

MANDARIN STONE

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HOW TO FIX PORCELAIN EXTERNALLY TO A CONCRETE SUBSTRATE

PREPARATION

The concrete must be fully cured and then at least 6 weeks allowed to elapse or 3 weeks for a cement and sand screed, following curing, to enable movement caused by drying shrinkage to have taken place.

The concrete must be clean, dry and free from dust, laitance or any contaminants which may act as a release agent and prevent the adhesive from bonding to the concrete. If the surface of the concrete is dusty then it should be dry-brushed with a wire brush to remove the loose dust.

The surface of the screed should be flood primed with ARDEX P 51 Primer at 1:3 with clean cold water and brushed, then allowed to dry to thin, blue film.

If required, the concrete may be levelled with Floor Levelling Compound such as ARDEX K 301 Exterior Self Levelling Compound.

FIXING

Fix porcelain tiles (*20mm thick porcelain often recommended for external use - always check suitability as stated by the tile manufacturer*) in a cement-based adhesive such as **ARDEX X 7 R S1 Rapid-Set Flexible Tile Adhesive**. Refer to the packaging or product data sheets for information regarding mixing ratios. Mix the adhesive as per the instructions by adding the powder to clean water and stir until a smooth, lump free consistency is obtained. Mix only enough that can be used within the pot life of the product (around 30 minutes at 20°C). **N.B.** This will be extended in cold weather and reduced in warm conditions. **ARDEX X 11 W** may be the preferred choice if a longer pot life is preferred.

Using a suitable, solid-bed notched floor trowel held at a 45° angle, spread the adhesive onto the floor to form parallel ribs into which the tiles should be pushed with a firm twisting action, this will collapse the ribs of adhesive and produce a 3-4mm solid bed of adhesive beneath the tiles. Work in small areas and discard any adhesive that begins to dry or 'skin over'. Tiles with deeply keyed back profiles may require the back of the tile to be buttered with adhesive. Every so often, lift a tile to ensure that it is in full contact with the adhesive and that no voids are left in the adhesive bed. Any adhesive residue on the surface of the tiles should be wiped off with a damp sponge before the adhesive sets. If this is not done it can prove tricky to remove dried on residue. Remove deposits of adhesive which may build up in the gaps between the tiles. **DO NOT WALK ON THE TILES UNTIL THE ADHESIVE HAS SET**, this is generally 3 hours approx. for rapid setting adhesives.

CUTTING

Cutting should be carried out using water cooled, diamond bladed bench power saw. It must however be noted that the final aesthetic finish achieved will depend greatly upon the choice of cutting mechanism and level of skill used by the operator. Equipment and blades specifically for the cutting of 20mm porcelain should be used.

The cutting blade should be water suppressed whenever cutting the paving to control dust and cool the blade.

Please note that high quality diamond blades should be utilised at all times. If a blunt or worn diamond blade is used, shelling or chipping of the tile edge could occur.

If more than 25% of the tile requires cutting then the remaining piece should be cut from the internal corner of the cut to the external corner of the tile, at an angle of preferably 45°.

GROUTING

Use **ARDEX FLEX-FL Rapid-Setting Flexible Tile Grout**. Clean out any dust, dirt and adhesive from between the tiles and make sure that the joints are dry.

Important: Once paving has been laid, rake out any excess mortar between the joints to the base level of the flag with a suitable tool. This is to ensure the supplied grouting material fills all joints to the entire depth and width of the flag joint.

Approximately 4 parts grout powder should be added to 1 part water, ensuring that the powder is added to the liquid to prevent the product from flash setting. Manually mix the grout to reduce the amount of air incorporated into the mix.

Holding a soft rubber grout float, sweep the mixed grout diagonally across the tiles, ensuring that the grout is pushed fully into the joints.

CLEANING

To finish the installation, clean off as much grout from the surface of the tiles as possible and allow the grout to become touch dry. Clean off the grout residues with a damp sponge wiped diagonally across the tiles. Allow the tiles to dry and buff the surface with a dry cloth. Any stubborn residues may be cleaned off with Fila Deterdek.

N.B. Before grouting commences trial a small inconspicuous area to check that the grout does not stain the tiles. If there is a risk of any staining, the tiles should be fully sealed using a proprietary sealer before grouting begins.

For technical advise please contact Mandarin Stone on 01600 715444, or by email info@mandarinstone.com

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