

Drying an Anhydrite Screed

In common with other screeds it is very important that good curing conditions are provided as soon as an Anhydrite screed has been laid. Adequate protection from rapid drying or draughts should be provided for the first 48-72 hours but thereafter the relative humidity of the building should be low to allow moisture release from the screed and facilitate drying. Failure to provide the desired conditions can prolong screed drying times considerably and may lead to delays in the construction schedule.

Screed Drying Time

Under ideal drying conditions (a warm, well ventilated room) an Anhydrite screed dries at a rate of 1mm/day up to a maximum thickness of 40mm and then at a rate of 0.5mm/day for thicknesses above this:

Eg. 50mm Anhydrite Drying Time: (40mm x 1 day) + (10mm x 2 days) = 60 Days (2 months)

Drying times can be improved by the provision of good ventilation, open windows and doors in good weather, removal of laitance as recommended, the use of dehumidifiers and by force drying of the screed using under floor heating.

Assisted Drying

During the hardening process a friable film may form on the surface of an Anhydrite screed slightly reducing the rate at which moisture can escape from the screed prolonging drying time. Removal of this film 7-14 days after application using the recommended equipment will open the surface assisting the screed to dry.

Dehumidifiers can be used as early as 7 days after placing of the screed to assist with drying. It is important that a closed system is employed to ensure that any moisture extracted from the environment during operation is removed whilst the warm air dries the screed. Failure to seal the water collection vessel will result in the moisture being recirculated delaying drying times.

Force Drying

Force drying of an Anhydrite screed can be accomplished by commissioning of under floor heating systems in accordance with BS1264:2001 Part 4 clause 4.4 as early as 7 days after the screed has been placed.

Raise system water temperature in 4-5C increments from ambient to 20-25C, maintain for a minimum of 3 days and then gradually increase the temperature again in 4-5C increments to maximum operating temperature which should be maintained for a further 4 days (water temperature should not exceed 55C for a calcium sulphate screed) prior to returning to ambient temperature in readiness to receive floor finishes.

Please note that it maybe necessary to commission and run the UFH system for greater than the 7 day commissioning period to enhance the drying. The time that is required for force drying is directly proportional to the age of the screed at the time of commissioning. In all cases it is important to remember that adequate ventilation is required to maintain good drying conditions.

The screed must be dry before application of the floor finish and failure to follow this procedure prior to the application of subsequent impermeable floor coverings such as vinyl is likely to lead to failure of the floor finish at a later date.

Subsequent to drying the screed by one of the above methods, the residual moisture content must be determined using one of the approved test procedures to demonstrate suitability for acceptance of floor finishes (0.5% for impermeable finishes such as vinyl and tiles and 1.0% for carpets).

Once proven to be dry it is important that the surface of an Anhydrite screed is protected from accidental spillages and leaking fixings (central heating pipes etc). Should these occur the exposed screed will require further drying to attain the required moisture content and in the worst case, full saturation of the screed drying times will be as with freshly placed screed leading to possible delays in the construction schedule.