



Sizes	25x150 cm 25x150 9 7/8"x59" ± 9.5mm	22.5x90 cm 8 7/8"x35 3/8" ± 9.5mm	15x90 cm 5 7/8"x35 3/8" ± 9.5mm	30x120 cm 30x120 cm Lastra 20mm ± 20mm	60x60 cm 60x60 cm Lastra 20mm ± 20mm
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TECHNICAL FEATURES / TECHNICAL FEATURES				Requirements for nominal size N Requisiti per dimensione nominale N			ETIC PRO				
				7 cm ≤ N < 15 cm		N ≥ 15 cm		Matt	Polished	Grip	Textured 20 mm
				(mm)	(%)	(mm)	(mm)				
Regularity features	<b>Length and width</b> Length and width	ISO 10545-2	± 0,9 (*)	± 0,6 (*)	± 2,0 (*)	±0.3% ±1.0mm	±0.3% ±1.0mm	±0.3% ±1.0mm	±0.3% ±1.0mm		
			± 0,5 (**)	± 5 (***)	± 0,5 (**)	±5.0% ±0.5mm	±5.0% ±0.5mm	±5.0% ±0.5mm	±5.0% ±0.5mm		
			± 0,75 (***)	± 0,5 (***)	± 1,5 (***)	±0.3% ±0.8mm	±0.3% ±0.8mm	±0.3% ±0.8mm	±0.3% ±0.8mm		
			± 0,75 (****)	± 0,5 (****)	± 2,0 (****)	±0.3% ±1.5mm	±0.3% ±1.5mm	±0.3% ±1.5mm	±0.3% ±1.5mm		
	<b>Surface flatness</b> Surface flatness	ISO 10545-2	c.c. ± 0,75	c.c. ± 0,5	c.c. ± 2,0	±0.4% ±1.8mm	±0.3% ±1.5mm	Not applicable	Not applicable		
			e.c. ± 0,75	e.c. ± 0,5	e.c. ± 2,0						
			EN 14411 annex G (Group Bla) EN 14411 appendice G (Gruppo Bla)		ISO 13006 annex G (Group Bla) ISO 13006 appendice G (Gruppo Bla)						
Structural features	<b>Water absorption level (in% by mass)</b> Water absorption level (come % della massa)	ISO 10545-3	E <sub>B</sub> ≤ 0,5% Individual max 0,6% E <sub>B</sub> ≤ 0,5% Valore max singolo 0,6%			≤0.1%	≤0.1%	≤0.1%	≤0.1%		
Bulk mechanical features	<b>Breaking strength</b> Breaking strength	ISO 10545-4	S ≥ 1300 N			S ≥ 2000 N	S ≥ 2000 N	S ≥ 2000 N	S ≥ 10000 N		
	<b>Modulus of Rupture</b> Modulus of Rupture		R ≥ 35 N/mm <sup>2</sup>			R ≥ 45 N/mm <sup>2</sup>	R ≥ 45 N/mm <sup>2</sup>	R ≥ 45 N/mm <sup>2</sup>	R ≥ 45 N/mm <sup>2</sup>		
Surface mechanical features	<b>Impact resistance, as coefficient of restitution</b> Resistenza all'impatto, espresso come coefficiente di restituzione	ISO 10545-5	Declare a value Dichiarare un valore	Test method available Metodo di prova disponibile		≥0.55	≥0.55	≥0.55	≥0.55		
	<b>Mohs hardness</b> Mohs hardness	EN 101 <sup>(1)</sup>	-			MOHS 6	MOHS 5	MOHS 8	MOHS 8		
	<b>Resistance to deep abrasion of unglazed tiles (removed volume)</b> Resistenza all'abrasione profonda delle piastrelle non smaltate (volume materiale asportato)	ISO 10545-6	≤ 175 mm <sup>3</sup>			≤150mm <sup>3</sup>	≤150mm <sup>3</sup>	≤150mm <sup>3</sup>	≤150mm <sup>3</sup>		
Thermo-igrometric features	<b>Linear Thermal Expansion Coefficient</b> Linear Thermal Expansion Coefficient	ISO 10545-8	Declare a value Dichiarare un valore	Test method available Metodo di prova disponibile		≤7 1/mk	≤7 1/mk	≤7 1/mk	≤7 1/mk		
	<b>Thermal shock resistance</b> Thermal shock resistance	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	Resiste	Resiste	Resiste		
	<b>Expansion due to humidity (mm/m)</b> Dilatazione all'umidità (in mm/m)	ISO 10545-10	Declare a value Dichiarare un valore	Test method available Metodo di prova disponibile		≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)		
	<b>Frost resistance</b> Frost resistance	ISO 10545-12	Pass according to EN ISO 10545-1 Test superato in accordo con ISO 10545-1	Required Metodo di prova richiesto		Resiste	Resiste	Resiste	Resiste		
Physical properties	<b>Bond strength/adhesion for improved cementitious adhesives</b> Bond Strength	EN 1348	Declare a value Dichiarare un valore	-		≥1.0 N/mm <sup>2</sup> (Class C2 - EN 12004)	≥1.0 N/mm <sup>2</sup> (Class C2 - EN 12004)	≥1.0 N/mm <sup>2</sup> (Class C2 - EN 12004)	≥1.0 N/mm <sup>2</sup> (Class C2 - EN 12004)		
	<b>Reaction to fire</b> Reaction to fire	-	Class A1 or A1 <sub>fl</sub> Classe A1 oppure A1 <sub>fl</sub>	-		A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>	A1 - A1 <sub>fl</sub>		
Chemical features	<b>Resistance to household chemicals and swimming pool salts</b> Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum Class B (UB for unglazed tiles) Classe minima B (UB per piastrelle non smaltate)			UA	UA	UA	UA		
	<b>Resistance to low concentrations of acids and alkalis</b> Resistance to low concentrations of acids and alkalis		Declare a class Dichiarare una classe	Manufacturer is to state classification Secondo la classificazione indicata dal fabbricante		ULA	ULA	ULA	ULA		
	<b>Resistance to high concentrations of acids and alkalis</b> Resistance to high concentrations of acids and alkalis		Declare a class Dichiarare una classe	Test method available Metodo di prova disponibile		UHA	0	UHA	UHA		
Safety features	<b>Barefoot Ramp Test</b> Barefoot Ramp Test	DIN 51097	Declare a value Dichiarare un valore	-		A	0	A+B+C	A+B+C		
	<b>Shod Ramp Test</b> Shod Ramp Test	DIN 51130	Declare a value Dichiarare un valore	-		R9	N.C.	R11	R11		
	<b>Pendulum Friction Test</b> Pendulum Friction Test	UNE-ENV 12633 BS 7976-2002	Declare a value Dichiarare un valore	-		Class1 PTV >36Dry PTV =25±35 Wet	Class0 PTV >36Dry PTV <24 Wet	Class3 PTV >36Dry PTV >36Wet	Class3 PTV >36Dry PTV >36Wet		
Safety features		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	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato		
			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	>0.42Wet	>0.42Wet		
			ASTM C1028 - 2007	The Ceramic Tiles Institute Identifies Tile Slip Resistant when SCOF ≥ 0,60		≥0.60Dry ≥ 0.60Wet	≥0.60Dry 0.50/0.60Wet	≥0.80Dry ≥ 0.80Wet	≥0.80Dry ≥ 0.80Wet		
			AS/NZS 4586 - 2013	Declared Classification of the pedestrian surface materials according to the Wet Pendulum Test		ClassP2	ClassP0	ClassP4	ClassP5		

(\*) 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).