



Sizes	120x240 cm	75x150 cm	120x120 cm	45x90 cm	75x75 cm	60x60 cm	30x60 cm
Sizes	47 1/4"x94 1/2"	29 1/2"x59"	47 1/4"x47 1/4"	17 3/4"x35 3/8"	29 1/2"x29 1/2"	23 5/8"x23 5/8"	11 3/4"x23 5/8"
	± 9mm	± 9.5mm	± 9mm	± 9mm	± 9.5mm	± 9mm	± 9mm

TECHNICAL FEATURES / TECHNICAL FEATURES				Requirements for nominal size N			MARVEL FLOOR	
				Requirements for nominal size N		Polished	Matt	
				7 cm ≤ N < 15 cm	N ≥ 15 cm			
				(mm)	(%)	(mm)		
Regularity features	Length and width Length and width	ISO 10545-2	± 0,9 (*)	± 0,6 (*)	± 2,0 (*)	±0.3% ±1.0mm	±0.3% ±1.0mm	
			± 0,5 (**)	± 5 (**)	± 0,5 (**)	±5.0% ±0.5mm	±5.0% ±0.5mm	
			± 0,75 (***)	± 0,5 (***)	± 1,5 (***)	±0.3% ±0.8mm	±0.3% ±0.8mm	
			± 0,75 (****)	± 0,5 (****)	± 2,0 (****)	±0.3% ±1.5mm	±0.3% ±1.5mm	
	Surface flatness Surface flatness	ISO 10545-2	c.c. ± 0,75	c.c. ± 0,5	c.c. ± 2,0	±0.3% ±1.5mm	±0.4% ±1.8mm	
			e.c. ± 0,75	e.c. ± 0,5	e.c. ± 2,0			
				EN 14411 annex G (Group Bla) EN 14411 annex G (Group Bla)	ISO 13006 annex G (Group Bla) ISO 13006 annex G (Group Bla)			
Structural features	Water absorption level (in% by mass) Water absorption level (in% by mass)	ISO 10545-3	E _B ≤ 0,5% Individual max 0,6% E _B ≤ 0,5% Valore max singolo 0,6%			≤0.1%	≤0.1%	
Bulk mechanical features	Breaking strength Breaking strength	ISO 10545-4	S ≥ 1300 N			S ≥ 1500 N	S ≥ 1500 N	
	Modulus of Rupture Modulus of Rupture		R ≥ 35 N/mm ²			R ≥ 40 N/mm ²	R ≥ 40 N/mm ²	
	Impact resistance, as coefficient of restitution Impact resistance, as coefficient of restitution	ISO 10545-5	Declare a value Declare a value	Test method available Test method available	≥0.55	≥0.55		
Surface mechanical features	Mohs hardness Mohs hardness	EN 101 ⁽¹⁾	-			MOHS 5	MOHS 6	
	Resistance to deep abrasion of unglazed tiles (removed volume) Resistance to deep abrasion of unglazed tiles (removed volume)	ISO 10545-6	≤ 175 mm ³			≤150mm ³	≤150mm ³	
Thermo-igrometric features	Linear Thermal Expansion Coefficient Linear Thermal Expansion Coefficient	ISO 10545-8	Declare a value Declare a value	Test method available Test method available	≤7 1/mk	≤7 1/mk		
	Thermal shock resistance Thermal shock resistance	ISO 10545-9	Pass according to EN ISO 10545-1 Pass according to EN ISO 10545-1	Test method available Test method available	Resiste	Resiste		
	Expansion due to humidity (mm/m) Expansion due to humidity (mm/m)	ISO 10545-10	Declare a value Declare a value	Test method available Test method available	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)		
	Frost resistance Frost resistance	ISO 10545-12	Pass according to EN ISO 10545-1 Pass according to EN ISO 10545-1	Required Required	Resiste	Resiste		
Physical properties	Bond strength/adhesion for improved cementitious adhesives Bond strength/adhesion for improved cementitious adhesives	EN 1348	Declare a value Declare a value	-	≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)		
	Reaction to fire Reaction to fire	-	Class A1 or A1 _{fl} Class A1 or A1 _{fl}	-	A1 - A1 _{fl}	A1 - A1 _{fl}		
Chemical features	Resistance to household chemicals and swimming pool salts Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum Class B (UB for unglazed tiles) Minimum Class B (UB for unglazed tiles)			UA	UA	
	Resistance to low concentrations of acids and alkalis Resistance to low concentrations of acids and alkalis		Declare a class Declare a class	Manufacturer is to state classification Manufacturer is to state classification	ULA	ULA		
	Resistance to high concentrations of acids and alkalis Resistance to high concentrations of acids and alkalis		Declare a class Declare a class	Test method available Test method available	0	UHA		
	Resistance to staining for glazed tiles Resistance to staining for glazed tiles	ISO 10545-14	Declare a class Declare a class	Test method available Test method available	UA	UA		
Safety features	Barefoot Ramp Test Barefoot Ramp Test	DIN 51097	Declare a value Declare a value	-	0	A		
	Shod Ramp Test Shod Ramp Test	DIN 51130	Declare a value Declare a value	-	0	R9		
	Pendulum Friction Test Pendulum Friction Test	UNE-ENV 12633	Declare a value Declare a value	-	Class 0	Class 1		
Safety features	Coefficient of friction (COF) Coefficient of friction (COF)	B.C.R.A. Rep. CEC/81	D. M. 236/89 del 14/06/89 μ >0,40 per elemento scivolante cuoio su pavimentazione asciutta μ >0,40 per elemento scivolante gomma dura su pavimentazione bagnata			>0.40Asciutto <0.40Bagnato	>0.40Asciutto >0.40Bagnato	
	Dynamic Coefficient of Friction Dynamic Coefficient of Friction	ANSI A137.1 - 2012	ANSI A.137.1 Requires a minimum value of 0.42 for commercial areas that are likely to be wet.			<0.42Wet	>0.42Wet	
	Static Coefficient of Friction Static Coefficient of Friction	ASTM C1028 - 2007	The Ceramic Tiles Institute Identifies Tile Slip Resistant when SCOF ≥ 0,60			≥0.60Dry 0.50/0.60Wet	≥0.60Dry ≥0.60Wet	
	Pendulum Friction Test Pendulum Friction Test	AS/NZS 4586 - 2013	Declared Classification of the pedestrian surface materials according to the Wet Pendulum Test			Class P0	Class P3 on demand	

(*) The permissible deviation, in % or mm, of the average size for each tile (2 or 4 sides) from work size (W).
 (**) The permissible deviation, in % or mm, of the average thickness for each tile from the work size thickness (W).
 (***) The maximum permissible deviation from straightness, in % or mm, related to the corresponding work sizes (W).
 (****) The maximum permissible deviation from rectangularity, in % or mm, related to the corresponding work sizes (W).
 c.c. The maximum permissible deviation from centre curvature, in % or mm, related to diagonal calculated from the work sizes (W).
 e.c. The maximum permissible deviation from edge curvature, in % or mm, related to the corresponding work sizes (W).
 w The maximum permissible deviation from warpage, in % or mm, related to diagonal calculated from the work sizes (W).
 (1) Requirements european standard EN 176.
 (2) Determination of slip resistance of pedestrian surfaces; it does not cover sports surfaces and road surfaces for vehicles (skid resistance).
 Anti-slip performance is guaranteed at the time of delivery of the product

