

Smink Studio relief wall tiles

Handmade in Portugal: extruded clay, pressed by hand with a raised pattern, then finished in a single glaze and fired. The pattern is formed in the clay, not printed. Every tile is made to order.

Product

Product	Glazed ceramic wall tiles with a raised pattern, in a single glaze	Classification	Group AIII: extruded, water absorption above 10% (ISO 13006)
Standard size	140 × 140 mm (5½ × 5½ in); other sizes made to order	Thickness	12 mm (½ in); other thicknesses made to order
Designs	14 relief patterns (P01–P14) and a plain pressed tile (P00)	Glazes	29 glossy, satin matt and special-firing glazes; see the Smink Studio relief glaze guide
Minimum order	3 m² (32 sq ft)	Recycled content	Around 25% recycled material

Glaze properties Typical values for each glaze family; see note 1

Property	Standard	Glossy glazes	Satin matt glazes
 Crazing resistance	ISO 10545-11	No crazing on any of 5 tiles See note 2	Not tested
 Chemical resistance	ISO 10545-13	Both families: 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	Both families: 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	Lead: up to 0.037 mg/dm² (measurable in 3 of 4 samples) Cadmium: below 0.002 mg/dm² See note 3

Dimensions and surface quality ISO 10545-2 · measured on flat 140 × 140 × 10 mm tiles · CTCV 4179/25

Characteristic	Measured	Requirement (AIII)
Length and width	Average 137.6 mm; 1.2–2.1% under 140 mm	±2.0% / ±4.0 mm
Thickness	9.7–10.2 mm (10 mm tiles)	±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

On some tiles, length and width (–2.1% on 2 of 10 tiles) and rectangularity fall slightly outside the ISO 13006 limits, as is usual for handmade tiles. Allow for this when setting joint widths. Relief tiles were not measured separately.

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Body properties The same clay body is used for every Smink Studio tile, whatever the glaze

Property	Standard	Result	Requirement (ISO 13006, Group AIII)	Report
 Breaking strength and modulus of rupture	ISO 10545-4	Breaking strength 1,985 N Modulus of rupture 19.7 N/mm ² Flat tile 12.3 mm thick: the nearest tested thickness to the 12 mm relief tile; see note 4	—	CTCV 571/22
		Breaking strength 1,048 N Modulus of rupture 19.6 N/mm ² Flat tile 9.0 mm thick at the point of test	≥ 600 N ≥ 8 N/mm ² average; ≥ 7 N/mm ² individual	CTCV 4179/25
 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
 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

Where to use Smink Studio relief tiles

 Interior walls and splashbacks All glazes in the Smink Studio relief glaze guide.	 Showers, steam rooms and pools All glazes in the Smink Studio relief glaze guide.
 Exterior walls and façades The clay body is frost-resistant. All glazes in the Smink Studio relief glaze guide are suitable.	 Floors Relief tiles are made for walls. For floors, see the Smink Studio floor-tile data sheet.

Notes

- Glaze families.** Smink Studio tiles are made to order from a wide range of glazes. Glaze results were measured on representative glazes from the glossy and satin matt families and are typical of each family; individual colours may vary. Special-firing glazes were tested for chemical resistance only.
- Long-term crazing.** A few glossy glazes may develop fine crazing over time. They are flagged in the Smink Studio relief glaze guide.
- Lead.** Satin matt glazes may contain lead; the measured release is shown above. Ask Smink Studio before using tiles on food-preparation surfaces.
- Strength of relief tiles.** Breaking strength was measured on flat tiles of the same clay body. Relief tiles themselves have not been strength-tested; their thickness varies across the raised pattern.
- Special-firing glazes.** S001 Red chili pepper and S010 Orange caviar contain substances that burst in the heat of the kiln, for effect. They do not need sealing.
- 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.
- 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.