





			Test method	Requisites for nominal size N			Klif	
		Technical features		7 cm ≤ N < 15 cm N ≥ 15 cm		L5 cm	Matte	Grip
				(mm)	(%)	(mm)	rectified	rectified
Regularity features		Length and width	ISO 10545-2	± 0,9 (*) Non-rect. ± 0,4 (*) Rect.	± 0,6 (*) Non-rect. ± 0,3 (*) Rect.	± 2,0 (*) Non-rect. ± 1,0 (*) Rect.	Suitable for	Suitable for
		Thickness		± 0,5 (**)	± 5 (**)	± 0,5 (**)	Suitable for	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	Suitable for
		Perpendicularity (Measurement only on short edges when L/I ≥ 3)		± 0,8 (***) Non-rect. ± 0,4 (***) Rect.	± 0,5 (***) Non-rect. ± 0,3 (***) Rect.	± 2,0 (***) Non-rect. ± 1,5 (***) Rect.	Suitable for	Suitable for
				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.	Suitable for	Suitable for
		Surface flatness		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.		
				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	$\left( \begin{array}{c} O \\ O \end{array} \right)$	Water absorption level (in% by mass)	ISO 10545-3	E≤ 0,5% Individual Maximum 0,6%			≤0.1%	≤0.1%
			ASTM C373-18	Requirement ANSI A137.1-2017 Water Absorption Max < 0,5%			≤0.5%	≤0.5%
Bulk mechanical features		Breaking strenght	ISO 10545-4	S ≥ 700N (for thickness < 7,5mm) S ≥ 1300N (for thickness ≥ 7,5mm)			S≥1500 N	S≥1500 N
		Bending resistance	150 10545-4	R ≥ 35 N/mm²			R ≥40 N/mm²	R ≥40 N/mm²
		Bending and breaking load resistance (4)(5)	EN 1339 Annex F	-				
		Impact resistance	ISO 10545-5	Declared value		≥0.55	≥0.55	
Surface mechanical features		Deep abrasion resistance of unglazed tiles	ISO 10545-6	≤ 175 mm³		≤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  $\frac{1}{6}$  or mm, with respect to the corresponding manufacturing sizes (W).
- ${}^{*****} \ \text{Maximum permitted perpendicularity deviation, in \% or mm, with respect to the corresponding manufacturing sizes (W).}$
- \*\*\*\* 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







Sizes 75x150 cm 29 ½"x59" 75x75 cm 29 ½"x29 ½" 37,5x75 cm 14¾"x29 ½" 37,5x75 cm 14¾"x29 ½" 39mm 9mm

				Requisites for nominal size N		Klif		
		Technical features	Test method	7 cm ≤ N < 15 cm N ≥ 15 cm		, ,		
		recrimical reatures		(mm)	(%) (mm)	Matte rectified	Grip rectified	
Thermo- igrometric features	(« <b>)</b> »	Coefficient of linear thermal expansion	ISO 10545-8	Declared value		≤7MK <sup>-1</sup>	≤7MK <sup>-1</sup>	
	(; <u>\(\)</u>	Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1		Resistant	Resistant	
		Moisture expansion (in mm/m)	ISO 10545-10	Declared value		≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	
	*	Frost resistance	ISO 10545-12	Test passed in accordance with ISO 10545-1		Resistant	Resistant	
Physical properties		Bond strenght	EN 1348	Declared value  Class A1 or A1 <sub>fl</sub>		≥1.0 N/mm² (Class C2 - EN 12004)	≥1.0 N/mm² (Class C2 - EN 12004)	
		Reaction to fire	-			A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>	
Chemical features		Resistance to household chemicals and swimming pool salts		Minimum B class		А	А	
		Resistance to low concentrations of acids and alkalis	ISO 10545-13	Declared class		LA	LA	
		Resistance to high concentrations of acids and alkalis		Declared class		НА	НА	
		Stain resistance	ISO 10545-14	Declared class		5	5	
Safety characteristics (1)(2)		Booted ramp test	DIN EN 16165 ANNEX B (EX DIN 51130)	Declared class		R10	R11	
		Barefoot Ramp test	DIN EN 16165 ANNEX A (EX DIN 51097)	Declared value		A+B	A+B+C	
		Pendulum friction Test	BS EN 16165 ANNEX C (EX BS 7976)	PTV ≥ 36 classifies the surface as "low slip risk"		≥36Dry ≥36Wet	≥36Dry ≥36Wet	
			AS 4586	Declared Classification of the new pedestrian surface materials according to the Pendulum Test		Class P3	Class P4	
			UNE 41901 EX:2017	Declared value		Class C2	Class C3	
		Coefficient of friction	B.C.R.A. Rep. CEC/81	$\begin{array}{c} \text{Min. Dec. 236/89 of } 14/06/89 \\ \mu > 0.40 \text{ for a sliding leather element on a dry }_{fl} \text{oor} \\ \mu > 0.40 \text{ for a sliding hard rubber element on a wet }_{fl} \text{oor} \end{array}$		>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	
		Dynamic coefficent of friction (DCOF)	ANSI A 326.3	-		Wet DCOF ≥ 0.50	Wet DCOF ≥ 0.55	

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