Technical Data Sheet and Installation Guide

Crown porcelain floor and wall tiles

Nov 20, 2026 · @Frank

1. Product specification

Crown porcelain floor and wall tiles are glazed full-body porcelain tiles in ISO 13006 Group BIa, the lowest water-absorption class.

Item	Specification
Material	Full-body porcelain, dry-pressed and fired
Surface	Glazed
Classification	ISO 13006 Group BIa (water absorption 0.5% or less)
Sizes	600×600 mm and 600×1200 mm. Other sizes are listed at www.crowntiles.co.nz/products
Thickness	10 mm nominal (9.7 mm as tested)
Slip rating	R12 (DIN 51130)
Surface abrasion	Class 3 (ISO 10545-7)
Warranty	30 years on the tiles
Manufacturer	Shandong Crown Ceramics Technology Co., Ltd, Zibo, Shandong, China
Supplier	Crown Tiles Limited, Auckland, New Zealand

2. Technical data

The tiles meet every requirement of ISO 13006 Annex G for Group BIa that was tested.

Property	Test method	Requirement	Result
Length and width deviation	ISO 10545-2	±2.0 mm	−0.1 mm

Property	Test method	Requirement	Result
Surface flatness	ISO 10545-2	±2.0 mm	Within 0.9 mm
Surface quality	ISO 10545-2	95% free of visible defects	100%
Water absorption	ISO 10545-3	0.5% or less	0.24%
Breaking strength	ISO 10545-4	1,300 N or more	2,285 N
Modulus of rupture	ISO 10545-4	35 N/mm² or more	40.9 N/mm²
Surface abrasion	ISO 10545-7	Report class	Class 3, 1,500 cycles
Moisture expansion	ISO 10545-10	Report result	0.01 mm/m
Crazing resistance	ISO 10545-11	Pass	Passed
Frost resistance	ISO 10545-12	Pass	Passed
Household chemicals and pool salts	ISO 10545-13	Class GB or better	Class A
Stain resistance	ISO 10545-14	Class 3 or better	Class 5
Slip resistance, ramp test	DIN 51130	Report result	R12 (27.9°)
Static coefficient of friction	ASTM C1028	Report result	0.98 dry, 0.74 wet
Scratch hardness	EN 15771	Report result	Mohs 7
Radioactivity	GB 6566-2010	Class A	Class A

Test report no. 25201802420, issued 20 June 2018 by the Inspection and Quarantine Comprehensive Technology Centre of Foshan Entry-Exit Inspection and Quarantine Bureau, on a 600×600×9.7 mm tile. All sizes in the range, including 600×1200 mm, are made on the same production line to the same specification.

3. Where to use

The tiles suit interior floors and walls throughout a home, including wet areas when laid over a waterproofing membrane.

Location	Suitable	Notes
Living areas, hallways and bedrooms	Yes	Floors and walls
Kitchen floors and splashbacks	Yes	
Bathroom and laundry floors and walls	Yes	Over a waterproofing membrane
Shower walls	Yes	Over a waterproofing membrane
Shower floors	Yes, in 600×600 mm or smaller cuts	Cut to the floor falls. 600×1200 mm tiles do not suit a centre waste
Exterior areas	Not covered	Outside the scope of this data sheet
Heavy commercial and industrial floors	No	Surface abrasion Class 3 is a residential rating

4. Storage and handling

Keep the tiles in their cartons, dry and flat, until they are laid.

- Store cartons on a level, dry surface, under cover.
- Check the product code, shade and batch on every carton before laying. Use one batch in each area.
- Carry 600×1200 mm tiles on edge, with two people. Do not carry them flat.
- Report damaged or incorrect tiles before laying. Laid tiles are taken as accepted.

5. Substrate and preparation

The finished floor or wall is only as good as the surface under it, so prepare the substrate before any tile is laid.

- The substrate must be sound, clean, dry and fully cured, as the adhesive maker requires.
- It must be flat to the tolerance in AS 3958. Correct hollows and ridges with a levelling compound first. 600×1200 mm tiles need a flatter surface than 600×600 mm tiles.
- Timber floors must be stiff enough for tiling and covered with a suitable tile underlay.

- In wet areas, form the floor falls to the waste, then apply the waterproofing membrane and let it cure before tiling.
- Prime porous or dusty surfaces as the adhesive maker requires.

6. Installation

The tiles must be laid by a competent tiler, in line with AS 3958 and the adhesive and membrane makers' instructions.

1. **Set out.** Plan the layout from the main sight line so cuts at the edges are even and no thin slivers are left. Mix tiles from several cartons as you lay.
2. **Apply adhesive.** Use a cement-based adhesive classified C2 or better under ISO 13007-1, suited to porcelain tiles with water absorption below 0.5%. Use a notched trowel sized for the tile.
3. **Lay the tiles.** Press each tile into the wet adhesive so the back is fully covered. Back-butter 600×1200 mm tiles and use a levelling system to control lippage.
4. **Stagger with care.** In a brick-bond layout, offset 600×1200 mm tiles by no more than one third of the tile length.
5. **Leave joints.** Keep grout joints to the widths in AS 3958 and do not butt-joint tiles. Place movement joints at perimeters, at changes of substrate and across large areas.
6. **Cut.** Use a wet saw or a cutter rated for porcelain. Smooth cut edges before fixing.
7. **Grout and seal.** Grout once the adhesive has cured. Use a flexible sealant at internal corners and around fixtures.
8. **Clean and protect.** Remove grout haze before it hardens. Keep traffic off the floor until the adhesive has set, and cover it until other trades have finished.

7. Care and contact

Cleaning and upkeep are covered in the Crown Tile Care and Maintenance Guide, published with this data sheet at www.crowntiles.co.nz.

Item	Details
Technical support	Crown Tiles Limited
Address	Unit C3, 27–29 William Pickering Drive, Rosedale, Auckland 0632
Phone	027 968 1530
Email	frank@crowntiles.co.nz

Item	Details
Version and date	1.0, 20 November 2026