Smink Studio

Smink Studio screen-printed wall tiles, 300 × 100 mm

Handmade in Portugal: extruded clay, pressed by hand into shape, then glazed, screen-printed and fired. Every tile is made to order.

Product

Product	Glazed ceramic wall tiles, screen-printed	**Classification**	Group AIII: extruded, water absorption above 10% (ISO 13006)
Size	300 × 100 mm (11¾ × 4 in)	**Thickness**	12 mm (½ in)
Glaze and print	Glossy glaze. Print colours are liquid pigments that fuse into the glaze in the second firing and take on its finish	**Recycled content**	Around 25% recycled material

Body properties

The same clay body is used for every Smink Studio tile, whatever the size or glaze

Property	Standard	Result	Requirement (ISO 13006, Group AIII)	Report
Water absorption	ISO 10545-3	16.2% average (vacuum method)	Above 10% (defines Group AIII)	CTCV 4179/25
	ASTM C373-88	15.9% average	—	CTCV 1.5.1079/14
Breaking strength and modulus of rupture	ISO 10545-4	Breaking strength 1,985 N Modulus of rupture 19.7 N/mm² Tile 12.3 mm thick: closest to this tile's thickness	≥ 600 N ≥ 8 N/mm² average; ≥ 7 N/mm² individual	CTCV 571/22
		Breaking strength 1,048 N Modulus of rupture 19.6 N/mm² Tile 9.0 mm thick at the point of test	As above	CTCV 4179/25
Frost resistance	ISO 10545-12	No damage to any of 10 tiles after 100 freeze–thaw cycles	Required	CTCV 4179/25
		Also no damage after 100 cycles to −20 °C, colder than the standard requires	—	CTCV 1144/18
Thermal shock resistance	ISO 10545-9	No visible defects	No limit set	CTCV 4179/25
Moisture expansion	ISO 10545-10	0.1 mm/m average; 0.2 mm/m maximum	No limit set	CTCV 4179/25

Dimensions and surface quality

ISO 10545-2 · measured on 140 × 140 × 10 mm tiles; see note below · CTCV 4179/25

Characteristic	Measured	Requirement (AIII)
Length and width	1.2–2.1% under nominal	±2.0% / ±4.0 mm
Thickness	9.7–10.2 mm (10 mm nominal)	±10%
Straightness of sides	−0.8% to +0.9%	±1.0%
Rectangularity	−1.4% to +1.3%	±1.0%

Characteristic	Measured	Requirement (AIII)
Centre curvature	0.0% to 1.4%	±1.5%
Edge curvature	−1.4% to +1.0%	±1.5%
Warpage	0.1% to 1.5%	±1.5%
Surface quality	All 30 tiles defect-free	≥95% of tiles

The 300 × 100 × 12 mm format has not been tested separately. It is made from the same clay body by the same process, so expect similar proportional variation: length and width about 1–2% under nominal, or roughly 4–6 mm on the 300 mm side and 1–2 mm on the 100 mm side. On some tested tiles, length and width (−2.1% on 2 of 10 tiles) and rectangularity fell slightly outside the ISO 13006 limits, as is usual for handmade tiles. Allow for this when setting joint widths.

Smink Studio screen-printed wall tiles, 300 × 100 mm

Glaze properties

Typical values for glossy glazes; see note 1

Property	Standard	Glossy glazes
Crazing resistance	ISO 10545-11	No crazing on any of 5 tiles See note 2
Surface abrasion	ISO 10545-7	PEI class V
Chemical resistance	ISO 10545-13	Class A for household chemicals and swimming-pool salts; class LA for low-concentration acids and alkalis
	ASTM C650-04	Not affected by any of 13 test solutions, including 18% hydrochloric acid Tested on S001 Red chili pepper (special firing)
Stain resistance	ISO 10545-14	Class 5 for green chromium, iodine and olive oil
	ASTM C1378-04	Not affected Manufacturer's data
Lead and cadmium release	ISO 10545-15	Lead: below 0.02 mg/dm² Cadmium: below 0.002 mg/dm² Both below the limit of quantification
Slip resistance	—	Does not apply: wall tile Glossy glazes have not been tested for slip resistance

Where to use this tile

Interior walls and splashbacks
All glazes.

Showers, steam rooms and pools
All glazes in the Smink Studio glaze guide.

Exterior walls and façades
The clay body is frost-resistant. All glazes in the Smink Studio glaze guide are suitable.

Floors
This format is made as a wall tile. For floors, ask Smink Studio about 14 mm tiles.

Notes

1. **Glaze and print colours.** Smink Studio tiles are made to order from a wide range of glazes. Glaze results were measured on representative glossy glazes and are typical of the family; individual colours may vary. Print colours are liquid pigments, screen-printed onto the glaze and fused into it in the second firing.
2. **Long-term crazing.** A few glossy glazes may develop fine crazing over time. They are flagged in the Smink Studio glaze guide.
3. **Format.** Body and glaze results apply to this tile because the clay body and glazes are the same. Dimensional results were measured on 140 × 140 × 10 mm tiles; the 300 × 100 × 12 mm format has not been tested separately.
4. **Handmade character.** Variation in size, shape, shade and texture is intentional and characteristic of handmade tiles. View the range before ordering and blend tiles from several boxes during installation.
5. **Testing.** Tests carried out by CTCV (Centro Tecnológico da Cerâmica e do Vidro, Coimbra, Portugal), an ISO/IEC 17025-accredited laboratory, on tiles from Smink Studio's production partner, 2014–2025. Test reports for body properties are available on request.