

DATI TECNICI
TECHNICAL FEATURES

TECHNISCHE EIGENSCHAFTEN
CARACTERISTIQUES TECHNIQUES

Water absorption ≤ 0,03 %	Antislip		Mohs ≥ 8
	R11	A+B+C	
Modulus of rupture	≥ 50 N/mm ²	≥ 500 Kg/cm ²	≥ 7,500 psi
Breaking strength (for square slabs)	≥ 12.000 N	≥ 1.200 Kg	≥ 2,700 Lbs
Compressive strength	≥ 200 N/mm ²	≥ 2.000 Kg/cm ²	≥ 29,000 psi
Color resistance UV light	Resistant	Reaction to fire	A1FL
Frost resistance	Complies	Thermal shock	Resistant

09315
PORCELAIN
TILE

The international reference standards: ISO - EN

The values of the main technical characteristics measured on our products, compared with international standards, are clearly shown and reproduced on our contractual documents (catalogs, price lists, etc.).
The values given in this document are common to groups of articles or series of our tiles and therefore are to be used as a guide for a first orientation in choosing the product. If required, the specific values for a given product and a determined supply can be provided depending on its intended use, when formally brought to our attention by notice in writing.

Characteristics and Test methods	Requirements EN 14411 ⁽¹⁾ - G/ISO 13006 ⁽²⁾ - G	Our general values
Determination of water absorption (ISO 10545-3)	Average value E _a ≤ 0,5% / Individual maximum ≤ 0,6%	≤ 0,03% Average value and individual maximum
Classification	Definition § 3.2 and § 3.7	BIa - Porcelain tiles
20 mm Physical properties		Physical properties
Modulus of rupture (ISO 10545-4)	Average ≥ 35 N/mm ²	≥ 50 N/mm ²
Breaking strength - (ISO 10545-4)	Average ≥ 1300 N for thickness ≥ 7,5 mm Average ≥ 700 N for thickness < 7,5 mm	Complies
Flexion resistance and breaking load - (EN 1339-F) P-Average Breaking Strength T-Average of modulus of rupture	Classes according to EN 1339 - § 5 (3)	≥ U11 ≥ 12.000 N ≥ 50 N/mm ²
Compressive strength (cubic sample 2 cm side)	NA	≥ 200 N/mm ²
MOHS hardness scale (ex EN 101 / BS 6431-13)	NA	≥ 8
Resistance to surface abrasion (ISO 10545-7)	Abrasion class and cycles passed	Class 0-5
Resistance to deep abrasion (ISO 10545-6)	Max volume abraded < 175 / mm ³	< 130 / mm ³
Raccomanded use	Novabell criterion	Class 5 (see Annex N-ISO 13006 / EN 14411)
Color resistance to UV light (Din 51094)	...	Resistant
Coefficient of linear thermal expansion (ISO 10545-8)	Declared value ⁽¹⁾ / Test method available ⁽²⁾	< 7,1 x10 ⁻⁶ °C ⁻¹
Thermal shock resistance (ISO 10545-9)	Pass according to EN ISO 10545-1 ⁽¹⁾ / Test method available ⁽²⁾	Complies
Crazing resistance (ISO 10545-11)	Pass according to EN ISO 10545-1 ⁽¹⁾ / Required ⁽²⁾	Complies
Frost resistance (ISO 10545-12)	Pass according to EN ISO 10545-1 ⁽¹⁾ / Required ⁽²⁾	Complies
Moisture expansion (ISO 10545-10)	Declared value ⁽¹⁾ / Test method available ⁽²⁾	≤ 0,1 mm/m
Small colour differences (ISO 10545-16)	Δ E _{cmc} da < 0,75 a < 1,0 (1)	If agreed
Impact resistance (ISO 10545-5)	Declared value ⁽¹⁾ / Test method available ⁽²⁾	COR > 0,75
Reaction to fire	Class A1 or A1 _{FL} ⁽¹⁾	A1_{FL} Classified Without Testing (CWT) - 96/603 EC
20 mm Chemical properties		Chemical properties
Chemical resistance - (ISO 10545-13)		
Resistance to low and high concentrations of acids and alkalis	Declared value ⁽¹⁾ / Manufacturer is to state classification ⁽²⁾	Resistant (see "Maintenance and care" section)
Resistance to household chemicals and swimming pool salts	Minimum class B	A
Resistance to staining (ISO 10545-14)	Minimum class 3	5 (see "Maintenance and care" section)
Release of dangerous substances (ISO 10545-15)	Declared value ⁽¹⁾ / Test method available ⁽²⁾	Pb < 0,1 / Cd < 0,01 mg/dm ²
20 mm Dimensions and surface quality		Dimensions and surface quality
Dimensions (ISO 10545-2)	See ANNEX G	Complies
Surface quality - (ISO 10545-2 § 7)	A minimum of 95% of the tiles shall be free from visible defects that would impair the appearance of a major area of tiles	Complies

(1) Requirements according to EN 14411 (2) Requirements according to ISO 13006 (3) This classification is not an indication of the intended use of NF 187 for concrete slabs

Test methods	Requirements and references	Our general values
DIN 51130	BGR / ASR From R9 to R13	R11
DIN 5109	GUV-I 8527 A - B - C	A + B + C
BCR - ex BCRA	DM n. 236 / 1989 μ > 0,40	μ > 0,40
DCOF Resistance (ANSI A 137.1 Section 9.6)	≥ 0.42 ⁽¹⁾	DCOF ≥ 0.42

North America reference standards: ANSI - ASTM

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Characteristics and Test methods	Requirements ANSI A 137.1	Our general values
Determination of water absorption - (ASTM C 373)	Average value E _b ≤ 0,5%	Average value ≤ 0,03%
Classification	Definition § 3.0	Porcelain tiles
		Physical properties
Breaking strength - (ASTM C 648)	Average ≥ 250 lbf (1.11 kN) Individual ≥ 225 lbf (1.00 kN)	Complies
Visible Abrasion - (ASTM C 1027)	As reported	See the specific section
Thermal shock resistance - (ASTM C 428)	Pass	Complies
Crazing resistance - (ASTM C 424)	Pass	Complies
Resistance to freeze/thaw cycling - (ASTM C 1026)	As reported	Resistant
DCOF Resistance - (ANSI A 137.1 Section 9.6)	≥ 0.42 ⁽¹⁾	DCOF ≥ 0.42
Bond strength - (ASTM C 482)	≥ 50 psi (0.34 MPa)	> 1 MPa
Color Uniformity - (ASTM C 609 and ANSI A 137.1 section 9.3) ⁽²⁾	V0 - 3 Juds	See the specific section
		Chemical properties
Chemical resistance - (ASTM C 650)	As reported	Resistant
Stain resistance - (ASTM C 1378)	As reported	Resistant
		Dimensions - Calibrated tiles
Dimensions - (ASTM C 499) - (ASTM C 485) - (ASTM C 502)	See ANSI A 137.1 - Tab.10	Complies
		Dimensions - Rectified tiles
Dimensions - (ASTM C 499) - (ASTM C 485) - (ASTM C 502)	See ANSI A 137.1 - Tab.10	Complies

(1) For level interior spaces expected to be walked upon when wet - (2) For V0 tiles only

La tabella in italiano con i dati tecnici è scaricabile su www.novabell.it

Si vous le souhaitez, téléchargez le tableau contenant les données techniques en français en allant sur www.novabell.it

The English language technical specification for each collection can be downloaded from www.novabell.it

Die Tabelle in deutscher Sprache kann auf www.novabell.it heruntergeladen werden.

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Il vérifie la qualité, la performance et la fiabilité des carreaux céramiques par rapport à la destination d'usage.

La liste à jour des matériaux NovaBell certifiés UPEC est disponible sur le site internet www.cstb.fr

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