

RESULTS REPORT OF TEST

Report Nº: IE142208

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:
72114	06/05/2014	Bateig Diamante	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 frost resistance	UNE-EN 12371:2011
1	Determination of water absorption coefficient by capillary	UNE-EN 1925:1999

Paterna, on Friday 18rd of July 2014

Signed: D^a 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°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

	START	END
Date test	19/05/2014	20/05/2014

	Higher	Lower
Temperature	23,8	20,2

TEST RESULT

Dimensions of the specimens : 50 x 50 x 50 mm

Specimen	1	2	3	4	5	6
Apparent density (kg/m ³)	2100	2120	2110	2120	2110	2110
Open porosity (%)	21,9	21,2	21,6	21,3	21,7	21,7

	AVERAGE
Apparent density (kg/m ³)	2110
Open porosity (%)	21,6

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

Registration date	06/05/2014
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	START	END
Date test	21/05/2014	22/05/2014

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Height, h (mm)	51,0	51,0	51,0	51,0	51,0	50,0	51,0	50,0	50,0	51,0
Average side (mm)	50	50	50	51	50	51	50	51	51	51
Breaking load, F(kN)	90	80	80	80	80	80	80	70	80	80
Compressive Strength (MPa)	34,0	31,2	31,0	31,2	31,0	32,0	30,9	28,9	31,2	30,6

Mean value of Compressive Strength, (MPa)	31
Standard deviation (MPa)	1
Coefficient of variation, v	0,040

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

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 : Bateig Diamante
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Saw
 Sampling realized by : Petitioner

	START	END
Preparation date	09/05/2014	13/05/2014
Test date	13/05/2014	13/05/2014

	Higher	Lower
T ^a (°C)	24,7	23,9

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Span distance l (mm)	254,5	252,7	253,8	254,2	251,3	249,7	253,6	254,7	250,9	252,4
Breaking load, F (N)	2190	2280	2380	2190	2090	1990	2280	2190	2380	2190
Thickness along breaking plane (mm)	50,9	50,9	51,0	50,6	50,3	50,0	50,7	50,9	51,0	50,4
Width along breaking plane (mm)	50,4	50,2	50,2	50,1	50,7	50,8	50,2	50,3	50,5	50,9
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 _{ff} (MPa)	6,4	6,6	6,9	6,5	6,1	5,9	6,7	6,4	6,8	6,4

Mean value of Flexural Strength, R _{tf} (MPa)	6,5
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Standard deviation, s (MPa)	0,3
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Lower expected value, E (MPa)	5,8
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA: COMMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 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)	50,23	50,55	50,73	50,56	50,42	50,33
Water absorption coeficient by capillary ($\text{g/m}^2 \cdot \text{s}^{0,5}$)	51,982	56,193	54,407	46,540	49,487	49,156
Mean value of water absorption coeficient by capillary ($\text{g/m}^2 \cdot \text{s}^{0,5}$)	51,294					

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 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)	40,58	40,4	40,73	40,68	41,19	40,87
Thickness (mm)	41,1	41,08	40,95	40,46	41,21	40,65
Length (mm)	40,91	41,13	41,07	41,02	40,7	41,08
Variation of mass ΔM (%)	-28,25	-6,59	-21,90	-47,90	-3,54	-6,62
Mean value of variation of mass ΔM (%)	-19,13					

ADDITIONAL DATA OF TEST :

COMMENTS:

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



Photo 1



Photo 2

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 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	06/05/2014
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	START	END
Date test	19/05/2014	23/05/2014

	Higher	Lower
Temperature	24,2	23,721,3

Specimen N°	1	2	3	4	5	6
Dimensions (Lade) (mm)	50,57	50,76	50,61	50,50	50,70	50,60
Water absorption (%)	7,3	7,3	7,3	7,2	7,3	7,4
Water Absorption medium (%)	7,3					

ADDITIONAL DATA OF TEST:

COMMENTS :

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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	06/05/2014
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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)	150,26x149,51x18,62	150,02x149,92x18,78	150,02x150,11x18,63	150,4x150,16x18,62	150,02x150,3x18,81	150,11x149,97x18,86
Dimension of the Groove (mm)	27,0	28,0	27,5	28,0	28,0	27,5

Average Value (mm)	27,65
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ADDITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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)	199,78	199,71	199,97	200,07	199,96
Thickness (mm)	31,9	32,16	32,08	32,22	31,35
Length (mm)	200,11	199,88	200,26	199,91	199,38
Rupture Energy, W (J)	3	3	3	3	3
Average Rupture Energy (J)	3				

ADDITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

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

Information supplied by the petitioner :

Petrographic name :
 Trade name of the stone : Bateig Diamante
 Country and place of extraction :
 Anisotropy planes :
 Petitioner : Bateig Piedra Natural, S.A
 Surface finish : Saw
 Sampling realized by : Petitioner
 Dimensions : 300 x 50 x 50 mm

	START	END
Preparation date	09/05/2014	13/05/2014
Test date	13/05/2014	10/09/2014

	Higher	Lower
T ^a (°C)	24,7	23,9

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Span distance l (mm)	254,5	252,7	253,8	254,2	251,3	249,7	253,6	254,7	250,9	252,4
Breaking load, F (N)	2190	2280	2380	2190	2090	1990	2280	2190	2380	2190
Thickness along breaking plane (mm)	50,9	50,9	51,0	50,6	50,3	50,0	50,7	50,9	51,0	50,4
Width along breaking plane (mm)	50,4	50,2	50,2	50,1	50,7	50,8	50,2	50,3	50,5	50,9
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_{tf} (MPa)	6,4	6,6	6,9	6,5	6,1	5,9	6,7	6,4	6,8	6,4

Mean value of Flexural Strength, $\overline{R_{tf}}$ (MPa)	6,5
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Standard deviation, s (MPa)	0,3
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Lower expected value, E (MPa)	5,8
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA: COMMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**TESTING METHODS FOR NATURAL STONE
 DETERMINATION OF FROST RESISTANCE
 UNE-EN 12371:2002**

**DETERMINATION OF FLEXURAL STRENGTH UNDER CONCENTRATED LOAD
 84 CICLES FREEZE/THAW
 UNE-EN 12372:2007**

TEST RESULT

	START	END		Higher	Lower
Preparation date	28/07/2014	10/09/2014	T ^a (°C)	26,8	25,9
Test date	13/05/2014	10/09/2014			

Specimen	11	12	13	14	15	16	17	18	19	20
Span distance l (mm)	225,0	255,0	253,9	253,1	254,7	252,7	250,3	254,8	253,0	255,3
Breaking load, F (N)	1890	3790	1990	2090	2090	1890	1800	1980	1700	1800
Thickness along breaking plane (mm)	50,9	50,5	51,0	50,6	50,6	50,3	50,1	50,7	50,5	50,8
Width along breaking plane (mm)	50,2	50,6	50,3	50,2	50,1	50,7	51,0	50,6	50,7	50,5
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_{ff} (MPa)	5,6	11,2	5,8	6,2	6,2	5,6	5,3	5,8	5,0	5,3

Mean value of Flexural Strength, $\overline{R_{tf}}$ (MPa)	6,2
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Standard deviation, s (MPa)	1,8
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Lower expected value, E (MPa)	3,7
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Variation of flexural strength, ΔR_{ff} (%)	4,6
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Speed load was 0,25 MPa/s.

ADITIONAL TEST DATA:

COMENTS:

REPORT N°: IE142208
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72114

**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 : Bateig Diamante
 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	06/05/2014
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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)	54	52	50	53	50	52
USRV (of the specimen)	52					

	WET CONDITIONS					
Specimen identification	1	2	3	4	5	6
USRV (mean value for test specimen)	62	62	64	62	54	61
USRV (of the specimen)	61					

COMMENTS:

ADDITIONAL DATE OF TEST: