



Sizes	19 1/4" x 47 1/4" ± 8.5mm	15 1/4" x 31 1/2" ± 8.5mm	12" x 36" ± 8.5mm	3 1/8" x 12 3/4" ± 8.5mm
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		Technical features	Test method	Requisites for nominal size N			Marvel Pro
				7 cm ≤ N < 15 cm (mm)	N ≥ 15 cm		Shiny rectified
					(%)	(mm)	
Regularity features		Length and width	ISO 10545-2	± 0,4 (*) Rect.	± 0,3 (*) Rect.	± 1,0 (*) Rect.	Suitable for
		Thickness		± 0,5 (**)	± 10 (**)	± 0,5 (**)	Suitable for
		Straightness of sides		± 0,4 (***) Rect.	± 0,3 (***) Rect.	± 0,8 (***) Rect.	Suitable for
		Perpendicularity		± 0,4 (***) Rect.	± 0,3 (***) Rect.	± 1,5 (***) Rect.	Suitable for
		Surface flatness		c.c. ± 0,6 Rect.	c.c. ± 0,4 Rect.	c.c. ± 1,8 Rect.	Suitable for
		e.c. ± 0,6 Rect.	e.c. ± 0,4 Rect.	e.c. ± 1,8 Rect.			
Structural features		Water absorption level (in% by mass)	ISO 10545-3	Average >10%. If this value > 20%, it must be indicated. Single value > 9%			10% < EV ≤ 20%
Bulk mechanical features		Breaking strenght	ISO 10545-4	S ≥ 600N			S ≥ 600 N
		Bending resistance		R ≥ 12 N/mm²			R ≥ 15 N/mm²
Thermo-igrometric features		Coefficient of linear thermal expansion	ISO 10545-8	Declared value			≤ 7MK <sup>-1</sup>
		Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1			Resistant
		Moisture expansion (in mm/m)	ISO 10545-10	Declared value			≤ 0.06% (0.6mm/m)
		Crazing resistance: glazed tiles	ISO 10545-11	Test passed in accordance with ISO 10545-1			Resistant
Physical properties		Bond strenght	EN 1348	Declared value			≥ 1.0 N/mm² (Class C2 - EN 12004)
		Reaction to fire	-	Class A1			A1
Chemical features		Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum B class			A
		Resistance to low concentrations of acids and alkalis		Declared class			LA
		Resistance to high concentrations of acids and alkalis		Declared class			HA
		Stain resistance of glazed tiles	ISO 10545-14	Minimum Class 3			5
		Release of dangerous substances: Cadmium (in mg/dm²) and Lead (in mg/dm²)	ISO 10545-15	Declared value			≤ 0.01mg/dm² Cd ≤ 0.1mg/dm² Pb

\* Permitted deviation, in % or mm, from the average size of each tile (2 or 4 sides) with respect to the manufacturing size (W).  
 \*\* Permitted deviation, in % or mm, from the average thickness of each tile with respect to the cited manufacturing thickness (W).  
 \*\*\* Maximum permitted straightness deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).  
 \*\*\*\* Maximum permitted perpendicularity deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).  
 \*\*\*\*\* Maximum permitted centre curvature deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).  
 e.c. Maximum permitted corner curvature deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).  
 w. Maximum permitted bending deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).  
 (1) Determining the slip resistance of pedestrian surfaces; not applicable to sports flooring or road traffic flooring.  
 (2) The anti-slip performance is guaranteed at the time of delivering the product.  
 (3) However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects. The specifier shall determine tiles appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations."  
 (4) For further details, please refer to the outdoor design general catalogue.  
 (5) Only for products with 20 mm thickness