

Tender Specifications

Supply of ceramic wall and floor tiles

Product characteristics

Unglazed Porcelain Tiles (UGL)

Unglazed porcelain stoneware consists of a mixture of quality clay with the addition of feldspar, quartz and kaolin. It is manufactured by dry pressing of atomized powder and then sintered by industrial burning at temperatures above 1100°C. The glazing level of the material makes it possible to obtain a compact, non-porous product, resistant to ice, bending, impact, staining, chemical attack and thermal shock.

The Endless collection complies with the regulations required for top quality products in Europe according to EN 14411 - Annex G and internationally through ISO 13006 - Annex G.

Quality and environmental certifications

The conservation of the product characteristics is guaranteed by the Quality Management System put into practice by Panaria Portugal in its plants and certified in accordance with EN ISO 9001.

The collection is manufactured in plants with EN ISO 14001 certified Environmental Management Systems (internationally recognized standard) and EMAS (Regulation 1221/09 - eco-management and audit community system).

The collection helps to meet the criteria for obtaining LEED credits. The product contains no VOC (volatile organic compounds) and has obtained the GREENGUARD GOLD certification.

The Environmental Product Declaration (EPD) is available, this tool communicates clearly the environmental performances of the Endless collection based on its Life Cycle Assessment (LCA).

This range is made of 5% - 18% recycled content this way contributing to a more sustainable project.

Antibacterial properties - PR()TECT®

Thanks to Protect antibacterial technology, the tiles in the Endless collection have continuous, effective and long-lasting protection against the proliferation of bacteria, tested and certified according to ISO 22196 and ASTM E3031. Available only in Smooth and Polished finishes.

Commercial description of the product	
Brand	Margres
Collection	Endless
Colours	Calacatta Gold, Breccia Capraia, Travertino, Port Black, Amazonite
Sizes	90x90 _ 89x89* _ 60x120
Finish - Surface	Smooth (SM)** _ Polished (P) _ Anti-Slip (ASR)***
Finish - Edge	Rectified
Thickness	9,5mm (90x90, 89x89, 60x120)

* available only in Polished finish

** available in colours Calacatta Gold, Breccia Capraia and Travertino

*** available in colours Calacatta Gold, Breccia Capraia and Travertino, size 90x90



EMAS



ISO 9001 | ISO 14001



RECYCLED CONTENT



LEED



Antibacterial for Life.

ANTIBACTERIANO



GREENGUARD GOLD



ENVIRONMENTAL
PRODUCT DECLARATION

Tender Specifications

Technical features

Product type: **Unglazed Porcelain Tiles (UGL)**

According to: ISO 13006 - Annex G (Group Bla), EN 14411 - Annex G (Group Bla)

Technical features		Test method	Required value ISO 13006 / EN 14411	Typical Margres value
Dimensions	Lenght and width	EN ISO 10545-2	Rect. $\pm 0,3\%$, máx ± 1 mm	Conform
	Side straightness		Rect. $\pm 0,3\%$, máx $\pm 0,8$ mm	Conform
	Rectangularity		Rect. $\pm 0,3\%$, máx $\pm 1,5$ mm	Conform
	Warpage		Rect. $\pm 0,4\%$, máx $\pm 1,8$ mm	Conform
	Thickness		$\pm 5\%$ máx $\pm 0,5$ mm	Conform
Water absorption		EN ISO 10545-3	$\leq 0,5\%$	0,1%
Modulus of rupture		EN ISO 10545-4	≥ 35 N/mm ²	45 N/mm ² 90x90_89x89 42 N/mm ² 60x120
Breaking strength (S)			≥ 1300 N	2000N 90x90_89x89 9,5mm 2200N 60x120 9,5mm
Abrasion resistance		EN ISO 10545-6	≤ 175 mm ³	139 mm ³
Linear thermal expansion		EN ISO 10545-8	As indicated by manufacturer	$\alpha \leq 7,5 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$
Thermal shock resistance		EN ISO 10545-9	Required	Resistant
Frost resistance		EN ISO 10545-12	Required	Resistant
Resistance against acids and alkalis		EN ISO 10545-13	As indicated by manufacturer	Minimum ULB
Resistance to household cleaning products			Minimum: UB	Class UA
Stain Resistance		EN ISO 10545-14	As indicated by manufacturer	4 Simple removal
Slip Resistance		DIN EN 16165 Annex B	As indicated by manufacturer	R10 ASR
		DIN EN 16165 Annex A		Class B ASR
		DIN EN 16165 Annex C		≥ 36 ASR
		AS/NZS 4586		P3 ASR
Shade Variation		ANSI A137.1	V0 None _ V1 Minor V2 Low _ V3 Medium _ V4 Major	V2 Slight variation
Recomended joint		Indoor Outdoor	-	Minimum 2mm Minimum 3mm (5mm colour Port Black)

It is guaranteed the compliance with the values required by norm EN 14411 Group Bla UGL. Typical Margres reference value is merely indicative, which can vary from real data, and does not have the purpose of any trading proposal. Endless is suitable for light residential or commercial use, with low traffic.

Products with a polished finish are more sensitive to abrasion and stains, what requires special conditions. Please check technical information on chapter 9 from Margres general catalogues.

