



Natural Stone Specialist Editorial

Article 2

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Fixing Natural Stone to Concrete & Cement: Sand Screeds

Even in an era of advanced building components concrete and cement: sand screeds are still the most common substrates to receive a tiled finish. As with all substrates, the key to achieving a successful installation is correct preparation combined with the right choice of adhesive.

Concrete bases and screeds shrink as they dry out. This may produce sufficient compression forces to break the adhesion between the tiles and the bed and in some instances cause the grout or tiles to crack. It is therefore essential that a proportion of the drying shrinkage of the concrete or screed has been allowed to take place before tiles are fixed.

The code of practice for the design and installation of terrazzo, natural stone and composition block floorings (BS 5385: Part 5) recommends that concrete slabs are a minimum 6 weeks old and cement: sand screeds a minimum of 3 weeks old before tiling commences. These time scales can be significantly reduced if an anti-fracture membrane is laid prior to tiles being fixed. For example, independent testing on Norcross Permlayer™ has shown that tiles may be fixed to green concretes and screeds 48 hours after the substrate has been laid.

It must be ensured that correct falls, where required, have been incorporated in the base, that the base is free from contamination, loose areas and significant cracks and that the substrate is sufficiently level to receive a tiled finish. It is necessary to seal porous or slightly dusty substrates prior to fixing tiles. Norcross Prime Bond is an SBR primer/ sealer, which when diluted 1: 4 with water reduces the porosity of the base and prevents the formation of dust onto the surface.

BS 5385: Part 5, recommends that, where thin bed adhesives such as Norcross Rapid Porcelain & Stone White are used the trueness of the base should be such that any gap under a 2m straightedge does not exceed 3mm. The use of a thick bed adhesive, like Norcross Thick Bed Stone and Porcelain Adhesive will allow for greater variations up to 6mm. Where necessary, levelling compounds may be used to level out the base prior to tiles being fixed.