

TILING SPECIFICATIONS

SPECIFICATION NUMBER: NR017-17
PREPARED BY: Mike Cubley
PREPARED FOR: Porcelain Plus
ATTENTION: Kirk Pollock
INSTALLATION: Banchory Tiling Specification

M40 STONE/ CONCRETE/ QUARRY/ CERAMIC TILING/ MOSAIC

To be read with Preliminaries/ General Conditions.

TYPES OF TILING/ MOSAIC

110 TILING TO HEATED ANHYDRITE SCREED

Tiles: Porcelain.

Manufacturer/ Supplier: Porcelain Plus.

Product reference: Edge

Colour: Grey

Finish: TBA.

Size: 750mm x 750mm.

Thickness: TBA.

Background/ Base (To be confirmed by contractor): Anhydrite screed incorporating a piped underfloor heating system.

- Prime using progressively stronger coats of Norcross Prime Bond. Initially apply a 1: 4 parts water dilution and when dry follow with a 1: 3 dilution applied at 90° to the first coat. If after these 2 coats the surface is still absorbent, apply a further coat at a 1: 2 dilution and allow to dry.

Lay Norcross Permalayer Anti Fracture Membrane in to a solid 2mm bed of Norcross Rapid Porcelain Grey Tile Adhesive.

Bedding: As clause 710 – Ensuring solid bed fixing is achieved.

Adhesive: Norcross Thickbed Porcelain and Stone Tile Adhesive.

Joint width: Minimum 3mm

Grout: Norcross 4 into 1 Flexible Wall and Floor Tile Grout.

Type/ classification: BS EN 13888 CG2.

Movement joints: In heated calcium sulphate floor screeds, movement joints should be detailed:

- Over structural joints in the underlying construction. These movement joints through the screed and tile bed should coincide with and be designed to accommodate the same movement of the underlying structural joints.
- At perimeters of floors where the screed abuts walls and upstands and at door thresholds.
- As a movement joint through both the screed and tile bed dividing the tiling into areas not greater than 40m², or in accordance with the screed suppliers or screed manufacturers instructions. The areas bounded by movement joints should be square to rectangular with the width to length ratio not exceeding 5 to 8.
- As movement joints at significant changes of width of the screed surface and in doorways (ground plan length over 5m) with several rooms arranged one after another within a floor plan.

“Helping architects achieve level 2 BIM”



- As a boundary joint isolating areas of screed with separately controlled heating circuits.
- At doorway thresholds between separate areas of use.
- At junctions between heated and unheated sections of the screed.

The width and spacing of movement joints should be sufficient to accommodate anticipated thermal movement of the screed between the maximum operating temperature and expected lowest temperature of the screed. The coefficient of thermal expansion of the pumped calcium sulphate screed should be taken to be $0.012\text{mm/m}^2/^{\circ}\text{C}$.

If the detail provided by the screed manufacturer states that there might be changes in length during installation (expansion), these must also be taken into account when calculating the necessary width of movement joints.

Note that, though pumped calcium sulphate based screeds can be laid in large areas without joints, where joints are required in heated screed they will have to be formed during the application of the calcium sulphate screed. This will require the use of formwork or the use of proprietary pre-formed movement joint profiles designed for this purpose.

Accessories: Fill perimeter movement joints with Norcros 4 into 1 Silicone Sealant, colour to match grout as clause 815.

“Helping architects achieve level 2 BIM”



111 TILING TO WALLS

Tiles: Porcelain.

Manufacturer/ Supplier: Porcelain Plus.

Product reference: Edge

Colour: Grey

Finish: TBA.

Size: 750mm x 750mm and 750mm X 250mm

Thickness: TBA.

Background/ Base (To be confirmed by contractor): 9mm, Knauf Aquapanel installed on to timber studwork as manufacturers recommendations.

- Prime using a neat coat of Norcross Prime Bond and allow to dry.

Bedding: As clause 651 – Ensuring solid bed fixing is achieved.

Adhesive: Norcross One Part Flexible Tile Adhesive.

Joint width: 2mm

Grout: Norcross 4 into 1 Flexible Wall and Floor Tile Grout.

Type/ classification: BS EN 13888 CG2.

Movement joints: Movement joints should coincide and be continuous with any existing structural movement joints. The recommendations contained within Section 3.5.2 'Location of Movement Joints' of British Standard BS 5385: Part 1; 2009, state that movement joints should be provided over existing and/or structural movement joints, where tiling abuts other materials, at junctions between different substrates, at vertical corner, at 3m to 4.5m centres both horizontally and vertically and in areas where stresses are likely to be concentrated such as at changes of alignment. An increase in the frequency of movement joints should be considered if large degrees of thermal movement or vibration are expected within an installation.

Accessories: Fill perimeter movement joints with Norcross 4 into 1 Silicone Sealant, colour to match grout as clause 815.

GENERALLY

- 200 NORCROS ADHESIVES PRODUCTS will be applied in accordance with the site work instructions on the manufacturer's product data sheets. All Norcross products are covered with a Lifetime guarantee when used in accordance with the manufacturer's instructions.

"Helping architects achieve level 2 BIM"



210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- Suitable and sufficiently strong to receive and support a tiled finish.
- Suitable for the conditions to which it will be exposed.
- Fully dry and free from contamination, laitance etc.
- New background drying times (minimum):
- Concrete walls: 6 weeks.
- Brick/ block walls: 6 weeks.
- Rendering: 2 weeks.
- Gypsum plaster: 4 weeks.
- New base drying times (minimum):
- Concrete slabs: 6 weeks *.
- Cement: sand screeds: 3 weeks *.
- * Drying time will be reduced to 48 hours if Norcross Permalayer Anti-Fracture membrane is used.

215 FALLS IN BASES

- General: Give notice if falls are inadequate.

240 UNDERFLOOR HEATING

- Cement: sand screeds must be a minimum of 3 weeks old before the heating is brought to its intended operating temperature and maintained at that temperature for a minimum of 3 days. It should then be allowed to cool to room temperature prior to the commencement of tiling.
- The heating may be switched on 14 days after completion of tiling, raising the temperature gradually at a rate of 5°C per day.

250 SAMPLES

- General: Submit representative samples of the following: _____ .

260 CONTROL SAMPLES

- General: Complete sample areas, being part of finished work, in locations as follows: _____ .
- Approval of appearance: Obtain before proceeding

PREPARATION

310 EXISTING BACKGROUNDS/ BASES GENERALLY

- Efflorescence, laitance, dirt and other loose material: Remove.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.
- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.

“Helping architects achieve level 2 BIM”



322 ANHYDRITE SCREEDS

The screed must be:

- Allowed to dry out and prepared as per the screed manufacturers recommendations (generally anhydrite screeds should be allowed to dry at a minimum rate of 1 day per mm of screed thickness for screeds of up to 40mm thickness and 2 days per mm for any additional thickness over 40mm to achieve a moisture content of no greater than 1% w/w or 75% Relative Humidity (RH), however the screed manufacturer should be consulted for their recommendations).
- Free from all surface contamination, dust and laitance (the surface should be lightly sanded and vacuumed).
- Primed using progressively stronger coats of Norcross Prime Bond. Initially apply a 1: 4 parts water dilution and when dry follow with a 1: 3 dilution applied at 90° to the first coat. If after these 2 coats the surface is still absorbent, apply a further coat at a 1: 2 dilution and allow to dry.
* Alternatively, allow the screed to dry to a moisture content of less than 2% by volume prior to preparing and priming as above. Fix Permalayer Anti-Fracture Membrane to the screed using Norcross Rapid Porcelain Adhesive and allow to dry.

392 TILE BACKER BOARDS

- To be fixed in accordance with the manufacturers recommendations.
- Must be clean, dry, rigid and well-braced.
- Consult the board manufacturer regarding the suitability of the boards for the intended conditions to which it will be subjected.

FIXING

510 FIXING GENERALLY

- Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
- Variegated tiles: Mix thoroughly.
- Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
- Use of admixtures with cementitious adhesives: Only admixtures approved by adhesive manufacturer.
- Cut tiles: Neat and accurate.
- Fixing: Provide adhesion over entire background/ base and tile backs.
- Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
- Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.

“Helping architects achieve level 2 BIM”



530 SETTING OUT

- Joints: True to line, continuous and without steps.
- Joints on walls: Horizontal, vertical and aligned round corners.
- Joints in floors: Parallel to the main axis of the space or specified features.
- Cut tiles: Minimize number, maximize size and locate unobtrusively.
- Joints in adjoining floors and walls: Align.
- Joints in adjoining floors and skirtings: Align.
- Movement joints: If locations are not indicated, submit proposals.
- Setting out of _____: Drawing references: _____ .
- Setting out of _____: Submit proposals.

540 LEVEL OF FLOOR TILING

- Permissible deviation in level from datum for _____ .

550 FLATNESS/ REGULARITY OF TILING

- Sudden irregularities: Not permitted.
- Deviation of surface: Measure from underside of a 2 m straightedge with 3mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 6 mm, i.e. a tolerance of ± 3 mm.

560 LEVEL OF TILING ACROSS JOINTS

- Deviation (maximum) between tile surfaces either side of any type of joint:
- 1 mm for joints less than 6 mm wide.
- 2 mm for joints 6 mm or greater in width.

651 THIN BED ADHESIVE - SOLID (WALLS)

- Application: By floated coat of adhesive to dry background in areas of about 1 m². Comb surface.
- Tiling: Apply thin even coat of adhesive to backs of dry tiles. Fill any ribbed, deep keyed or button profiles. Press tiles firmly onto float coat.
- Finished adhesive thickness: 3 mm or within the range allowed by the adhesive manufacturer.

710 THICK BED ADHESIVE - SOLID (FLOORS)

- Application: By floated coat of adhesive to dry base and comb surface.
- Tiling: Apply coat of adhesive to backs of dry tiles. Fill any ribbed, deep keyed or button profiles. Press tiles firmly onto position.
- Finished adhesive thickness: Within range recommended by manufacturer.

MOVEMENT JOINTS/ GROUTING/ COMPLETION

815 SEALANT MOVEMENT JOINTS

- Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
- Width: Minimum 6mm.
- Sealant: Norcross 4 into 1 Silicone Sealant
- Colour: To match grout colour.
- Preparation and application: As section Z22.

“Helping architects achieve level 2 BIM”



875 GROUTING

- Sequence: Grout when bed/ adhesive has set sufficiently to prevent disturbance of tiles.
- Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
- Grouting: Fill joints completely, tool to profile, clean off surface. Leave free from blemishes.
- Profile: _____ .
- Polishing: When grout is hard, polish tiling with a dry cloth.

885 COLOURED GROUT

- Staining of tiles: Not permitted.
- Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply Norcross Impregnating Sealer to tiles and repeat trial.

“Helping architects achieve level 2 BIM”

