



Sizes Formate	50x110 cm 19 5/8"x43 1/4" ± 8.5mm	40x80 cm 15 3/4" x 31 1/2" ± 8.5mm	
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TECHNICAL FEATURES / CARATTERISTICHE TECNICHE				Requirements for nominal size N Requisiti per dimensione nominale N			MARVEL GEMS WALL
				7 cm ≤ N < 15 cm (mm)	N ≥ 15 cm (%) (mm)		
Regularity characteristics		Length and width Länge und Breite	ISO 10545-2	± 0,75 (*)	± 0,5 (*)	± 2,0 (*)	±0.3% ±1.0mm
		Thickness Stärke		± 0,5 (**)	± 10 (**)	± 0,5 (**)	±10.0% ±0.5mm
		Straightness of sides Geradlinigkeit der Kanten		± 0,5 (***)	± 0,3 (***)	± 1,5 (***)	±0.3% ±0.8mm
		Rectangularity Rechtwinkligkeit		± 0,75 (****)	± 0,5 (****)	± 2,0 (****)	±0.3% ±1.5mm
		Surface flatness Ebenflächigkeit		c.c. + 0,75 - 0,50	c.c. + 0,5 - 0,3	c.c. + 2,0 - 1,5	±0.3% ±1.5mm
			e.c. + 0,75 - 0,50	e.c. + 0,5 - 0,3	e.c. + 2,0 - 1,5		
			w. ± 0,75	w. ± 0,5	w. ± 2,0		
				EN 14411 annex L (Group BIII) EN 14411 appendice L (Gruppo BIII)	ISO 13006 annex L (Group BIII) ISO 13006 appendice L (Gruppo BIII)		
Structural features		Water absorption level (in% by mass) Wasseraufnahme (come % della massa)	ISO 10545-3	Average >10%. When the average > 20%, this shall be indicated. Individual value > 9% Media >10%. Se questo valore > 20%, deve essere indicato. Valore Singolo > 9%			10%<EB≤20%
Bulk mechanical features		Breaking strength Bruchlast	ISO 10545-4	S ≥ 600 N			S ≥ 600 N
		Modulus of Rupture Biegefestigkeit		R ≥ 15 N/mm ²			R ≥ 15 N/mm ²
Thermo-igrometric features		Coefficient of linear thermal expansion Wärmeausdehnungskoeffizient	ISO 10545-8	Declared value Dichiarare un valore	Test method available Metodo di prova disponibile		≤7 1/mk
		Thermal shock resistance Temperaturwechselbeständigkeit	ISO 10545-9	Pass according to EN ISO 10545-1 Test superato in accordo con ISO 10545-1	Test method available Metodo di prova disponibile		Resiste
		Moisture expansion (in mm/m) Dilatazione all'umidità (in mm/m)	ISO 10545-10	Declared value Dichiarare un valore	Test method available Metodo di prova disponibile		≤0.06% (0.6mm/m)
		Frost resistance Frostbeständigkeit	ISO 10545-12	Pass according to EN ISO 10545-1 Test superato in accordo con ISO 10545-1	Required Metodo di prova richiesto		0
Physical properties		Bond strength/adhesion for improved cementitious adhesives Haftfestigkeit	EN 1348	Declared value Dichiarare un valore	-		≥1.0 N/mm ² (Class C2 - EN 12004)
		Reaction to fire Brandverhalten	-	Class A1 or A1_{fl} Classe A1 oppure A1 _{fl}	-		A1
Chemical features		Resistance to household chemicals and swimming pool salts Beständigkeit gegen Haushaltschemikalien und Zusatzstoffe für Schwimmbäder	ISO 10545-13	Minimum Class B (GB for unglazed tiles) Classe minima B (GB per piastrelle non smaltate)			GA
		Resistance to low concentrations of acids and alkalis Beständigkeit gegen niedrigkonzentrierte Säuren und Laugen		Declare a class Dichiarare una classe	Test method available Metodo di prova disponibile		GLA
		Resistance to high concentrations of acids and alkalis Beständigkeit gegen hochkonzentrierte Säuren und Laugen		Declare a class Dichiarare una classe	Test method available Metodo di prova disponibile		GHA
		Resistance to staining for glazed tiles Resistenza alle macchie piastrelle smaltate	ISO 10545-14	Minimum Class 3 Classe 3 minima			5

(*) 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