NORDE

THROUGH-BODY PORCELAIN TILE
TECHNICAL FEATURES - COMPLIANT WITH STANDARDS EN 14411 (ISO 13006)
ANNEX G GROUP Bla

atlas concorde

Sizes	80x80 cm 31 ½"x31 ½" ⊠ 20mm	60x120 cm 23⅝"x47 ¼" ⊠ 9mm	60x120 cm 23⅝"x47 ¼" ⊠ 20mm	60x90 cm 23⅝"x35⅝" ⊠ 20mm	60x60 cm 23⅝"x23⅝" ⊠ 9mm	60x60 cm 23⅝"x23⅝" ⊠ 20mm	30x60 cm 11¾"x23⅝" ⊠ 9mm

		Technical features	Test method	Requisites for nominal size N			Norde			
				7 cm ≤ N < 15 cm	N ≥ 15 cm					
				(mm)	(%)	(mm)	Matte rectified	Grip rectified	Textured rectified 20mm	Textured rectified 9mm 30x60 cm
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	Suitable for	Suitable for
		Thickness		± 0,5 (**)	± 5 (**)	± 0,5 (**)	Suitable for	Suitable for	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	Suitable for	Suitable for
		Perpendicularity (Measurement only on short edges when L/l ≥ 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	Suitable for	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.	Suitable for	Suitable for	Suitable for	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.				
				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		Water absorption level (in% by mass)	ISO 10545-3	E≤ 0,5% Individual Maximum 0,6%			≤0.1%	≤0.1%	≤0.1%	≤0.1%
			ASTM C373-18	Requirement ANSI A137.1-2017 Water Absorption Max < 0,5%			≤0.5%	≤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	S ≥10000 N	S ≥1500 N
		Bending resistance		R ≥ 35 N/mm²			R ≥40 N/mm²	R ≥40 N/mm²	R ≥45 N/mm²	R ≥40 N/mm²
		Bending and breaking load resistance (4)(5)	EN 1339 Annex F	-					≥T11 80x80 60x60 | ≥U4 60x120 60x90	
		Impact resistance	ISO 10545-5	Declared value			≥0.55	≥0.55	≥0.55	≥0.55
Surface mechanical features		Mohs hardness	EN 101	-			MOHS 6	MOHS 8	MOHS 8	MOHS 8
		Deep abrasion resistance of unglazed tiles	ISO 10545-6	≤ 175 mm³			≤150mm³	≤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).
** 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

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				(mm)	(%)	(mm)	Matte rectified	Grip rectified	Textured rectified 20mm	Textured rectified 9mm 30x60 cm
Thermo-igrometric features		Coefficient of linear thermal expansion	ISO 10545-8	Declared value			≤7MK^{-1}	≤7MK^{-1}	≤7MK^{-1}	≤7MK^{-1}
		Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1			Resistant	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)	≤0.01% (0.1mm/m)
		Frost resistance	ISO 10545-12	Test passed in accordance with ISO 10545-1			Resistant	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)	≥1.0 N/mm² (Class C2 - EN 12004)
		Reaction to fire	-	Class A1 or A1$_{fl}$			A1 - A1$_{fl}$	A1 - A1$_{fl}$	A1 - A1$_{fl}$	A1 - A1$_{fl}$
Chemical features		Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum B class			A	A	A	A
		Resistance to low concentrations of acids and alkalis		Declared class			LA	LA	LA	LA
		Resistance to high concentrations of acids and alkalis		Declared class			HA	HA	HA	HA
		Stain resistance	ISO 10545-14	Declared class			5	5	5	5
Safety characteristics (1)(2)		Booted ramp test	DIN 51130	Declared class			R10	R11	R11	R12
		Barefoot Ramp test	DIN 51097	Declared value			A+B	A+B+C	A+B+C	A+B+C
		Pendulum friction Test	BS 7976	PTV ≥ 36 classifies the surface as "low slip risk"			≥36Dry ≥36Wet	≥36Dry ≥36Wet	≥36Dry ≥36Wet	≥36Dry ≥36Wet
			AS 4586	Declared Classification of the new pedestrian surface materials according to the Pendulum Test			Class P3	Class P4	Class P4	Class P4
			UNE-ENV 12633 UNE 41901:2017 EX	Declared value			Class C2	Class C3	Class C3	Class C3
		Coefficient of friction	B.C.R.A. Rep. CEC/81	Min. Dec. 236/89 of 14/06/89 μ >0.40 for a sliding leather element on a dry $_{fl}$oor μ >0.40 for a sliding hard rubber element on a wet $_{fl}$oor			>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato
		Dynamic coefficent of friction (DCOF)	ANSI A.137.1	ANSI A.137.1-2017 Requires a minimum value of 0.42 for level interior space expected to be walked upon when wet. (3)			> 0.42 Wet	> 0.42 Wet	> 0.42 Wet	> 0.42 Wet

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