





				Requisites for nominal size N				Drift		
			Test method	7 cm ≤ N < 15 cm N ≥ 1!		L5 cm		Matte		
		Technical features		(mm)	(%)	(mm)	Matte rectified 9mm	rectified 9mm 60x60 cm	Outdoor rectified	
Regularity features		Length and width		± 0,9 (*) Non-rect. ± 0,4 (*) Rect.	± 0,6 (*) Non-rect. ± 0,3 (*) Rect.	± 2,0 (*) Non-rect. ± 1,0 (*) Rect.	Suitable for	±0.3% ±1.0mm	Suitable for	
		Thickness		± 0,5 (**)	± 5 (**)	± 0,5 (**)	Suitable for	±5.0% ±0.5mm	Suitable for	
		Straightness of sides		± 0,8 (***) Non-rect. ± 0,4 (***) Rect.	± 0,5 (***) Non-rect. ± 0,3 (***) Rect.	± 1,5 (***) Non-rect. ± 0,8 (***) Rect.	Suitable for	±0.3% ±0.8mm	Suitable for	
		Perpendicularity (Measurement only on short edges when L/I ≥ 3)	ISO 10545-2	± 0,8 (***) Non-rect. ± 0,4 (***) Rect.	± 0,5 (***) Non-rect. ± 0,3 (***) Rect.	± 2,0 (***) Non-rect. ± 1,5 (***) Rect.	Suitable for	±0.3% ±1.5mm	Suitable for	
		Surface flatness		c.c. ± 0,8 Non-rect. c.c. ± 0,6 Rect.	c.c. ± 0,5 Non-rect. c.c. ± 0,4 Rect.	c.c. ± 2,0 Non-rect. c.c. ± 1,8 Rect.		±0.4% ±1.8mm	Suitable for	
				e.c. ± 0,8 Non-rect. e.c. ± 0,6 Rect.	e.c. ± 0,5 Non-rect. e.c. ± 0,4 Rect.	e.c. ± 2,0 Non-rect. e.c. ± 1,8 Rect.	Suitable for			
				w. ± 0,8 Non-rect. w. ± 0,6 Rect.	w. ± 0,5 Non-rect. w. ± 0,4 Rect.	w. ± 2,0 Non-rect. w. ± 1,8 Rect.				
Structural features	$\left( \begin{array}{c} \mathcal{O} \\ \mathcal{O} \end{array} \right)$	Water absorption level (in% by mass)	ISO 10545-3	E≤ 0,5% Individual Maximum 0,6%			≤0.1%	≤0.1%	≤0.1%	
			ASTM C373-18	Requirement ANSI A137.1-2017 Water Absorption Max < 0,5%						
Bulk mechanical features	$\downarrow$	Breaking strenght	ISO 10545-4	S≥70 S≥13			S≥10000 N			
		Bending resistance	130 10545-4		R ≥40 N/mm²	R ≥40 N/mm²	R ≥45 N/mm²			
		Bending and breaking load resistance (4) (5)	EN 1339 Annex F	N 1339 Annex F -						
		Impact resistance	ISO 10545-5	Declared value			≥0.55	≥0.55	≥0.55	
Surface mechanical features		Deep abrasion resistance of unglazed tiles	ISO 10545-6	≤ 175 mm³			≤150mm³	≤150mm³	≤150mm³	

- \* Permitted deviation, in % or mm, from the average size of each tile (2 or 4 sides) with respect to the manufacturing size (W).
- $^{\star\star} \text{ Permitted deviation, in \% or mm, from the average thickness of each tile with respect to the cited manufacturing thickness (W).}$
- \*\*\* Maximum permitted straightness deviation, in  $\bar{\%}$  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).
- $***** \ \, \text{Maximum permitted centre curvature deviation, in \% or mm, with respect to the diagonal calculated according to manufacturing sizes (W). } \\$
- 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







80x160 cm 31 ½"x63" ₩ 9mm 80x80 cm 31 ½"x31 ½" ₩ 9mm 60x120 cm 23%"x47 /₄" ₩ 9mm 60x60 cm 23%"x23%" ₩ 9mm 60x60 cm 235/8"x235/8" ₩ 20mm Sizes

			Test method	Requisites for nominal size N			Drift			
		Technical features		7 cm ≤ N < 15 cm N ≥ 15 cm		cm	M			
		recrifical features		(mm)		mm)	Matte rectified 9mm	Matte rectified 9mm 60x60 cm	Outdoor rectified	
Thermo- igrometric features	(°, )	Coefficient of linear thermal expansion	ISO 10545-8	Declared value			≤7MK <sup>-1</sup>	≤7MK <sup>-1</sup>	≤7MK <sup>-1</sup>	
	(X)	Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1		45-1	Resistant	Resistant	Resistant	
		Moisture expansion (in mm/m)	ISO 10545-10	Declared value			≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	
	**	Frost resistance	ISO 10545-12	Test passed in accordance with ISO 10545-1		45-1	Resistant	Resistant	Resistant	
Physical properties		Bond strenght	EN 1348	Declared value			≥1.0 N/mm² (Class C2 - EN 12004)	≥1.0 N/mm² (Class C2 - EN 12004)	≥1.0 N/mm² (Class C2 - EN 12004)	
		Reaction to fire	-	Class A1 or A1 <sub>fl</sub>			A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>	
		Resistance to household chemicals and swimming pool salts		Minimum B class			А	А	А	
Chemical features		Resistance to low concentrations of acids and alkalis	ISO 10545-13	Declared class			LA	LA	LA	
		Resistance to high concentrations of acids and alkalis		Declared class			НА	НА	НА	
		Stain resistance	ISO 10545-14	Declared class			5	5	5	
		Booted ramp test	DIN EN 16165 ANNEX B (EX DIN 51130)	Declared class			R9	R9	R11	
Safety characteristics (1)(2)		Barefoot Ramp test	DIN EN 16165 ANNEX A (EX DIN 51097)	Declared value			А	А	A+B+C	
		Pendulum friction Test	BS EN 16165 ANNEX C (EX BS 7976)	PTV ≥ 36 classifies the surface as "low slip risk"		o risk"			≥36Dry ≥36Wet	
	$ (\mathcal{G}) $		AS 4586	Declared Classification of the new pedestrian surface materials according to the Pendulum Test						
			UNE 41901 EX:2017	Declared value					Class C3	
		Coefficient of friction	B.C.R.A. Rep. CEC/81	Min. Dec. 236/89 of 14/06/89 $\mu$ >0.40 for a sliding leather element on a dry $_{fl}$ oor $\mu$ >0.40 for a sliding hard rubber element on a wet $_{fl}$ oor					>0.40Asciutto >0.40Bagnato	
		Dynamic coefficent of friction (DCOF)	ANSI A 326.3	-					Wet DCOF ≥ 0.55	

- \* 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