

Tiling onto calcium sulphate (anhydrite screeds)

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Question

Where a Calcium sulphate (Anhydrite Screeds) is used, can floor tiles be directly applied?

Considerations

- NHBC Technical standards section 9.3.5 state that *'Tile flooring shall provide a suitable wearing surface for the location and intended use.'*
- Cement based adhesives applied directly to a calcium sulphide screed may react with gypsum in the screed, resulting in the formation of ettringite and debonding of the tile adhesive.
- Calcium sulphate screeds if not properly prepared can lead to debonding of the floor tiles.

Answer

Floor tiles can be adhered directly to calcium sulphate (Anhydrite) screeds providing the screed is suitably prepared. It is important that;

- The substrate is sufficiently dry. Calcium sulphate screeds generally should be allowed to dry at a rate of 1 day per mm of screed thickness for screeds up to 40mm thickness, and 2 days per mm for any additional thickness over 40mm, however it should be ensured that the moisture content does not exceed 75% RH before tiling begins.
- The weak layer of laitance which forms on the surface of the screed should be removed usually by mechanical means.
The removal of laitance should be in accordance with the screed manufacturers requirements.
- The floor should be sealed with an appropriate primer in accordance with the manufacturer's recommendations before tiling begins.