



TECHNICAL FEATURES	
Collection: Replace Surface: Naturale	Brand: Ragno
Size (cm): 60X120 RT - 60X60 RT - 30X60 RT	Thickness (mm): 9,5
Size (cm): 45X45	Thickness (mm): 9,0

Compliant with standard EN 14411:2016 annex G group Bla - GL

Compliant with standard ISO 13006:2018 annex G group Bla - GL

Technical Features	Testing Method	Meas. unit	Average Typical Values	Established limits			
DIMENSIONAL PROPERTIES AND SURFACE QUALITY							
Dimensions				Nominal Length of edge N (cm) 7≤N<15	Nominal Length of edge N (cm) N≥15		
Length and width (*)	ISO 10545-2	(mm) (%)	Complies with the standards	±2% (max 5mm)	±2% (max 5mm)	±2% (max 5mm)	
Length and width (**)							
Not Rectified			Complies with the standards	±0,9 mm	±0,6%	±2,0 mm	
Rectified				± 0,4 mm	±0,3 %	±1,0 mm	
Thickness							
Not Rectified			Complies with the standards	±0,5 mm	±5%	±0,5 mm	
Rectified				±0,5 mm	±5%	±0,5 mm	
Straightness of sides							
Not Rectified			Complies with the standards	±0,75 mm	±0,5 %	±1,5 mm	
Rectified				±0,4 mm	±0,3 %	±0,8 mm	
Rectangularity							
Not Rectified			Complies with the standards	±0,75 mm	±0,5%	±2,0 mm	
Rectified				±0,4 mm	±0,3%	±1,5 mm	
Surface Flatness c.c - e.c. - w.							
Not Rectified			Complies with the standards	±0,75 mm	±0,5%	±2,0 mm	
Rectified				±0,6 mm	±0,4%	±1,8 mm	
Surface Quality			Complies with the standards			≥95%	
PHYSICAL PROPERTIES							
Water absorption	ISO 10545-3	(%)	<= 0,5	Eb ≤ 0,5 (Individual maximum value 0,6%)			
Modulus of rupture	ISO 10545-4	(N/mm2)	>= 35	R ≥35 (Individual minimun value 32 N/mm2)			
Breaking Strength	ISO 10545-4	(N)	>= 1300	≥1300 (Thickness ≥7,5 mm) ≥700 (Thickness < 7,5 mm)			
Resistance to surface abrasion	Internal Method		See attached table				
Linear thermal expansion coefficient	ISO 10545-8	(x(10)-6/°C)	<=9	Declared value (EN 14411:2016) Test Method available (ISO 13006:2018)			
Thermal shock resistance	ISO 10545-9		Complies with the standards	Declared value (EN 14411:2016) **** Test Method available (ISO 13006:2018)			
Crazing Resistance	ISO 10545-11		Complies with the standards	Pass according to EN ISO 10545-1 (EN 14411:2016) Required (ISO 13006:2018)			
Frost resistance	ISO 10545-12		Complies with the standards	Pass according to EN ISO 10545-1 (EN 14411:2016) Required (ISO 13006:2018)			
Reaction to fire	-	-	Floor/Wall Class A1 FL / A1	Class A1 or Class A1 FL (EN 14411:2016)			
Colour resistance to light exposure	DIN 51094		Complies with the standards	No sample must show noticeable colour modifications.			



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CHEMICAL PROPERTIES				
Resistance to chemicals for household use and swimming pool salts	ISO 10545-13		A	GB Minimum (EN 14411:2016) GB Minimum (ISO 13006:2018)
Resistance to low concentrations of acids and alkalis	ISO 10545-13		LA-LB	Declared value (EN 14411:2016) Test Method available (ISO 13006:2018)
Resistance to high concentrations of acids and alkalis	ISO 10545-13		HA-HB	Declared value (EN 14411:2016) Test Method available (ISO 13006:2018)
Stain resistance	ISO 10545-14		Class 5	Minimum class 3 (EN 14411:2016) Minimum class 3 (ISO 13006:2018)
ANTISLIPPERY PROPERTIES				
Slipperiness Resistance: Ramp Method	DIN 51130 B.G.R. 181		R9	from R9 to R13
Slipperiness Resistance: B.C.R.	D.M. N.236 14/6/89		$\mu > 0,40$	$\mu > 0,40$
Slipperiness Resistance: Pendulum	ENV 12633 BOE N.74 del 2006		Class 1	From Class 0 to Class 3
Dynamic coefficient of friction (DCOF)	ANSI A137.1:2012		$>0,42$	$\geq 0,42$

* The work size shall be chose, for non-modular tiles, so that the difference between the work size and the nominal size is:

** The deviation, in percent, of the average size for each tile (2 or 4 sides) from the work size..

**** See Table 2 for uses where it is applicable

c.c. Centre curvature, related to diagonal calculated from the work sizes

e.c. Edge curvature, related to the corresponding work sizes.

w. Warpage, related to diagonal calculated from the work sizes.


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Resistance to surface	abrasion - Internal Method
Replace anthracite	Intended use - Class H
Replace grey	Intended use - Class H
Replace sand	Intended use - Class G
Replace taupe	Intended use - Class H
Replace white	Intended use - Class H