LEA CERAMICHE

Tender specifications
WATERFALL collection

Supply of LEA Ceramiche porcelain stoneware tiles for walls and floors.

Product characteristics

LEA Ceramiche full body porcelain stoneware tiles, unglazed, composed of a very fine mixture of quality clay with the addition of feldspar, quartz and kaolin, manufactured by dry pressing of atomized powders and subsequently sintered by industrial firing at temperatures above 1200°C.
The complete vitrification of the tiles allows for a compact, non-absorbent, frost-proof product, resistant to bending, impacts, staining, chemical attack and thermal shock.

Compliance with EN 14411-G / ISO 13006-G

The Waterfall collection is in compliance with the regulations required for first quality products in Italy and Europe UNI 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 LEA Ceramiche in its plants and certified in accordance with UNI EN ISO 9001.
The collection is manufactured in plants with UNI 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 content of "pre-consumer" recycled material is 40%, as certified by a qualified external body (LEED V4 Regulations - MR Credit). The product contains no VOC (volatile organic compounds) and got the GREENGUARD GOLD certification. The Environmental Product Declaration (EPD) is available, this tool communicates clearly the environmental performances of the Waterfall collection based on its Life Cycle Assessment (LCA).

Antibacterial properties

Thanks to Protect antibacterial technology, the tiles from the Waterfall collection have continuous, effective and durable protection against the proliferation of bacteria, tested and certified in accordance with ISO 22196 and ASTM E3031.
(Not for GRIP 20MM* surface).

Commercial description of the product				
Company	LEA CERAMICHE (Panariagroup Industrie Ceramiche S.p.A.)			
Collection	WATERFALL			
Colours	IVORY FLOW, SILVER FLOW, GRAY FLOW, DARK FLOW			
Sizes	30X60cm NAT RTT	30X60cm LAPP RTT		
	60X60cm NAT RTT	60X60cm LAPP RTT	60X60cm GRIP RTT	60X60cm GRIP RTT Thick. 20mm*
	45X90cm NAT RTT	45X90cm LAPP RTT		45X90cm GRIP RTT Thick. 20mm*
	90X90cm NAT RTT	90X90cm LAPP RTT		90X90cm GRIP RTT Thick. 20mm*
	60X120cm NAT RTT	60X120cm LAPP RTT		
Surfaces	NATURALE (NAT), LAPPATA (LAPP), GRIP			
Edges	RECTIFIED (RTT)			
Thickness	9,5mm - 20mm			

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Technical features

Product type: full body porcelain stoneware (UGL)
According to: ISO 13006-G (Group BIa), EN 14411-G (Group BIa)

Technical features		Test method	Required values ISO 13006-G, EN 14411-G	Average values WATERFALL
Water absorption		ISO 10545-3	≤ 0.5%	0,05 %
Breaking strength (S)		ISO 10545-4	≥ 1300 N	Thick. 9,5mm: 2.200 N Thick. 20mm: 13.600 N
Modulus of rupture		ISO 10545-4	≥ 35 N/mm^2	50 N/mm^2
Deep abrasion resistance		ISO 10545-6	≤ 175mm^3	145mm^3
Linear thermal expansion		ISO 10545-8	No provision	$\alpha \leq 7 \cdot 10^{-6}$ $°C^{-1}$
Stain resistance		ISO 10545-14	Class 3 Min.	5 RESISTANT
Chemical resistance (*)		ISO 10545-13	As indicated by manufacturer	LA, HA RESISTANT
Frost resistance		ISO 10545-12	No alteration	RESISTANT
Dimensions	Lenght and width	ISO 10545-2	± 0,3 %, max ± 1 mm	COMPLIANT
	Straightness of sides	ISO 10545-2	± 0,3 %, max ± 0,8 mm	COMPLIANT
	Rectangularity	ISO 10545-2	± 0,3 %, max ± 1,5 mm	COMPLIANT
	Warpage	ISO 10545-2	± 0,4 %, max ± 1,8 mm	COMPLIANT
	Thickness	ISO 10545-2	± 5 %, max ± 0,5 mm	COMPLIANT
Slip resistance		DIN 51130	-	R10 (Nat) R11 (Grip - 20mm)
		DIN 51097	-	A+B (Nat) A+B+C (Grip - 20mm)
		BCR-TORTUS	-	μ > 0,40 (Nat - Grip - 20mm)
		ANSI A 137.1	-	DCOF≥0.42 (Nat - Grip - 20mm)
		AS 4586:2013	-	P3 (Nat) P4 (Grip - 20mm)
		BS 7976:2002	-	PTV 36+Wet (Sl. 96) (Nat) PTV 36+Wet (Sl. 55) (Grip, 20mm)
Shade variation		ANSI A 137.1	As indicated by manufacturer	V3
Fire reaction		EN 13823	CPR (UE) 305/2011, 2000/147/CE, UNI EN 13501-1	Class A1 (wall)
		EN 9239-1		Class $A1_{fl}$ (floor)
Thermal conductivity		EN 12524	-	λ = 1,3 W/m °K
Recommended minimum joint (**)		Indoor	-	2mm

(*) Excluding hydrofluoric acid and its derivatives.
(**) The width of grout joints must be established by the installation supervisor, unless grout widths are regulated by national laying standards.

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