

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

### Quality and environmental certifications

The conservation of the product characteristics is guaranteed by the Quality Management System put into practice by Gres 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.

### Antibacterial properties

Thanks to Protect® antibacterial technology, the tiles in the Native 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 Natural Rectified finish.

Commercial description of the product	
Company	Love Ceramic Tiles
Collection	Native
Colours	Ginger, Dark Beige, Light Beige, White, Tortora, Grey
Sizes	20x100 _ 20x100 AS
	40x120 RET. AS
Finish - Surface	Natural - Surface with a natural touch. Recommended for residential flooring or for commercial spaces with medium/high traffic and outdoor spaces that do not require anti-slip properties. Anti-slip (AS) - Product with a rough surface that gives it anti-slip properties. Recommended for use as outdoor flooring or indoor spaces that require anti-slip properties.
Finish - Edge	Rectified (RET), Non Rectified
Thickness	20mm _ 40x120   8mm _ 20x100



## 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	Prescribed Value	Typical Value
Dimensions	Lenght and width	EN ISO 10545-2	Non Rect. $\pm 0,6\%$ , max $\pm 2,0$ mm Rect. $\pm 0,3\%$ , max $\pm 1,0$ mm	Conform
	Side straightness		Non Rect. $\pm 0,5\%$ , max $\pm 2,0$ mm Rect. $\pm 0,3\%$ , max $\pm 1,5$ mm	Conform
	Rectangularity		Non Rect. $\pm 0,5\%$ , max $\pm 2,0$ mm Rect. $\pm 0,3\%$ , max $\pm 1,5$ mm	Conform
	Warpage		Non Rect. $\pm 0,5\%$ , max $\pm 2,0$ mm Rect. $\pm 0,4\%$ , max $\pm 1,8$ mm	Conform
	Thickness		$\pm 5\%$ max $\pm 0,5$ mm	Conform
Water absorption (E)		EN ISO 10545-3	$E \leq 0,5\%$	0,05% 20MM 0,2% 8MM
Modulus of rupture		EN ISO 10545-4	$\geq 35$ N/mm <sup>2</sup>	50 N/mm <sup>2</sup> 20MM 40 N/mm <sup>2</sup> 8MM
Breaking strength (S)			$S \geq 1300$ N	13600 N 20MM 2000 N 8MM
Abrasion resistance		EN ISO 10545-6	$\leq 175$ mm <sup>2</sup>	3-4
Linear thermal expansion		EN ISO 10545-8	As indicated by manufacturer	$\alpha \leq 7,0 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$ 20MM $\alpha \leq 7,5 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$ 8MM
Thermal shock resistance		EN ISO 10545-9	Required	Resistant
Crazing resistance		EN ISO 10545-11	Required	Resistant
Frost resistance		EN ISO 10545-12	Required	Resistant
Resistance against acids and alkalis		EN ISO 10545-13	As indicated by manufacturer	ULB
Resistance to household cleaning products			Minimum: UB	UA
Stain Resistance		EN ISO 10545-14	As indicated by manufacturer	4
Slip Resistance	DIN EN 16165 _ Annex B	As indicated by manufacturer	R11 AS R10 Natural	
	DIN EN 16165 _ Annex A		C AS A Natural	
	DIN EN 16165 _ Annex C		$\geq 36$ AS	
	AS/NZS 4586		P4 20MM	
Shade Variation		ANSI A137.1	V0 None _ V1 Minor V2 Low _ V3 Medium V4 Major	V3
Recomended joint		Non rectified Indoor / 20MM Non rectified Outdoor / 20MM Rectified Indoor / 20MM Rectified Outdoor / 20MM 20MM Raised floor	-	3 mm 4 mm 2 mm 3 mm 3 mm

It is guaranteed the compliance with the values required by norm EN 14411\_Group BIA UGL. Typical Value is merely indicative, which can vary from real data, and does not have the purpose of any trading proposal.