



**LABORATORIO CERAMICO SEBASTIAN CARPI**  
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE CASTELLON

N.I.F: Q - 4670001 - I

AVENIDA DEL MAR, Nº 46 - 12003 CASTELLON  
TEL: 964 208 583 - FAX: 964 202 594  
www.laboratoriocarpi.com



## TEST REPORT

PETITIONER: GRES DE LA MANCHA, S.L.

ADDRESS: Ctra. Consuegra, Km. 1,200

CITY: LOS YEBENES (Toledo)

TEST REPORT Nº: 51.281

PAGE Nº: 1 / 5

DATE OF TEST REPORT: 01/03/2012

DATE OF RECEIPT OF THE SAMPLE: 27/01/2012

DATE OF TESTS PERFORMANCE: 27/01 - 28/02/2012

NUMBER OF TILES SUPPLIED: 32

### DESCRIPTION OF THE SAMPLE:

Ceramic tiles, single extruded, 245 mm x 245 mm, glazed. Ref.:

-- **Serie SANIGRES** --

Code lab.: 28-4-12

### TEST PERFORMED:

- UNE-EN-ISO 10545-7 : DETERMINATION OF RESISTANCE TO SURFACE ABRASION. GLAZED TILES.
- UNE-EN-ISO 10545-13 : DETERMINATION OF CHEMICAL RESISTANCE.
- UNE-EN-ISO 10545-14 : DETERMINATION OF RESISTANCE TO STAINS.
- UNE 67101 and 1M : DETERMINATION OF SCRATCH HARDNESS ACCORDING TO MOHS.

\*\*\*\*\*

José A. Estibález Catalán  
MANAGER

The samples and his description have been chosen by the petitioner.

The reported results relate only to the samples tested.

This report must not be reproduced in part without the written permission of Laboratory.

The uncertaintys have been evaluated according to recommendations of document ISO/TAG5/WGE : June 95.



**LABORATORIO CERAMICO SEBASTIAN CARPI**  
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE CASTELLON

N.I.F: Q - 4670001 - I

AVENIDA DEL MAR, Nº 46 - 12003 CASTELLON  
TEL: 964 208 583 - FAX: 964 202 594  
www.laboratoriocarpi.com

Test report n°: 51.281  
Page n°: 2 / 5  
Petitioner: GRES DE LA MANCHA  
Date: 01/03/2012

**DETERMINATION OF RESISTANCE TO SURFACE ABRASION**  
**\* GLAZED TILES \***

**DESCRIPTION OF THE SAMPLE.-**

Ceramic tiles, single extruded, 245 mm x 245 mm, glazed. Ref.:

-- **Serie SANIGRES** --

Code lab.: 28-4-12

**RESULTS.-** (Test performed after **UNE-EN-ISO 10545 Part 7:1999**)

\* Classification: **Class 4**

\* Abrasion stage at which visual failure occurred: **More than 12.000 revolutions.**

\*\*\*\*\*



**LABORATORIO CERAMICO SEBASTIAN CARPI**  
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE CASTELLON

N.I.F: Q - 4670001 - I

AVENIDA DEL MAR, Nº 46 - 12003 CASTELLON  
TEL: 964 208 583 - FAX: 964 202 594  
www.laboratoriocarpi.com

Test report n°: 51.281

Page n°: 3 / 5

Petitioner: GRES DE LA MANCHA

Date: 01/03/2012

## DETERMINATION OF CHEMICAL RESISTANCE

### DESCRIPTION OF THE SAMPLE.-

Ceramic tiles, single extruded, 245 mm x 245 mm, glazed. Ref.:

-- **Serie SANIGRES** --

Code lab.: 28-4-12

### RESULTS.- (Test performed after **UNE-EN-ISO 10545 Part 13:1998**)

\* Number of test specimens used with each test solution: FIVE.

<b><u>Test solutions</u></b>	<b><u>Classification</u></b>	<b><u>Visual Changes</u></b>
* <u>Household chemicals</u> - Ammonium Chloride .....	<b>GA</b>	- No visible effects.
* <u>Swimming pool salts</u> - Sodium Hypochlorite .....	<b>GA</b>	- No visible effects.
* <u>Acids and Alkalis (Low concentrations)</u> - Hydrochloric Acid .....	<b>GLA</b>	- No visible effects.
- Citric Acid .....	<b>GLA</b>	- No visible effects.
- Potassium Hydroxide .....	<b>GLA</b>	- No visible effects.
* <u>Acids and Alkalis (High concentrations)</u> - Hydrochloric Acid .....	<b>GHA</b>	- No visible effects.
- Lactic Acid .....	<b>GHA</b>	- No visible effects.
- Potassium Hydroxide .....	<b>GHA</b>	- No visible effects.



**LABORATORIO CERAMICO SEBASTIAN CARPI**  
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE CASTELLON

N.I.F: Q - 4670001 - I

AVENIDA DEL MAR, Nº 46 - 12003 CASTELLON  
TEL: 964 208 583 - FAX: 964 202 594  
www.laboratoriocarpi.com

Test report n°: 51.281

Page n° : 4 / 5

Petitioner: GRES DE LA MANCHA

Date: 01/03/2012

## DETERMINATION OF RESISTANCE TO STAINS

### DESCRIPTION OF THE SAMPLE.-

Ceramic tiles, single extruded, 245 mm x 245 mm, glazed. Ref.:

-- **Serie SANIGRES** --

Code lab.: 28-4-12

### RESULTS.- (Test performed after **UNE-EN-ISO 10545 Part 14:1998**)

\* Number of test specimens used with each test solution: FIVE.

<b><u>Staining Agents</u></b>	<b><u>Cleaning Procedure</u></b>	<b><u>Class</u></b>	<b><u>Observations</u></b>
* <u>Stains having tracing action</u> (Pastes). - Green staining agent in light oil	- Running hot water for five minutes. (Procedure A).	<b>5</b>	- Stain removed.
* <u>Stains having chemical / oxidizing action</u> - Iodine alcohol solution .....	- Running hot water for five minutes. (Procedure A).	<b>5</b>	- Stain removed.
* <u>Stains having filming action</u> - Olive oil .....	- Running hot water for five minutes. (Procedure A).	<b>5</b>	- Stain removed.

\* Observations: The chromium oxide used as green staining agent have a grain size less than 80 microns, being the 50 % (m/m) of theirs down on 3 microns.

\*\*\*\*\*



**LABORATORIO CERAMICO SEBASTIAN CARPI**  
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE CASTELLON

N.I.F.: Q - 4670001 - I

AVENIDA DEL MAR, Nº 46 - 12003 CASTELLON  
TEL: 964 208 583 - FAX: 964 202 594  
www.laboratoriocarpi.com

Test report n°: 51.281  
Page n°: 5 / 5  
Petitioner: GRES DE LA MANCHA  
Date: 01/03/2012

## DETERMINATION OF SCRATCH HARDNESS ACCORDING TO MOHS

### DESCRIPTION OF THE SAMPLE.-

Ceramic tiles, single extruded, 245 mm x 245 mm, glazed. Ref.:

-- **Serie SANIGRES** --

Code lab.: 28-4-12

RESULTS.- (Test performed after Standard **UNE 67-101:1985 and UNE 67-101/1M:1992**) (\*)

<u>Tile</u>	<u>Mohs Hardness</u>
1	9
2	9
3	9

(\*) Note: This standards are repealed since 18.03.2009.