

Technical Characteristics Series EMPEROR

ANSI/ASTM Standards

Products: **CAESAR, ALEXANDER, NAPOLEON**

Sizes/Thicknesses (mm): **NOT RECTIFIED 12"x12"/8; 18"x18"/9**

Product group: **Porcelain Tiles - class P1** (Water absorption $\leq 0,5$ %)

Surface: **GLAZED (GL)**

Technical characteristics	Test method	ANSI 137.1: Values required for Glazed Porcelain Tiles Class P1	EMPEROR Values
Water absorption	ASTM C373	≤ 0.5 %	≤ 0.05 %
Breaking strength	ASTM C648	≥ 250 pounds	Compliant
Resistance to surface abrasion	ASTM C1027 (PEI method)	Not required	5
Linear thermal expansion	ASTM C372	Not required	$\alpha \leq 8 \cdot 10^{-6} \text{ } ^\circ\text{C}^{-1}$ $\alpha \leq 4.4 \cdot 10^{-6} \text{ } ^\circ\text{F}^{-1}$
Thermal shock resistance	ASTM C484	No sample must show visible signs	Resistant
Chemical resistance	ASTM C650	Not required	Resistant
Stain resistance	CTI-T-81 D	Not required	Resistant
Frost resistance	ASTM C1026	Not required	Resistant
Bond strength	ASTM C482	≥ 50 PSI	Compliant
Dimensions	Warpage Edge	ASTM C485 ± 0.75 % or max ± 0.09 inch	Compliant
	Warpage Diagonal	ASTM C485 ± 0.50 % or max ± 0.08 inch	Compliant
	Nominal sizes	ASTM C499 ± 3.0 % of nominal dimensions	± 1.50 %
	Caliber range	ASTM C499 ± 0.50 % or max ± 0.08 inch	Compliant
	Thickness	ASTM C499 ≤ 0.040 inch	≤ 0.030 inch
	Wedging	ASTM C502 ± 0.50 % or max ± 0.08 inch	Compliant
Slip resistance	ASTM C1028	COF < 0.50 questionable $0.50 \leq \text{COF} < 0.60$ conditionally slip resistant COF ≥ 0.60 slip resistant	dry-neolite: COF ≥ 0.60 wet-neolite: COF ≥ 0.60