



Centro Tecnológico  
del mármol



## NATURAL STONE LABORATORY

Price List 2.018 Rev.2

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Cod.	Ensayo	Norma	€
<b>Natural stone:</b>			
PN001	* Petrographic examination	EN 12407:2007	193,00
PN002A	Geometric characteristics	EN 13373:2003	21,00
PN003	* Water absorption at atmospheric pressure	EN 13755:2008	100,00
PN004A	* Apparent density and open porosity	EN 1936:2006	103,00
PN005A	* Real and apparent density and total and open porosity	EN 1936:2006	260,00
PN006	* Abrasion resistance: method A (Capon)	EN 14157:2017	155,00
PN007A	* Frost resistance: Identification test until 14 cycles	EN 12371:2010	174,00
PN007B	* Frost resistance: Identification test until 56 cycles	EN 12371:2010	377,00
PN007C	* Frost resistance: Identification test until 84 cycles	EN 12371:2010	497,00
PN007D	* Frost resistance: Identification test until 140 cycles	EN 12371:2010	725,00
PN007E	* Frost resistance: Identification test until 168 cycles	EN 12371:2010	824,00
PN008A	* Frost resistance: Technological test (lost of flexural strength under concentrated load after 14 cycles)	EN 12371:2010	173,00
PN008B	* Frost resistance: Technological test (lost of flexural strength under concentrated load after 48/56 cycles)	EN 12371:2010	374,00
PN008C	* Frost resistance: Technological test (lost of compressive strength after 14 cycles)	EN 12371:2010	228,00
PN008D	* Frost resistance: Technological test (lost of compressive strength after 48/56 cycles)	EN 12371:2010	427,00
PN008E	* Frost resistance: Technological test (lost of flexural strength at a constant moment after 48/56 cycles)	EN 12371:2010	374,00
PN008F	* Frost resistance: Technological test (lost of breaking load at a dowel hole after 14 cycles)	EN 12371:2010	277,00
PN009A	* Compressive strength	EN 1926:2006	144,00
PN009B	Compressive strength	EN 772-1:2011	144,00
PN010	* Flexural strength under concentrated load	EN 12372:2006	106,00

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Cod.	Ensayo	Norma	€
PN011	* Flexural strength at a constant moment	EN 13161:2008	108,00
PN012A	* Breaking load at a dowel hole: Identification test	EN 13364:2001	163,00
PN012B	* Breaking load at a dowel hole: Technological test	EN 13364:2001	163,00
PN012C	* Breaking load at a dowel hole (without cement)	PE 17 Rev.7	135,00
PN012D	Resistance to anchorage (grooved slabs)	ETAG 034-1:2012	153,00
PN013	* Resistance to salt crystallisation	EN 12370:1999	281,00
PN014	Static elastic modulus	EN 14580:2005	396,00
PN015	Knoop hardness	EN 14205:2003	103,00
PN016	* Rupture energy (by impact)	EN 14158:2004	62,00
PN017A	* Water absorption coefficient by capillarity	EN 1925:1999	108,00
PN017B	Water absorption due to capillary action	EN 772-11:2011	108,00
PN019C	* Resistance to ageing by thermal shock	EN 14066:2013	272,00
PN019D	* Sensivity to changes in appearance produced by thermal cycles	EN 16140:2011	126,00
PN020A	* Slip resistance by means of the pendulum tester (wet and dry conditions)	EN 14231:2003	150,00
PN020E	* Slip/skid resistance value (wet conditions)	ENV 12633:2003	101,00
PN020H	* Slip/skid resistance value (wet and dry conditions)	ENV 12633:2003	150,00
PN020J	* Slip/skid resistance value (wet conditions)	CEN/TS 16165:2012	116,00
PN020K	* Slip/skid resistance value (wet conditions)	UNE 41901 EX:2017	116,00
PN023	Surface roughness	EN ISO 4288:1997	84,00
PN024	Chemical resistance	EN ISO 10545-13:1997	255,00
PN035A	Initial adhesion	PE 31 Rev.1	195,00
PN035B	Adhesion after 20 thermal shock cycles	PE 31 Rev.1	281,00
PN035C	Adhesion after 48/56 frost/thaw cycles	PE 31 Rev.1	325,00
PN036	Wet tensile adhesion strength	PE 31 Rev.1	195,00

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<i>Cod.</i>	<i>Ensayo</i>	<i>Norma</i>	<i>€</i>
PN050	Organic matter content		82,00
PN051A	Thermal expansion coefficient	PE 28 Rev.1	107,00
PN051B	Thermal expansion coefficient	EN 14581:2004	488,00
PN053	Resistance to ageing by salt mist	EN 14147:2003	435,00
PN054	Sound speed propagation	EN 14579:2004	92,00
PN066B	Resistance to stains	EN 16301:2013	172,00
PN068	Mohs hardness	EN 101:1991	38,00
PN077	Dynamic modulus of elasticity	EN 14146:2004	110,00
<b><i>Dimensioned stone (ASTM):</i></b>			
PN025	Absorption and bulk specific gravity	ASTM C97/C97M-18	103,00
PN026	Modulus of rupture	ASTM C99/C99M-15	106,00
PN027	Compressive strength	ASTM C170/C170M-17	144,00
PN028	Flexural strength	ASTM C880/C880M-15	108,00
PN029B	Abrasion resistance	ASTM C1353/C1353M-15a	141,00
PN078B	Resistance to rapid freezing and thawing (lost of flexural strength after 125 cycles, method B)	ASTM C666/C666M-15	427,00
PN078C	Resistance to rapid freezing and thawing (125 cycles, method A)	ASTM C666/C666M-15	619,00
PN080	Petrographic examination	ASTM C1721-15	197,00
PN082	Flexural modulus of elasticity	ASTM C1352/C1352M-15	128,00
PN084	Strength of individual stone anchorages	ASTM C1354/C1354M-15	163,00
<b><i>Slates for roofing:</i></b>			
PT039	Geometric characteristics	EN 12326-2:2011	21,00
PT040	Flexural strength	EN 12326-2:2011	217,00

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Cod.	Ensayo	Norma	€
PT041	Water absorption	EN 12326-2:2011	103,00
PT042	Freeze-thaw	EN 12326-2:2011	377,00
PT044	Sulphur dioxide exposure	EN 12326-2:2011	177,00
PT045	Thermal cycle	EN 12326-2:2011	131,00
PT046	Petrographic examination of thin sections	EN 12326-2:2011	193,00
<b>Agglomerated stone:</b>			
PA055	* Apparent density and water absorption	EN 14617-1:2013	96,00
PA056	* Flexural strength	EN 14617-2:2016	106,00
PA058	Freeze-thaw resistance	EN 14617-5:2012	246,00
PA059	* Thermal shock resistance	EN 14617-6:2012	229,00
PA060	* Impact resistance	EN 14617-9:2005	62,00
PA061	* Chemical resistance	EN 14617-10:2012	145,00
PA062A	Thermal expansion coefficient (20-80°C)	PE 28 Rev.1	107,00
PA062C	Thermal expansion coefficient (30-130°C)	EN 14617-11:2006	124,00
PA063	* Compressive strength	EN 14617-15:2005	147,00
PA064	* Resistance to fixing (dowel hole)	EN 14617-8:2007	166,00
PA067A	* Slip/skid resistance value (wet conditions)	ENV 12633:2003	101,00
PA067B	* Slip resistance by means of the pendulum tester (wet and dry conditions)	EN 14231:2003	150,00
PA067E	* Slip/skid resistance value (wet and dry conditions)	ENV 12633:2003	150,00
PA067F	* Slip/skid resistance value (wet conditions)	CEN/TS 16165:2012	116,00
PN067H	* Slip/skid resistance value (wet conditions)	UNE 41901 EX:2017	116,00
PA069	* Abrasion resistance	EN 14617-4:2012	104,00
PA070	Electrical resistivity	EN 14617-13:2013	105,00
PA071	Dimensional stability	EN 14617-12:2012	70,00

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Cod.	Ensayo	Norma	€
PA072	Knoop hardness	EN 14205:2003	103,00
PA073	Initial adhesion	PE 31 Rev.1	195,00
PA074	Mohs hardness	EN 101:1991	38,00
PA075	Dimensions, geometric characteristics and surface quality	EN 14617-16:2006	192,00
PA076A	Weathering by exposure to filtered xenon-arc radiation. Method A: daylight, (200 h)	EN ISO 4892-2:2013	149,00
PA076B	Weathering by exposure to filtered xenon-arc radiation. Method C, window lighth, (200 h)	EN ISO 4892-2:2013	149,00
PA076Q	Lighthfastness	EN 438-2:2005	217,00
PA107A	Resistance to anchorage (grooved slabs)	ETAG 034-1:2012	153,00

### General conditions

The CTM reserves the right to modify the prices without notice.

Sending of samples will be paid by the customer.

For tests which are requested by customers a detailed offer will be presented, and this proposal will contain prices and specific conditions, as well as the samples specifications. Acceptance of the offer should be sent in writing before beginning tests. If the customer has doubts about the terms of the offer, or this offer doesn't serve the customer exact needs, customers should contact the laboratory before testing begins.

The CTM guarantees the confidentiality of received information and the results included in the report. All information to third parties must be previously authorised in writing by the petitioner.

Clients who request tests, will have access to laboratory facilities to be present when tests, whenever this is possible.

For each test carried out an independent report will be done, in Spanish + English or Spanish + French.

Results in the reports will refer only to the samples and information provided by the customer. The CTM is not responsible for the representativity with respect to the marketed product.

Specimens not destroyed will remain stored for 3 months from completion of tests, at the disposition of the customer which requested them.

Complaints about test results should be made in writing, addressed to the test laboratory CTM.

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