.4	55.8	58.1	51.5	60.1

F - Average breaking load (N):

S - Average breaking strength (N):

R - Average modulus of rupture (N/mm²):

 Pietro Bruzzi
Technical verification



Prof. Maria Chiara Bignozzi

Director



Bologna, 07/07/2017

Messrs
Bassi Group International
S.r.l.
Piazzale degli Alberi 7,
42024 Castelnovo Sotto (RE)

TEST LABORATORY

TEST REPORT No. 5843/17

Requested by:	Bassi Group International S.r.l. Piazzale degli Alberi 7, 42024 Castelnovo Sotto (RE)
On (date):	08/06/2017
For the sample marked:	"GRES PORCELLANATO - GRUPPO BIA SECONDO EN 14411:2016 - AUTOPOSANTE MAGNETICO BREVETTO BASSI GROUP INTERNATIONAL "

The results reported relate only to the samples tested.

No responsibility is taken for the accuracy of the sampling unless it is done under our own supervision.

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DESCRIPTION OF THE SAMPLE:

Multilayer elements for flooring of size 60x60x1 cm marked "GRES PORCELLANATO - GRUPPO BIa SECONDO EN 14411:2016 - AUTOPOSANTE MAGNETICO BREVETTO BASSI GROUP INTERNATIONAL", see photo1 and photo 2.

Manufacturer: -----

Sampling details

- Where: -----
- Date: -----
- By whom: CUSTOMER
- How (methods): -----

Date of receipt in laboratory: 21/06/2017

TEST PERFORMED :

		Date of starting	Date of ending
<input checked="" type="checkbox"/>	Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester	27/06/17	06/06/17



Photo 1 – Front of the element: work surface



Photo 2 – Back of the element



**Evaluating Ceramic Floor Tile Installation Systems Using
the Robinson-Type Floor Tester**

The test was performed according to ASTM C627-10

TEST AND MATERIAL DESCRIPTION:

As per client's request, the following materials have been used for the preparation of the testing pads.

Item #	Product name and size	Provided By:
1	Concrete base Nominal Size: 1219mm x 1219mm x 51mm	Centro Ceramico
2	Primer G, Mapei	Client
3	Ultraplan, Mapei	Client
4	Flexible Metallic Film IRONFLEX 50	Client
5	Mapecontact Release	Client

TYPE OF INSTALLATION:

All the materials used and the tested assembly were approved by the client. The installation was made by multilayer elements for flooring, over concrete substrate.

The base preparation and the installation were performed by a Centro Ceramico representative according to the instructions approved by the client.

Base:

A concrete base was prepared and cured for a minimum of 28 days prior to testing.

Over the concrete base a layer of Primer G was applied, as specified by manufacturer. After that a layer of Ultraplan was applied, as prescribed in the technical sheet. A further layer of Primer G was then applied, as requested by the client.

Multilayer elements:

The double-sided adhesive tape Mapecontact Release was stuck on the base. The Flexible Metallic Film IRONFLEX 50 was fixed onto it. The multilayer elements were applied over the Flexible Metallic Film IRONFLEX 50.



TEST RESULTS:

Cycle Type of Wheels	Type of Wheels	Total Weight per Wheel lbs (kg)	Duration of Test, h	Total Number of Revolutions	Damage	N° of damage	Type of damage
1	Soft rubber	100 (45)	1	900	No damage	---	
2	Soft rubber	200 (91)	1	900	No damage	---	
3	Soft rubber	300 (136)	1	900	No damage	---	
4	Soft rubber	300 (136)	1	900	No damage	---	
5	Hard rubber	100 (45)	1	900	No damage	---	
6	Hard rubber	200 (91)	1	900	No damage	---	
7	Hard rubber	300 (136)	1	900	No damage	---	
8	Hard rubber	300 (136)	1	900	No damage	---	
9	steel	50 (23)	1/2	450	No damage	---	
10	steel	100 (45)	1/2	450	No damage	---	
11	steel	150 (68)	1/2	450	No damage	---	
12	steel	200 (91)	1/2	450	No damage	---	
13	steel	250 (114)	1/2	450	Damage	1	chipped and broken element
14	steel	300 (136)	1/2	150	No damage	---	

Number of test cycles performed	13
Highest number of the test cycle the installation passed	13

Classification as prescribed by "Handbook for Ceramic, Glass, and Stone Tile Installation 2016, TCNA".

CLASSIFICATION:

HEAVY



LEGEND:

Damage Categories (ASTM C627-10):

Chipped Multilayer element >5 % of the Multilayer element in the wheel path or one tile
Broken Multilayer element >3 % of the Multilayer element in the wheel path or one tile
Loose Multilayer element >3 % of the Multilayer element in the wheel path or one tile
Popped-Up Grout Joint >5 % of the joints in the wheel path or one joint
Cracked Grout Joint >5 % of the joints in the wheel path or one joint
Powdered Grout Joints >5 % of the joints in the wheel path or one joint

Performance Level Requirement Guide and Selection Table (Handbook for Ceramic, Glass, and Stone Tile Installation 2016, TCNA, page 41):

Service Requirements

EXTRA HEAVY	EXTRA heavy and high-impact used in food plants, dairies, breweries, and kitchens. Requires quarry tile, packing house tile, or tile designated by tile manufacturer, (passes ASTM C627 cycles 1 through 14).
HEAVY	Shopping malls, stores, commercial kitchens, work areas, laboratories, auto showrooms and service areas, shipping/receiving, and exterior decks (passes ASTM C627 cycles 1 through 12).
MODERATE	Normal commercial and light institutional use in public space of restaurants and hospitals (passes ASTM C627 cycles 1 through 10).
LIGHT	Light commercial use in office space, reception areas, kitchens, and bathrooms (passes ASTM C627 cycles 1 through 6).
RESIDENTIAL	Kitchens, bathrooms, and foyers (passes ASTM C627 cycles 1 through 3).

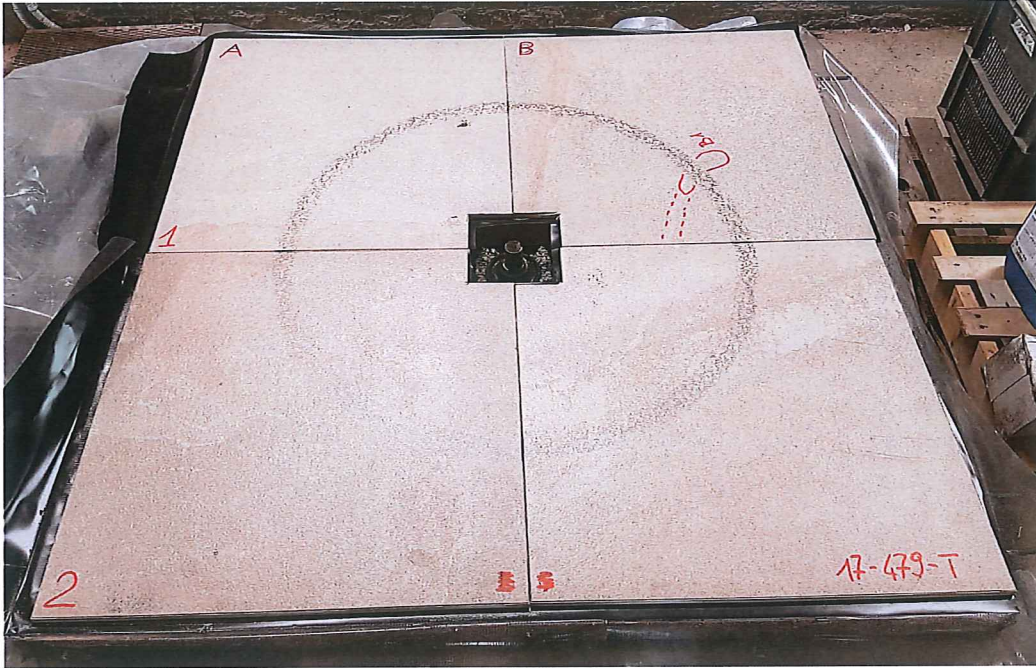


Photo 3 – Full assembly after testing

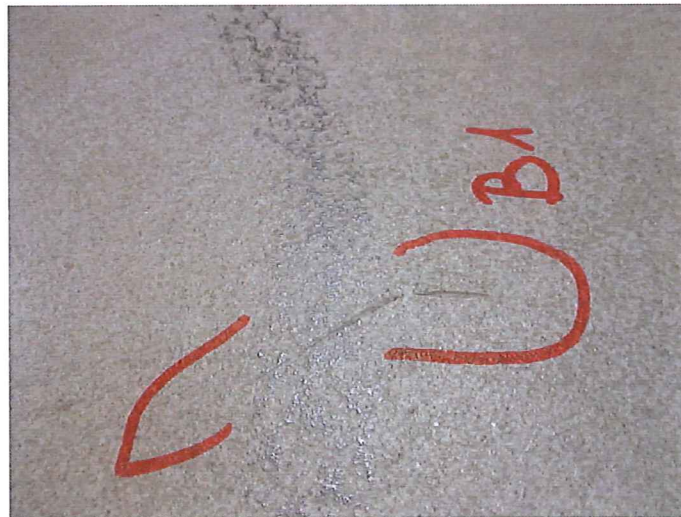



Photo 4 – Damage of multilayer element

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Technical verification


Prof. Maria Chiara Bignozzi
Director

