SUNROCK

COLOURED BODY PORCELAIN TILES - RECTIFIED MONOCALIBER
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Compliant with EN 14411 (ISO 13006) Appendix G group BIa
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atlas concorde

Sizes Sizes	**45x90 cm** 17 3/4"x35 3/8" 9.5mm	**22.5x90 cm** 8 7/8"x35 3/8" 9.5mm	**15x90 cm** 5 7/8"x35 3/8" 9.5mm	**60x60 cm** 23 5/8"x23 5/8" 9.5mm	**30x60 cm** 11 3/4"x23 5/8" 9.5mm	**60x60 cm** 60x60 cm Lastra 20mm 20mm	

TECHNICAL FEATURES / TECHNICAL FEATURES				**Requirements for nominal size N** Requirements for nominal size N			**SUNROCK**		
				7 cm ≤ N < 15 cm	N ≥ 15 cm		Matt	Textured	Textured 20 mm
				(mm)	(%)	(mm)			
Regularity features		**Length and width** Length and width	ISO 10545-2	± 0,9 (*)	± 0,6 (*)	± 2,0 (*)	±0.3% ±1.0mm	±0.3% ±1.0mm	±0.3% ±1.0mm
		Thickness Thickness		± 0,5 (**)	± 5 (**)	± 0,5 (**)	±5.0% ±0.5mm	±5.0% ±0.5mm	±5.0% ±0.5mm
		Straightness of sides Straightness of sides		± 0,75 (***)	± 0,5 (***)	± 1,5 (***)	±0.3% ±0.8mm	±0.3% ±0.8mm	±0.3% ±0.8mm
		Rectangularity (Measurement only on short edges when L/l ≥ 3) Rectangularity (Measurement only on short edges when L/l ≥ 3)		± 0,75 (****)	± 0,5 (****)	± 2,0 (****)	±0.3% ±1.5mm	±0.3% ±1.5mm	±0.3% ±1.5mm
		Surface flatness Surface flatness		c.c. ± 0,75	c.c. ± 0,5	c.c. ± 2,0	±0.4% ±1.8mm	Not applicable	Not applicable
				e.c. ± 0,75	e.c. ± 0,5	e.c. ± 2,0			
				w. ± 0,75	w. ± 0,5	w. ± 2,0			
				EN 14411 annex G (Group BIa) EN 14411 annex G (Group BIa)	**ISO 13006 annex G (Group BIa)** ISO 13006 annex G (Group BIa)				
Structural features		**Water absorption level (in% by mass)** Water absorption level (in% by mass)	ISO 10545-3	**E_B≤ 0,5% Individual max 0,6%** E_B≤ 0,5% Valore max singolo 0,6%			≤0.1%	≤0.1%	≤0.1%
Bulk mechanical features		**Breaking strength** Breaking strength	ISO 10545-4	S ≥ 1300 N			S ≥2000 N	S ≥2000 N	S ≥10000 N
		Modulus of Rupture Modulus of Rupture		R ≥ 35 N/mm2			R ≥40 N/mm^2	R ≥45 N/mm^2	R ≥45 N/mm^2
		Impact resistance, as coeffi cient of restitution Impact resistance, as coeffi cient of restitution	ISO 10545-5	**Declare a value** Declare a value	**Test method available** Test method available		≥0.55	≥0.55	≥0.55
Surface mechanical features		**Mohs hardness** Mohs hardness	EN 101(1)	-			MOHS 7	MOHS 8	MOHS 8
		Resistance to deep abrasion of unglazed tiles (removed volume) Resistance to deep abrasion of unglazed tiles (removed volume)	ISO 10545-6	≤ 175 mm3			≤150mm^3	≤150mm^3	≤150mm^3
Thermo-igrometric features		**Linear Thermal Expansion Coefficient** Linear Thermal Expansion Coefficient	ISO 10545-8	**Declare a value** Declare a value	**Test method available** Test method available		≤7 1/mk	≤7 1/mk	≤7 1/mk
		Thermal shock resistance Thermal shock resistance	ISO 10545-9	**Pass according to EN ISO 10545-1** Pass according to EN ISO 10545-1	**Test method available** Test method available		Resiste	Resiste	Resiste
		Expansion due to humidity (mm/m) Expansion due to humidity (mm/m)	ISO 10545-10	**Declare a value** Declare a value	**Test method available** Test method available		≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)
		Frost resistance Frost resistance	ISO 10545-12	**Pass according to EN ISO 10545-1** Pass according to EN ISO 10545-1	**Required** Required		Resiste	Resiste	Resiste
Physical properties		**Bond strength/adhesion for improved cementitious adhesives** Bond strength/adhesion for improved cementitious adhesives	EN 1348	**Declare a value** Declare a value	-		≥1.0 N/mm^2 (Class C2 - EN 12004)	≥1.0 N/mm^2 (Class C2 - EN 12004)	≥1.0 N/mm^2 (Class C2 - EN 12004)
		Reaction to fire Reaction to fire	-	**Class A1 or $A1_{fl}$** Class A1 or $A1_{fl}$	-		A1 - $A1_{fl}$	A1 - $A1_{fl}$	A1 - $A1_{fl}$
Chemical features		**Resistance to household chemicals and swimming pool salts** Resistance to household chemicals and swimming pool salts	ISO 10545-13	**Minimum Class B (UB for unglazed tiles)** Minimum Class B (UB for unglazed tiles)			UA	UA	UA
		Resistance to low concentrations of acids and alkalis Resistance to low concentrations of acids and alkalis		**Declare a class** Declare a class	**Manufacturer is to stateclassifi cation** Manufacturer is to stateclassifi cation		ULA	ULA	ULA
		Resistance to high concentrations of acids and alkalis Resistance to high concentrations of acids and alkalis		**Declare a class** Declare a class	**Test method available** Test method available		UHA	UHA	UHA
		Resistance to staining for glazed tiles Resistance to staining for glazed tiles	ISO 10545-14	**Declare a class** Declare a class	**Test method available** Test method available		UA	UA	UA
Safety features		**Barefoot Ramp Test** Barefoot Ramp Test	DIN 51097	**Declare a value** Declare a value	-		A	A+B+C	A+B+C
		Shod Ramp Test Shod Ramp Test	DIN 51130	**Declare a value** Declare a value	-		R9	R11	R11
		Pendulum Friction Test Pendulum Friction Test	UNE-ENV 12633 BS 7976-2002	**Declare a value** Declare a value	-		Class1 PTV >36Dry PTV =25÷35 Wet	Class3 PTV >36Dry PTV >36Wet	Class3 PTV >36Dry PTV >36Wet
Safety features		**Coefficient of friction (COF)** Coefficient of friction (COF)	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
		Dynamic Coefficent of Friction Dynamic Coefficent of Friction	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
		Static Coefficent of Friction Static Coefficent of Friction	ASTM C1028 - 2007	**The Ceramic Tiles Institute Identifies Tile Slip Resistant when SCOF ≥ 0,60**			≥0.60Dry ≥ 0.60Wet	≥0.80Dry ≥ 0.80Wet	≥0.80Dry ≥ 0.80Wet
		Pendulum Friction Test Pendulum Friction Test	AS/NZS 4586 - 2013	**Declared Classification of the pedestrian surface materials according to the Wet Pendulum Test**			ClassP2	ClassP4	ClassP4

(*) 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