

TECHNICAL DATA

Unglazed porcelain tiles – ISO 13006 and EN 14411 - Annex G - Group Bla

SIZES:	M(=N)	10x10	10x30	7.5x15	15x15	30x30	DESIGNING COMPONENTS ^{a)}
	W	96x96x8	96x296x8	71x146x8	146x146x8	296x296x8.5	

a) Including 6STP (W29x146x8), 5STP (W21x137x8), 6D (W64x64x8), 3D (W29x29x8), LZ (W96x44x52x8), TR (W93x93x8, W64x64x8, W45x45x8, W25x25x8 y W20x20x8)

PHYSICAL PROPERTIES		TEST STANDARD	REQUIREMENTS			TOPCER VALUE
DIMENSION AND SURFACE QUALITY:			N < 7 cm	7 cm ≤ N < 15 cm	N ≥ 15 cm	
Length and width		ISO 10545-2	± 0,5 mm	± 0,9 mm	± 0,6% / ± 2,0 mm	Conforms
Thickness		ISO 10545-2	± 0,5 mm	± 0,5 mm	± 5,0% / ± 0,5 mm	Conforms
Straightness of sides		ISO 10545-2	No testing	± 0,8 mm	± 0,5% / ± 1,5 mm	Conforms
Rectangularity		ISO 10545-2	No testing	± 0,8 mm	± 0,5% / ± 2,0 mm	Conforms
Surface flatness, (curvature and warpage)		ISO 10545-2	No testing	± 0,8 mm	± 0,5% / ± 2,0 mm	Conforms
Surface quality		ISO 10545-2		≥ 95%		Conforms
PRODUCT QUALITY AND DURABILITY:						
Water absorption		ISO 10545-3		≤ 0,5%		Conforms
Breaking strength		ISO 10545-4		≥ 1300 N		≥ 1800 N
Modulus of rupture		ISO 10545-4		≥ 35 N/mm ²		≥ 50 N/mm ²
Impact resistance		ISO 10545-5		Declared Value		No visible defects
Resistance to deep abrasion (unglazed tiles)		ISO 10545-6		≤ 175 mm ³		123 mm ³
Coefficient of linear thermal expansion		ISO 10545-8		Declared Value		5,6 x 10 ⁻⁶ °C ⁻¹
Thermal shock resistance		ISO 10545-9		No visible defects		Conforms
Moisture expansion		ISO 10545-10		Declared Value		< 0,1 mm/m
Frost resistance		ISO 10545-12		No visible defects		Conforms
Resistance to chemicals		ISO 10545-13		No visible defects		Conforms
Resistance to staining		ISO 10545-14		No permanent staining		Conforms
SLIP RESISTANCE: (For the designing components, the slip resistance is equal or better than size 10x10 smooth)						
Areas with footwear	Dynamic Coefficient of Friction (DCOF)		VALUES:			
		ASTM - ANSI A 137.1-2012 (INTERTEK - CA)	0.62	10x10 / 4"x4 Plain Finish (smooth)		
			0.65	10x10 / 4"x4 Riven (RT) finish		
		AS 4586:2013 Appendix B (ATTAR - AU)	0.65	10x10 / 4"x4 Plain Finish (smooth)		
	Wet Pendulum Slip Resistance		VALUES:			
		AS 4586:2013 Appendix A (ATTAR - AU)	47	10x10 / 4"x4 Plain Finish (smooth)		
	Pendulum (Slider 96)		DRY	WET	SIZES / SURFACE TEXTURE	
	CEN/TS 16165 : 2016 (Annex C)		62 - 71	42 - 53	10x10; 7,5x15; 15x15; 10x30; 30x30 Plain finish (smooth)	
			65	45	10x10 Octagon with 3x3 dot Plain finish (smooth)	
			63	39	10x10 Hexagon Plain finish (smooth)	
		81 / 85	73 / 75	10x10 Round studs (RC) finish / 15x15 Round studs (RC) finish		
		83 / 85	71 / 74	10x10 Square studs (SS) finish / 15x15 Square studs (SS) finish		
		85 / 88	70 / 79	10x10 Diamond studs (DD) finish / 15x15 Diamond studs (DD) finish		
	63 / 67	53 / 55	10x10 Riven (RT) finish / 15x15 Riven (RT) finish			
Pendulum (Slider 57)		PVT	Class	SIZES / SURFACE TEXTURE		
UNE 41901 : 2017 EX (SPAIN)		37 / 39	2	10x10 colour 16 / 10x10 colour 28 Plain finish (smooth)		
		29 - 32	1	10x10 other colours; 10x10 Octagon; 10x10 Hexagon Plain finish (smooth)		
		26 - 35	1	7,5x15; 15x15; 10x30; 30x30 Plain finish (smooth)		
		57 / 53	3	10x10 Round studs (RC) finish / 15x15 Round studs (RC) finish		
		64 / 58	3	10x10 Square studs (SS) finish / 15x15 Square studs (SS) finish		
		51 / 56	3	10x10 Diamond studs (DD) finish / 15x15 Diamond studs (DD) finish		
	47 / 54	3	10x10 Riven (RT) finish / 15x15 Riven (RT) finish			
Ramp Test		VALUES:				
DIN 51130 (HS-KOBLENZ - DE)		6° ≤ R9 ≤ 10°	30x30 Plain finish (smooth)			
		10° < R10 ≤ 19°	10x10 (also Hexagon and Octagon) / 10x30 / 15x15 Plain finish (smooth)			
		19° < R11 ≤ 27°	10x10 / 15x15 Square studs (SS) and in Round studs (RC) 30x30 Rubber (R), 30x30 Riven (RT)			
		27° R12 ≤ 35°	10x10 / 15x15 Riven (RT) and in Diamond studs (DD)			
Displacement volume / Expulsion space		V5	15x15 Square studs (SS) and Riven (RT)			
		V6	10x10 Square studs (SS) and Riven (RT), 15x15 Round studs (RC)			
		V7	15x15 Diamond studs (DD)			
		V8	10x10 Round studs (RC)			
Areas with bare-footed	DIN 51097 (HS-KOBLENZ - DE)	12° ≤ A < 18°	30x30 Plain finish (smooth)			
		18° ≤ B < 24°	10x10 (also Hexagon and Octagon) / 10x30 / 15x15 Plain finish (smooth) 30x30 Rubber (R), 30x30 Riven (RT)			
	(CERAM - UK)	18° ≤ B < 24°	10x10 / 15x15 Plain finish (smooth)			
	(CERAM - UK)	C ≥ 24°	15x15 Round studs (RC)+Diamond studs (DD)+Riven (RT)+Square studs (SS)			
	(HS-KOBLENZ - DE)	C ≥ 24°	10x10 / 15x15 Round studs (RC)+Diamond studs (DD)+Riven (RT)+Square studs (SS)			