

Liberty Technical Specifications

ASTM C 484: Resistance to Thermal Shock

Result: Resistant

ASTM C 373: Apparent Porosity, Water Absorption, Apparent Specific Gravity and Bulk Density

Apparent porosity: 0.20%

Water Absorption: 0.08%

Apparent Specific Gravity g/cm³: 2.37

Bulk Density g/cm³: 2,36

ASTM C 499: Standard Method for Facial Dimensions and Thickness of Flat, Rectangular Ceramic Wall and Floor Tile

Length & Width, nominal size: 2x2cm

Average size on 20 samples submitted: 19.98 mm

Thickness, nominal 4 mm

Average on 20 samples submitted: 3.91 mm

ASTM C 502: Standard Method for Wedging of Flat, Rectangular Ceramic Wall & Floor Tile

Average on 20 samples submitted: 0.0%

ASTM C 1028: Friction Coefficient

Three samples were considered. Both dry and wet conditions were used. Calibration was performed based on a 4-pulls test on standard tile, as prescribed in the norm. Samples were subjected to the pull test in the renovated conditions (cleaned samples). Four pulls perpendicular to the previous were performed on each sample. An actual normal load of 233 N was used for all the pulls.

Friction coefficient in dry conditions: 0.76

Friction coefficient in wet conditions: 0.61

ASTM C 482: Bond Strength

Result: Passes

ASTM C 424: Crazeing

Result: Passes

ASTM C 1026: Frost Resistance

Result: Resistant

ASTM C 543: Chemical Attacks

Result: Resistant

DIN 51094: Color Resistance to Fading

Result: Resistant

ASTM D 696: Coefficient of Linear Thermal Expansion

Result: Negligible (dilation is absorbed by grout)

Resistance to Fire: Non-combustible class O (emits no toxic gas at melting)