



Tender specifications / SURROUND 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 SURROUND 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 SURROUND collection based on its Life Cycle Assessment (LCA).

Commercial description of the product	
Company	PANARIA CERAMICA (Panariagroup Industrie Ceramiche S.p.A.)
Collection	SURROUND
Colours	DRAFT; SKETCH; ROW; SHAPE; OUTLINE
Sizes	30x60 cm
Surfaces	NAT
Edges	RECTIFIED (RECT)
Thickness	8 mm



GREENGUARD
GOLD



EPD



GREENBUILDING
CO. ITALIA
MEMBER



EN 14411
Lo DPD sono disponibili sul sito
internet www.panaria.it
DGP sono disponibili on the website
www.panaria.it

LEED

LEED

CE MARK

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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 SURROUND
Water absorption	ISO 10545-3	> 10 %	> 10 %
Breaking strength (S)	ISO 10545-4	$\geq 600 \text{ N}$	$\geq 600 \text{ N}$
Modulus of rupture	ISO 10545-4	$\geq 12 \text{ N/mm}^2$	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	$\pm 0,3 \text{ %, max } \pm 1 \text{ mm}$
	Straightness of sides	ISO 10545-2	$\pm 0,3 \text{ %, max } \pm 0,8 \text{ mm}$
	Rectangularity	ISO 10545-2	$\pm 0,3 \text{ %, max } \pm 1,5 \text{ mm}$
	Warpage	ISO 10545-2	Warpage: $\pm 0,4 \text{ %, max } \pm 1,8 \text{ mm}$ Centre curvature: $+0,5\%/-0,3\%$ and $+2,0/-1,5 \text{ mm}$ Edge curvature: $+0,5\%/-0,3\%$ and $+2,0/-1,5 \text{ mm}$
	Thickness	ISO 10545-2	$\pm 10 \text{ % and } \pm 0,5 \text{ mm}$
Shade variation	ANSI A137.1	As indicated by manufacturer	V2
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.

