Step by Step Preparation & Aftercare Guide.

Preparation Guide

Before we arrive, please take the time to study this important guide to ensure that your installation can be completed on the day…

Most important of all please ensure there is a good water supply with easy access!!

Sub Floor Preparation

1. Scrape off any debris or mortar splashes from the sub-floor.
2. Brush the sub-floor, leaving a flat clean surface, on which to place the insulation.
3. Place a minimum 1200gauge DPM over the subfloor cutting flush to the edges of the room ensuring that edges are lapped by minimum 100mm and taped.

Installing Insulation

4. Ensure that any insulation is flat to the sub floor with no voids underneath. Joints should be staggered and board should be tightly butted together.
5. Placing services other than underfloor heating within the insulation should be avoided where possible and under no circumstances should gas pipes be placed within the insulation zone.

Screed Preparation

6. Install the edging strip around all walls, and around columns, taking care to ensure it is neatly placed into all corners. Avoid stretching the edge strip around external corners. Tack the edging strip to the walls using a staple gun if necessary. Ensure that there are no voids behind the edges strip.
7. Place 500 gauge plastic over the top of the insulation ensuring it is pulled tight with no creases and lap joints at a minimum of 100mm. Tape all joints and then tape the 500-gauge membrane to the plastic skirt of the edging strip.
8. Install the under floor heating pipes, ensuring they are appropriately fixed at every 400mm along the length of the pipes more frequently on bends.
9. Fill the under floor heating pipes with water and check for any signs of leaking. Perform a pressure test to 6 bars or the maximum operating pressure for the system to ensure the pipes hold water under pressure. The pressure should be maintained whilst screed is placed.

Joints

10. Install movement joints across door thresholds, between independently controlled heating zones and where the aspect ratio is greater than 1:6. Cut away notches on the underside of the joints to allow it to sit level over the UFH pipes.
11. Either cut the joint former 5mm below the finished level of the screed or create “V” notches on the top of the joint, this allows the screed to flow across the joint to keep the same level either side
12. Complete a final depth check to ensure the minimum depth of cover to pipes can be maintained. This is normally 25mm but can be 20mm if Aire flo-screed HTC is used. Pay particular attention to the corners of rooms and over external door thresholds.
13. Brush or vacuum out all debris from the surface of the polythene. Any material left may float once the screed is poured resulting in blemishes on the hardened surface. Inspect the whole tanking system for any tears or untapped joints, make good, ready for screed to be poured.

14. Additional joints should be considered at abrupt changes to aspect ratio and where heated and unheated screeds meet and in areas of high thermal gain such as conservatories.

Unbonded Screeds

15. BS8204:7:2003 considers the screed unbonded if it is separated from the sub floor usually by means of a 1200gauge polythene membrane and where no insulation is present. The screed is also considered unbonded if it is placed directly in contact with an unprepared substrate.

Bonded Screeds

16. BS8204:7:2003 considers the screed bonded if it is placed in direct contact with a prepared concrete substrate.
17. Scabble the surface of the concrete substrate to remove any laitance and to expose the coarse aggregate in the concrete and prime the concrete using a proprietary epoxy or polyurethane primer.
18. Alternatively use a proprietary epoxy primer on the concrete substrate and allow to dry.
19. Add a second coat of primer and whilst still wet broadcast clean dry silica sand onto the surface and allow the primer to dry.
20. Vacuum up any loose sand leaving a rough textured surface onto which the screed can be placed.

Quality Control

Our fully trained and approved Aire flo-screed installers will arrive on site and set up the pump, check and setup levels with multiple, evenly placed datum tripods once a datum level is agreed with you. We will then measure the floor to ensure that the Screed is sufficient to fill the designated areas which are to be screeded. Before commencing the main pour the screed is checked for flow and appearance. Once we begin batching and pumping, the screed is then dappled in two directions to level the surface and then left to dry. The performance and finish achieved by Aire flo-screed is dependent on the conditions in which it is installed and for a period thereafter. It is essential the following site conditions are provided during screed pour and 24 hours thereafter. The entire area where the screed is to be installed must be frost-free and not subject to temperatures of less than 5°C or more than 30°C. The surface of the screed must be protected from severe draughts and direct sunlight. The temperature of the area where screed is placed should not fall below 5°C.

Immediately after installation

Our liquid screed can usually accept foot traffic after about 24 - 48 hours. It is sometimes possible to traffic the morning after the installation. Care should be taken to avoid damaging the surface of the screed if it is not yet fully hardened. Full site traffic should be avoided for at least 7 days. Where very heavy site traffic e.g. scissor lifts and such like, is expected, it is advisable to temporarily protect these areas with plywood sheets, which should be removed after use to permit drying.

Curing

Aire-flo screeds are self-curing do not require curing under polythene. It is essential that the material is undisturbed for the first 24-48 hours. Rapid loss of moisture should be avoided during this period. Where windows and/or doors are not installed, a temporary provision must be made using appropriate materials. Direct sunlight must be avoided.

Drying

After 24 – 48 hours, open windows on all sides of the building in order to achieve good cross ventilation, and air changes thus accelerating the drying out process. Dehumidifiers may be used after 72 hours to assist drying if required. Avoid moisture ingress from rain or other water sources and in the event of accidental spillage ensure it is cleared up straight away.

In common with other Gypsol screeds the drying time for Aire-flo screeds based on 50mm depth at 20degrees C and 60% RH is 28 days. Underfloor heating can be commissioned after 7 days and can be used to force dry the screed. Where force dried using underfloor heating the drying time can be reduced to 13 days. Drying times are affected by site conditions and screed depth.

Commissioning the underfloor heating

After a minimum of 7 days following installation of the screed switch on the heating system using the manifold mixing valve or boiler temperature control to set the flow temperature at a maximum of 35 degrees C or the lowest available temperature. Room thermostats should be disabled. Leave at this temperature for 3 days before increasing by a maximum of 5C per day until a maximum of 55C is reached. Leave at this temperature for a minimum of 3 days before reversing the process. Switch off the heating for minimum of 48 hours before carrying out a moisture test on the screed.

Note: underfloor heating should always be commissioned and run prior to applying bonded floor coverings.

Moisture Testing

Avoid water ingress to completed screeds and arrange to dry out accidental ingress as soon as possible.
The screed may suffer a minor loss of strength if it becomes wet however, this strength will be regained when it dries out.

Moisture testing is by means of a flooring hygrometer, carbide bomb or oven dried sample. For moisture sensitive coverings the floor should be below 75% relative humidity, which equates to 0.5% moisture content by mass. For moisture permeable floor coverings the floor should be below 85% relative humidity or 1% by mass.

Sanding

In common with all screeds and concretes the screed should be lightly mechanically abraded to remove laitance and contamination from the day to day site traffic and activity prior to applying any floor coverings. This abrasion also promotes a key for primers and adhesives to bond to. A calcium sulphate compatible primer should be applied to the floor once the floor has completely dried to the recommended moisture levels at which point a floor covering can be applied. It is also important that any adhesive used is anhydrite/calcium sulphate compatible. Please check with your chosen suppliers to ensure that this is the case.

You can purchase a suitable primer from ourselves at:
Aire flo-screed or for further information or guidance, please call our technical team on 0800 061 4455 who will be happy to help!