

Method Statement Title: Flow Screed Installations

Method Statement No.: MS-0001

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Main Contractor:

Site Managers:

Site Address:

Site Operatives:

## 1.0 Introduction

- Liquid screed is a flowing screed flooring system comprising of a calcium sulphate binder, fine aggregate and water.
- It is for internal use only, in general where conventional sand / cement screeds would be used. It is not a wearing surface.
- Liquid screed should not be used where conditions of prolonged saturation or repeated wetting and drying are expected.
- Liquid screed is factory manufactured and delivered to site ready for immediate discharge via mixer trucks, it can be plant mixed or truck mixed.
- Liquid screed should only be installed by approved contractors, experienced with laying flowing screeds based on anhydrite or alpha hemi-hydrate binder.

## 2.0 Site Considerations

- The site should be able to receive deliveries from conventional concrete truck mixers.
- A plastic sheet should be provided by the client where necessary to prevent ground contamination in all finished areas including point of discharge from lorries.
- A hose pipe is required by the client to wash down equipment after use.
- A skip or wash out area is required to allow the equipment on site to be washed out after use.

- Access to the site is required prior to the pour commencing; a minimum of 24 hours is recommended to allow enough time to correctly prepare the floor area.
- The areas to be laid must be clean, dry and weatherproof.
- Windows and doors should be in place, if not, temporary provision should be made by the use of polythene, adhesive tape etc.
- On large contracts provision should be made for the largest daily pours practicable, as a guide up to 1,000m<sup>2</sup> may be laid by a gang of 3 or 4 men per day, given ideal conditions. However, 500 to 600m<sup>2</sup> probably represent sufficient progress for the majority of daily pours.

### **3.0 Preparation of Substrate**

- Liquid screed can be installed as a Unbonded or Bonded system. The vast majority of contracts are Unbonded.
- For both systems the substrate should be sound with the surface swept prior to installation / preparation. Contaminants such as mud, dirt, organic matter, and water and construction debris should be removed.

#### **3.1 Unbonded screeds**

- Unbonded screeds can be placed directly on to the membrane being floating or floating with underfloor heating.

##### **Direct**

- Polythene sheeting (of not less than 500 gauge) or building paper (to BS 1521) should be used. This is laid directly over the substrate.

- The sheets should be taped at all joints. For building paper a heat bonding material may be used and activated using a hot air gun.

### **Floating**

- The floating screed insulation material should be laid on to the substrate and the sheets of polythene or building paper placed on top.
- All sheets should be taped at all joints.

### **Floating with underfloor heating**

- The underfloor heating system should have been fitted by a competent installer.
- All pipe work should be securely attached to the underlying insulation material. If this is not the case additional pipe clips should be used.
- Liquid screed should be installed with a minimum pipe cover of 35mm. However the code of practice allows an absolute minimum cover of 25mm.

### **Liquid screed on in situ concrete and composite flooring**

Liquid screed that is to be installed above an in situ concrete floor slab either ground bearing or a separating floor should have a damp proof membrane beneath it. Ideally this should be immediately beneath the Liquid screed layer and above any insulation.

This DPM is to prevent the movement of moisture from the

concrete in to the Liquid screed.

### **3.2 Bonded screeds**

For bonded screeds the substrate (floor slab / unit) may require mechanical treatment to remove laitance and other adhered material (construction spillages). Shot blasting or scabbling would be appropriate.

After treatment the substrate surface should be swept or vacuumed to remove any dust. Prior to installation, a primer / sealer should be used in accordance with the manufacturer's instructions. In general, bonded screeds are not recommended.

### **3.3 Perimeter treatment**

- A minimum 5mm thick compressible border strip should be laid around walls and all upstands, columns, piers and similar.
- Where underfloor heating is installed a 10mm material should be used.

### **3.4 Control Joints**

- As liquid screed has minimal drying shrinkage, control joints are not usually needed at less than 40m lengths
- In the case of long narrow sections, where the aspect ratio of the floor is greater than about 1:6, a joint or joints are recommended to reduce the ratio.
- Control joints will also be needed between any areas of heated floors and unheated floors.

- They should also be used at doors and similar restrictions in plan dimension
- All structural joints in the sub-base should be carried through the screed or reflected cracking may occur.

### **3.5 Levels**

- An appropriate means of establishing a level across the pour area should be used.
- A laser level or an alternative level device and level indicators are often used to set the required level of the finished material.
- The level indicators where used should be spaced at 1 to 2 metre centres and cover the entire pour area.
- The level indicators must be removed before the wet material is dapped.

### **4.0 Laying**

- Before the Liquid screed is discharged from the mixer truck into the pump hopper, the pump should be empty of water and primed in accordance with the manufacturer's recommendations. Screed pump manufacturers produce a primer specifically for this application or a weak wallpaper paste mix can be used. This should be collected in a bucket and discarded. Once primed the Liquid screed can be discharged and pumped.
- The pump hose should be extended to the furthest point away from the pump on the floor. This is where the pour should

begin and work back towards the pump.

- Levels are controlled by the operator manning the hose, with reference to the level indicators.
- Care should be taken to avoid leading edges being left open for any length of time. Fresh deliveries of Liquid screed must always be well blended in using the dappling bar.
- When laying in strips, the sequence should be to commence laying the second strip from the original starting end and not to work backwards down the strip.
- It is important not to leave exposed edges (in front or at the side) for more than 30 minutes to 1 hour. This time may be less in hot weather conditions. Where left exposed faults may develop at the interval of the two pours.
- Where this period of time is to be extended a vertical face should be formed in the first pour by means of a temporary stop end.
- This is typically formed using scaffold battens or other suitable timber and concrete block or similar.

### **5.0 Curing**

- It is essential that the material is allowed to cure undisturbed for the first 24-48 hour period. The floor area should be closed to all traffic.
- Traditional curing procedures using impermeable membranes are not necessary but rapid loss of moisture should be avoided during the first 24-48 hours.

- Where windows and/or doors are not installed, a temporary provision must be made using appropriate materials.
- Direct sunlight must be avoided during the first 24-48 hour curing period. Windows and glass doors with a southern aspect should be covered temporarily for this period.
- After the first 24-48 hours of curing doors and windows may be opened.

### **6.0 Trafficking**

- Liquid screed can usually accept light site traffic after about 24 - 48 hours. It is sometimes possible to traffic the morning after the previous installation.
- Full site traffic should be avoided for at least 3 days. Where heavier site traffic is expected it is advisable to temporarily protect these areas with plywood sheets, which should be removed in good time to permit adequate drying.

### **7.0 Drying**

- It is important to note that drying times relate to ambient humidity, temperature and a number of air changes.
- In general, Liquid screed installed as an unbonded system dries at a rate of 1mm per day for normal thicknesses, at a temperature of 20oC and 65% relative humidity.
- Where drying temperatures are high and humidities low, drying time will be less.
- Unlike conventional cement: sand screeds, dehumidifiers may be used to accelerate drying. These should only be used 2 to 5 days after placing.
- Where under floor heating is installed this can be used to decrease drying times but should only be used after the first 5



days. The heating system temperature should be built up gradually at a rate of 5 degrees celcius per day.

- Prior to the installation of a floor covering, Liquid screed must have dried to an approved level. For moisture sensitive coverings the code of practice value is stated as 75% relative humidity, which equates to 0.5% moisture content by mass. Below this value Impermeable floor finishes may be applied.

## **8.0 Finishing, level adjustment and crack treatment**

### **Finishing**

- Liquid screed always requires a wearing surface material to be applied, usually tiles, carpet or polymers.
- It is recommended that Liquid screed is primed once sufficiently dry.
- When the final wearing surface of the floor is to be adhered / bonded to the Liquid screed, light sanding and the removal of subsequent dust / flakes may be necessary. This should take place a minimum of 14 days after laying.
- For un-adhered wearing surfaces further finishing may not be necessary.

### **Level adjustment**

- Where it is necessary to place a further layer of Liquid screed to adjust a level. This should be done within 24 hours of the original pour, unless a primer is used to reduce substrate suction.

### **Crack treatment**

- If cracks occur these should be widened with an angle grinder and then a proprietary repair material (low viscosity polymer resin) poured in.

### **Floor preparation prior to tiling**

All anhydrite liquid screed floors must firstly be primed with a calcium sulphate screed compatible primer which isolates products containing calcium sulphate, such as gypsum plaster and anhydrite screeds, from cement-based adhesives. This minimises the risk of a reaction between the two materials, provides surface strength to friable surfaces and reduces porosity, thus preventing the formation of air bubbles, prolonging the flow time with levelling compounds and extending the open time of tile adhesives.

**For more information on this product please visit**  
[www.expressliquidscreeds.co.uk](http://www.expressliquidscreeds.co.uk)