



Sizes

11¾"x23¾"
 ±9mm

		PROPERTY	ASTM TEST METHOD	Porcelain Tile Specification				Liberty
				Calibrated		Rectified		
				Minimum	Maximum	Minimum	Maximum	
REGULARITY CHARACTERISTICS		Nominal Size	ASTM C499	-3.00%	3.00%	-3.00%	2.00%	Compliant
		Caliber Range (Variation from average facial dimension of sample)		-0.50% or -0.08 in (-2.0 mm) (*)	0.50% or 0.08 in (2.0 mm) (*)	-0.25% or -0.03 in (-0.8 mm) (*)	0.25% or 0.03 in (0.8 mm) (*)	Compliant
		Thickness ⁽¹⁾		N/A	Range: 0.40 in (1.02 mm)	N/A	Range: 0.40 in (1.02 mm)	Compliant
		Wedging	ASTM C502	-0.50% or -0.08 in (-2.0 mm) (*)	0.50% or 0.08 in (2.0 mm) (*)	-0.25% or -0.03 in (-0.8 mm) (*)	0.25% or 0.03 in (0.8 mm) (*)	Compliant
		Warpage Edge	ASTM C485	-0.75% or -0.09 in (-2.3 mm) (*)	0.75% or 0.09 in (2.3 mm) (*)	-0.40% or -0.05 in (-1.3 mm) ⁽²⁾ or -1.8 mm ^{(3)(*)}	0.40% or 0.05 in (1.3 mm) ⁽²⁾ or 1.8 mm ^{(3)(*)}	Compliant
		Warpage Diagonal		-0.50% or -0.08 in (-2.0 mm) (*)	0.50% or 0.08 in (2.0 mm) (*)	-0.40% or -0.07 in (-1.8 mm) (*)	0.40% or 0.07 in (1.8 mm) (*)	Compliant
				All Porcelain Tiles				
STRUCTURAL CHARACTERISTICS		Water Absorption	ASTM C373	≤ 0.5%				≤0.5%
BULK MECHANICAL CHARACTERISTICS		Breaking strenght	ASTM C648	Average ≥ 250 lbf. (1.11 kN) Individual ≥ 225 lbf. (1.00 kN)				≥350lbf. avg
PHISICAL PROPERTIES		Bond Strength	ASTM C482	≥ 50 psi (0.34 Mpa)				≥100 psi
THERMAL AND IGROMETRIC CHARACTERISTICS		Resistance to Freeze/Thaw Cycling	ASTM C1026	As Reported				Resistant
CHEMICAL CHARACTERISTICS		Chemical Resistance	ASTM C650	As Reported				Unaffected
		Stain Resistance	ASTM C1378	As Reported				Unaffected
SAFETY CHARACTERISTICS		Dynamic coefficient of friction	DCOF	Requires a minimum value of 0.42 for commercial areas that are likely to be wet				> 0.42 Wet

(*) Whichever is less

(1) May not apply to textured surfaces or tiles with uneven back patterns.

(2) Whichever is less, for tiles up to 24"x24" (610 mm x 610 mm).

(3) Applies to tiles larger than 24"x24" (610 mm x 610 mm).

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