

TECHNICAL INFORMATION

DRYING OF TOPFLOW SCREED A

As with all screeds, it is very important that good drying conditions are in place prior to installation. For Topflow Screed A 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 well ventilated room) Topflow Screed A dries at a rate of 1mm/day up to a thickness of 40mm, and then at a rate of 0.5mm/day for thicknesses above this.

FOR EXAMPLE:

50mm Topflow Screed A drying time: (40mm x 1mm per day) + (10mm x 0.5mm per day) = 60 Days (2 months) (Guidance only)

NB: Drying of screeds can be greatly influenced by individual site conditions. As mentioned above, drying times can be reduced by provision of good ventilation by opening windows and doors, the use of dehumidifiers and commissioning of underfloor heating systems to manufacturers' guidelines and recommendations. Please follow these guidelines to aid drying.

DRYING GUIDELINES

1. The building must be weather tight. Leakage of water from dry risers, lift shafts etc is not acceptable
2. The surface of the screed should be sanded after 7-10 days to remove laitance and open the surface of the screed to promote drying
3. Wet trades should be advised to minimise any spillages of water onto the screed
4. Painters must avoid spillage/overspray of paint onto the surface of the screed. A film of paint on the surface will seal in moisture and may also cause problems with installation of floor coverings

5. The removal of dust and debris should be accomplished by using a vacuum cleaner or dry brushing whilst wearing suitable respiratory protection. **Under no circumstances should the screed be damped down to brush away dust**
6. Site personnel entering the building from wet external areas should ensure that footwear is dry before walking on drying screeds
7. Screed will not dry if the surface is covered. Dry Lining boards should be, if possible, on a pallet and removed from the screed as quickly as possible. This applies to any coverings placed on the screed

MOISTURE TESTING OF FLOOR SCREEDS

The most commonly approved method of testing the dryness of a calcium sulphate screed prior to the installation of floor coverings is the surface hygrometer box. Full details of the instrument and its operation are given in BS5325, BS8203, BS8201 and BS8425.

In brief the hygrometer measures the equilibrium relative humidity of a pocket of air above the screed for the duration of the test using an insulated impermeable box.

A base is deemed to be dry when a figure of 75%RH or less is recorded. Some wooden floors may require 65% RH. To ensure effective readings are obtained a number of factors need to be considered prior to commencing any test.

The hygrometer must be calibrated at 75% +/- 3% in accordance with manufacturer instructions. The building must be fully watertight and have good ventilation following installation and during the drying period.

Underfloor heating must be switched off for 72-96 hours prior to the test.

Allow a period of at least 4 hours before taking the first reading.

The hygrometer should be placed at a point on the floor which has been identified to have the highest moisture level. This can be determined by using a hand held resistivity meter, for example protimeter / Tramex.

The box must be placed on a clean uncontaminated surface.

The screed should have been sanded prior to commencement of test.

The hygrometer should be left in place until equilibrium of readings are obtained. This can be assumed to be two consecutive readings of the same RH level.

Once two readings are attained the box must be removed.

Please note that when ambient relative humidity conditions within the building are high, false readings can result.

Example: The RH of the ambient air in the area to be tested is higher than 75%. This means that the air trapped within the box above the screed has an RH higher than 75%.

A high ambient humidity will lead to all surfaces in the environment attaining equilibrium, therefore to obtain an accurate result, the humidity in the room must be less than or equal to the target 65% RH or below. To achieve this use dehumidifiers in the area to be tested shutting down 12/24 hours before commencement of any drying tests.

This will allow an accurate reading to be obtained.

ASSISTED DRYING TIME DEHUMIDIFIERS

Dehumidifiers can be used as early as 72 hours after the placing of Topflow Screed A 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. Any water collected should be removed regularly. We suggest the use of industrial closed-circuit systems.

FORCE DRYING

Force drying of Topflow Screed A can begin as early as seven days following installation of the screed by various methods.

When commissioning underfloor heating systems;

- set flow temperature to 20-25°C
- maintain for a minimum of 24 hours and then gradually increase the temperature in 5°C increments to maximum operating temperature
- maintain this for a further seven days (water temperature should not exceed 55°C for screeds) prior to returning to ambient temperature again in 5°C increments
- turn off system for 48 hours prior to moisture testing of the screed

Using space heaters and dehumidifiers in combination or fossil fuel fired heaters (eg gas heaters) must be avoided as they will raise humidity

IMPORTANT

After drying the screed, the residual moisture content must be determined using one of the approved test methods - hair hygrometer, carbide bomb or oven dry tests to demonstrate suitability for acceptance of floor finishes



For more details contact your local Tarmac screed representative or email topflowscreed@tarmac.com

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