



Tender specifications / LULLABY collection

Supply of Panaria Ceramica single fired wall tiles

Product characteristics

Panaria Ceramica white body single fired wall tiles, glazed, 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 1100°C.

The product is resistant to cracking, bending, staining, chemical attack.

Compliance with EN 14411-L / ISO 13006-L

The LULLABY collection is in compliance with the regulations required for first quality products in Italy and Europe UNI EN 14411-L and internationally through ISO 13006-L.

Quality and environmental certifications

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 LULLABY collection based on its Life Cycle Assessment (LCA).

Commercial description of the product	
Company	PANARIA CERAMICA (Panariagroup Industrie Ceramiche S.p.A.)
Collection	LULLABY
Colours	STARDUST LIGHT; FAIRYTALE BLUSH; DREAMY IVORY; SILENT GREEN; PEACEFUL GRAY; SKY BLUE
Sizes	35x100 cm
Surfaces	NAT
Edges	RECTIFIED (RECT)
Thickness	8 mm



GREENGUARD
GOLD



EPD



LEED



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EN 14411
Le DOP sono disponibili sul sito
Internet www.panaria.it
L'OP è available on the website
www.panaria.it

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Technical features

Product type: **Single fired wall tiles (GL)**

According to: ISO 13006-L (Group BIII), EN 14411-L (Group BIII)

Technical features		Test method	Required values - ISO 13006-L, EN 14411-L – BIII - GL Group	Average values LULLABY
Water absorption		ISO 10545-3	> 10 %	> 10 %
Breaking strength (S)		ISO 10545-4	≥ 600 N	≥ 600 N
Modulus of rupture		ISO 10545-4	≥ 12 N/mm ²	18 N/mm ²
Linear thermal expansion		ISO 10545-8	No provision	$\alpha \leq 7 \cdot 10^{-6} \text{ }^{\circ}\text{C}^{-1}$
Crazing resistance		ISO 10455-11	No alteration	RESISTANT
Frost resistance		ISO 10545-12	As indicated by manufacturer	NOT RESISTANT
Chemical resistance (*)		ISO 10545-13	As indicated by manufacturer	LA, HA RESISTANT
Stain resistance		ISO 10545-14	Class 3 Min.	5 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	Warpage: ± 0,4 %, max ± 1,8 mm Centre curvature: +0,5%/-0,3% and +2,0/-1,5 mm Edge curvature: +0,5%/-0,3% and +2,0/-1,5 mm	COMPLIANT
	Thickness	ISO 10545-2	± 10 % and ± 0,5 mm	COMPLIANT
Shade variation		ANSI A137.1	As indicated by manufacturer	V1
Fire reaction		EN 13823	CPR (UE) 305/2011, 2000/147/CE, UNI EN 13501-1	Class A1 (wall)
Thermal conductivity		EN 12524	-	$\lambda = 0,7 \text{ W/m }^{\circ}\text{K}$
Recommended minimum joint (**)		Indoor	-	1 mm (RECT)

(*) 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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