

## RESULTS REPORT OF TEST

Report Nº: IE142207

### PETITIONER

D. Gregorio Berná  
 BATEIG PIEDRA NATURAL, S.A.  
 CAMÍ DE CASTELLA 112, B.º ESTACION  
 03660 NOVELDA ALICANTE NIF: A03099405

### COMMENTS:

### FURTHER INFORMATION:

### Specimen/s:

DELIVERY NOTE Nº:	REGISTRATION DATE:	SPECIMEN IDENTIFICATION ACCORDING TO APPLICANT:	MATERIAL:	QUANTITY:	RECEPCIÓN:
72115	23/05/2014	Maroc Claro	Natural Stone	72 tiles	Sent by the applicant

### Test/s Carried out

Nº:	DESCRIPTION	REGULATION:
1	Determination of water absorption at atmospheric pressure	UNE-EN 13755:2008
1	Determination of apparent density and open porosity	UNE-EN 1936:2007
1	Determination of the abrasion resistance	UNE-EN 14157:2005
1	Determination of uniaxial compressive strength	UNE-EN 1926:2007
1	Determination of flexural strength under concentrated load	UNE-EN 12372:2007
1	Determination of rupture energy	UNE-EN 14158:2004
1	Determination of resistance to salt crystallisation	UNE-EN 12370:1999
1	Determination of the slip resistance by means of the pendulum tester	UNE-EN 14231:2004
1	Determination of water absorption coefficient by capillary	UNE-EN 1925:1999

Paterna, on Friday 18<sup>rd</sup> of July 2014

Signed: D<sup>a</sup> Rocío Correoso Cano  
*Technician of the Natural Stone Laboratory*

Signed: Mr. José Manuel Cuevas Castell  
*Responsible of the Natural Stone Laboratory*

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REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF APPARENT DENSITY AND OPEN POROSITY  
 UNE-EN 1936 :2007 Apdo.8.1**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Raw  
 Sampling realized by : Petitioner

	START	END
Date test	10/07/2014	11/07/2014

	Higher	Lower
Temperature	24,3	21,2

**TEST RESULT**

Dimensions of the specimens : 50 x 50 x 50 mm

Specimen	1	2	3	4	5	6
Apparent density (kg/m <sup>3</sup> )	1980	2110	2070	2030	2030	2010
Open porosity (%)	26,8	22,8	23,6	23,1	24,1	24,2

	AVERAGE
Apparent density (kg/m <sup>3</sup> )	2040
Open porosity (%)	24,1

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF UNIAXIAL COMPRESSIVE STRENGTH  
 UNE-EN 1926:2007**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Raw  
 Sampling realized by : Petitioner

Registration date	23/05/2014
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	START	END
Date test	2706/2014	30/06/2014

**TEST RESULT**

Specimen	1	2	3	4	5	6	7	8	9	10
Height, h (mm)	51,0	50,0	51,0	52,0	51,0	51,0	51,0	51,0	51,0	51,0
Average side (mm)	48	51	51	50	51	51	51	51	51	51
Breaking load, F(kN)	40	40	70	60	90	40	80	60	40	40
Compressive Strength (MPa)	16,2	16,5	25,6	22,4	35,0	17,4	30,2	23,6	16,5	16,5

Mean value of Compressive Strength, (MPa)	22
Standard deviation (MPa)	7
Coefficient of variation, v	0,303

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS**  
**DETERMINATION OF FLEXURAL STRENGTH UNDER CONCENTRATED LOAD**  
**UNE-EN 12372:2007**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Saw  
 Sampling realized by : Petitioner

	START	END
Preparation date	18/06/2014	23/06/2014
Test date	23/06/2014	23/06/2014

	Higher	Lower
T <sup>a</sup> (°C)	23,8	23,2

**TEST RESULT**

Specimen	1	2	3	4	5	6	7	8	9	10
Span distance $l$ (mm)	259,9	255,9	256,4	252,8	255,4	255,0	253,4	259,6	259,4	259,4
Breaking load, F (N)	1260	1570	1440	1580	1380	1480	1090	1450	1550	1510
Thickness along breaking plane (mm)	51,7	51,1	51,3	50,8	51,0	51,0	50,8	52,1	51,9	51,9
Width along breaking plane (mm)	51,6	51,1	51,5	50,9	51,3	50,8	50,8	51,3	51,5	51,3
Breaking zone	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$	$\leq 15\%$ $l$
Flexural Strength, R <sub>tf</sub> (MPa)	3,6	4,5	4,1	4,6	4,0	4,3	3,2	4,1	4,3	4,3

Mean value of Flexural Strength, R <sub>tf</sub> (MPa)	4,1
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Standard deviation, s (MPa)	0,4
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Lower expected value, E (MPa)	3,2
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA:                      COMMENTS:

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF WATER ABSORPTION COEFICIENT BY CAPILLARY  
 UNE-EN 1925:1999**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Surface finish : Raw  
 Anisotropy planes :  
 Sampling realized by : Petitioner

	START	END
Date test	05/09/2014	08/09/2014

	Higher	Lower
Temperature	25,3	25,1

**TEST RESULT**

Dimensions (mm) : 50 x 50 x 50 mm

Specimen	1	2	3	4	5	6
Dimensions (Side) (mm)	50,90	50,80	50,90	50,70	50,80	50,70
Water absorption coeficient by capillary ( $\text{g/m}^2 \cdot \text{s}^{0,5}$ )	443,020	421,760	338,170	447,980	343,270	455,420
<b>Mean value of water absorption coeficient by capillary (<math>\text{g/m}^2 \cdot \text{s}^{0,5}</math>)</b>	<b>408,270</b>					

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF RESISTANCE TO SALT CRYSTALLISATION  
 UNE-EN 12370:1999**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Raw  
 Sampling realized by : Petitioner

	START	END
Date preparation	28/05/2014	2/06/2014
Date test	02/06/2014	27/06/2014

**TEST RESULT**

Specimen	1	2	3	4	5	6
Width (mm)	40,86	40,49	40,98	40,2	40,26	39,77
Thickness (mm)	40,33	40,2	40,36	40,74	40,19	40,48
Length (mm)	39,78	39,48	39,52	39,64	39,39	39,91
Variation of mass $\Delta M$ (%)	-0,12	-0,10	-0,07	-0,09	-0,12	-0,11
Mean value of variation of mass $\Delta M$ (%)	-0,10					

ADDITIONAL DATA OF TEST :

COMMENTS:

REPORT N°: IE142207  
TESTED MATERIAL: Natural Stone  
DELIVEY NOTE N°: 72115



Photo 1

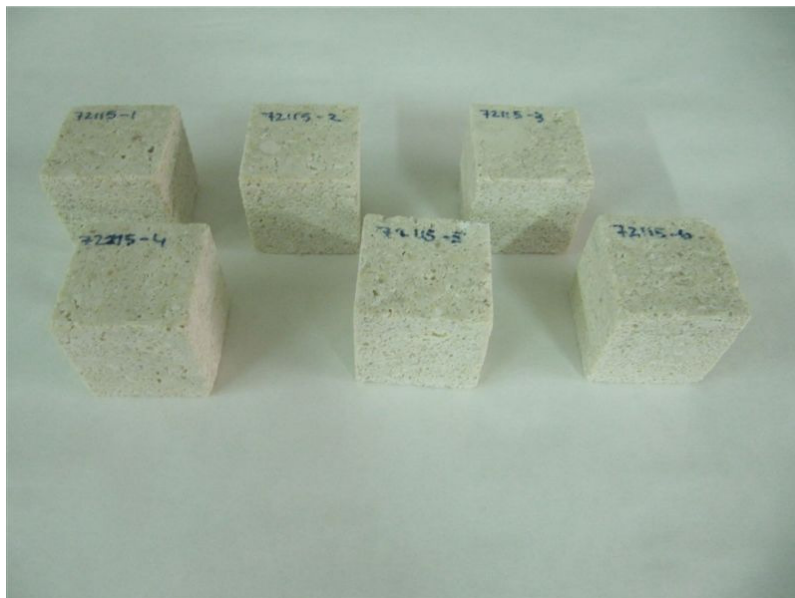


Photo 2

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF WATER ABSORPTION AT ATMOSPHERIC  
 PRESSURE  
 UNE-EN 13755:2008**

Information supplied by the petitioner :

Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Petitioner : Bateig Piedra Natural, S.A  
 Anisotropy planes :  
 Surface finish : Raw  
 Sampling realized by : Petitioner

**TEST RESULT**

Dimensions of the specimens (mm) : 50 x 50 x 50 mm

Registration date	23/05/2014
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	START	END
Date test	14/07/2014	17/07/2014

	Higher	Lower
Temperature	24,4	21,3

Specimen N°	1	2	3	4	5	6
Dimensions (Lade) (mm)	50,82	50,78	50,81	50,94	50,93	50,88
Water absorption (%)	8,3	7,3	10,1	8,3	8,4	7,8
Water Absorption medium (%)	8,4					

ADDITIONAL DATA OF TEST:

COMMENTS :



REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF THE ABRASION RESISTANCE  
 UNE-EN 14157:2005**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Honed  
 Sampling realized by : Petitioner

**TEST RESULT**

Dimensions of the specimens : 150 x 150 x 18 mm

Registration date	23/05/2014
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	START	END
Date test	11/06/2014	11/06/2014

Value of calibration	0,3
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PROBETA Specimen	1	2	3	4	5	6
Dimensions (mm)	150,81x150,35x19,56	150,88x150,53x19,57	151,22x150,83x19x33	150,88x151,83x19,4	151,61x152,49x19,49	150,83x151,09x19,34
Dimension of the Groove (mm)	22,5	23,5	23,5	22,5	23,0	22,5

Average Value (mm)	22,97
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ADDITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF RUPTURE ENERGY  
 UNE-EN 14158:2004**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Honed  
 Sampling realized by : Petitioner

**TEST RESULT**

	START	END
Date preparation	26/05/2014	28/05/2014
Date test	28/05/2014	28/05/2014

**TEST RESULT**

Specimen	1	2	3	4	5
Width (mm)	199,747	199,5	199,69	199,67	199,88
Thickness (mm)	30,01	29,9	29,87	29,85	29,73
Length (mm)	199,31	199,45	199,58	199,24	200,16
Rupture Energy, W (J)	4	4	3	4	4
Average Rupture Energy (J)	4				

ADDITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142207  
 TESTED MATERIAL: Natural Stone  
 DELIVEY NOTE N°: 72115

**NATURAL STONE TEST METHODS  
 DETERMINATION OF THE SLIP RESISTANCE BY MEANS OF THE  
 PENDULUM TESTER  
 UNE-EN 14231:2004**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A  
 Petrographic name :  
 Trade name of the stone : Maroc Claro  
 Country and place of extraction :  
 Anisotropy planes :  
 Surface finish : Honed  
 Sampling realized by : Petitioner

**TEST RESULT**

Dimensions of specimens : 200 x 200 x 20 mm

Registration date	23/05/2014
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	START	END
Date test	09/07/2014	09/07/2014

Size of the rubber sliders : 76 mm.

	DRY CONDITIONS					
Specimen identification	1	2	3	4	5	6
USRV (mean value for test specimen)	53	53	57	54	52	62
USRV (of the specimen)	55					

	WET CONDITIONS					
Specimen identification	1	2	3	4	5	6
USRV (mean value for test specimen)	59	62	62	63	65	63
USRV (of the specimen)	62					

COMMENTS:

ADDITIONAL DATE OF TEST: