

## No curing is required

The floor should not be subjected to severe draughts, direct sunlight or heating for the first 72 hours. Do not cover the screed, e.g. with polythene, as this is not necessary and will only delay final drying of the screed. Foot traffic should be restricted for at least 24 (preferably 48) hours to prevent damage to the screed surface.

Sanding to remove the surface laitance layer should be carried out if necessary, as soon as possible, usually after approximately 4 days. This will provide a dense surface to receive adhesives as well as speeding drying of the screed. Note Sanding will not be necessary initially to remove laitance on screeds based on a low skin formulation.

Normal site traffic and erection of non-load bearing partitions off the screed is permitted 7 days after application.

## Drying

Screed drying time is 1mm/day up to 40 mm thickness in warm and well-ventilated drying conditions. This will increase for screeds thicker than 40 mm and in poor drying conditions

In common with other screeds, it is very important that good drying conditions are provided as soon as the screed is laid. It should be protected from rapid drying or draughts for the first 48-72 hrs, but thereafter air humidity must be low so that moisture can be released. Good ventilation or the use of dehumidifiers can assist in reducing the ambient humidity.

Forced drying of Gyvlon screeds is possible if required after 7 days, heaters and dehumidifiers may be used to improve drying conditions and any underfloor heating can be commissioned and slowly brought up to temperature in line with manufacturers recommendations.

## Testing - Moisture

### Residual Moisture Content

Before floor finishes are laid, the moisture content of the screed should be checked by the floor finishes contractor. The British Standard for testing a base to receive a resilient floor covering is to use a hair hygrometer. This provides a non-destructive test and when tested strictly to the method defined in BS8203: will give reliable results on Calcium Sulfate screeds for RH near to 75% (the required limit for floor finishes). To test Gyvlon screeds by the CM (Carbide Method), typical requirements will be for a maximum of 1% water by weight for moisture permeable coverings (e.g. carpet) or 0.5% water by weight for impermeable coverings (e.g. vinyl).

These figures equate approximately to 80% RH and 75% RH respectively. At a thickness of 30mm, with ambient temperature of 20oC and with good ventilation, Gyvlon should reach moisture content of 0.5% within 30 days. The screed and base should be checked to establish that it meets the requirements of the flooring material.

## Testing- Physical

Bonded, Partially Bonded and Unbonded Screeds may be tested using the BRE Screed Tester, to Category A or B as specified. Floating screeds (i.e. on insulation) cannot be tested by this means. Strength classification will be available from the supplier in accordance with BSEN 13813

## Joins

Control joints are only required where continuous areas exceed the manufactures guidelines 40 metres in length, nominal 30m in non-heated screeds,

**Note:** (for details of joints and recommendations see appropriate Gyvlon datasheet)

## Floor finishes

### Surface Preparation for Tiles, Vinyl and Smoothing Compounds

The surface of the screed will be either lightly sanded as soon as possible, typically after 4-5 days, to remove any fine laitance, or sanded prior to floor finishes installation to remove surface contamination and provide a good Key. A light sanding may not be necessary when carpet is to be applied, however it is advisable to always lightly abrade the surface as this will not only act as a key but will speed drying. Sanding is usually carried out using a carborandom disc in conjunction with an orbital disc sander. The surface should be swept and vacuumed clean to ensure it is dust free.

One of the largest reasons for failure of the screed finishes for all forms of screed is excess moisture. Application of the surface finishes before drying out has been completed will lead to a failure in the bond between primer and screed, vinyl and levelling compound or tile and grout.

It is important to highlight the fact that failure to check the screed moisture content before application of finishes / primers etc, may result in delamination of the wearing surface.

Whenever a cement-based or moisture sensitive coating is to be applied on a Gyvlon screed, the screed must be dry and primed with an epoxy, polyurethane or an acrylic based primer recommended by the manufacturer of the product.

**NOTE:** Recommendations for priming Gyvlon screeds are no more complicated to those for traditional sand cement screeds or powerfloated concrete's. The following procedure should be followed for all classes of surface preparation:

- ◆ Check the residual screed moisture is not too high. (Generally <75%RH)
- ◆ Ensure the surface has been sanded to provide a good surface key, however this may not be necessary for some epoxy / acrylic based primers, please see manufactures guidelines.

**Note:**(Industry recommendation generally suggest a mechanical sanding is always best practice)

- ◆ Ensure the surface is primed with a recommended primer / sealer in accordance with the manufactures instructions.

Smoothing compounds, tile grout, vinyl etc., can now be applied in accordance with individual manufacturer's instructions. Tiles must be applied in accordance with BS5385 and the recommendations of the Tile association best practice guide: *"Tiling to Calcium Sulphate Based Screeds"*

It is important to point out that the BS5385, states that the width of tile joints should not be less than 3mm and the depth at least 6mm. Intermediate floor joints on larger floor areas will be required dimensionally 10x10m. In areas where significant thermal change can occur, solar gain, underfloor heating then joints should be allowed for in bays of 40m<sup>2</sup> with an edge length not greater than 8 line meters.

## Repairs

### General

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

### Surface damage or level tolerance defects:

If any defect does occur, use an appropriate levelling material for the thickness required. Prime the screed surface with the primer recommended by the manufacturer of the compound. Surface preparation of the Gyvlon is in line with manufacturer's instructions

### Cracks – Remedial 1 (Surface Dressing)

If light cracks do occur, due to physical damage or incorrect early curing conditions, then the following repair method may be used:

1. Rake out any loose spalled edges of screed from the sides of the crack and vacuum clean out any dust that has been trafficked in to the cracks.
2. Mix up appropriate water based polymer, diluted 1 part Polymer to 5 parts water.
3. Take a small quantity of the diluted Polymer, say half to one litre, and add to it some Gypsum Finishing Plaster and mix to a fluid pourable consistency.
4. Pour this mixture into the cracks. (A small plastic indoor watering can is ideal for this).
5. Use a steel trowel to help work the material into the crack.
6. Return to the crack as necessary to top up the crack. If the crack is proving impossible to completely fill then mix up some material to a thicker consistency and try again.
7. Scrape off level with the steel trowel.

**Note:** This form of remedial is not a crack repair, but just surface dressing, this should not be used to repair cracks in floating screeds, UF heating, or screeds to receive sensitive finishes.

### Cracks – Remedial 2 (Chemical Stick)

If light or larger cracks occur, due to physical damage or incorrect early site conditions, then the following repair method may be used:

1. Open the top surface of the crack using a disc cutter, (a Chase of about 5mm x 5mm is suitable)
2. Rake out any loose spalled edges of screed from the sides of the crack and using an industrial vacuum clean out any dust that has been trafficked in to the cracks.
3. Fill the crack using a low viscosity Epoxy resin, topping up as necessary to satisfy the demand. A fine dry silica sand may be used to bulk up the resin at top of the crack.

The above repairs should not be carried out until drying of the screed has taken place. Cracks of less than 0.5mm may close naturally during this time and a natural binding of the screed will take place.

Carry out the surface sanding to the entire area of the screed in the usual manner.

**Note:** This form of remedial is considered suitable for many situations where cracking has occurred on site. The addition of reinforcing elements maybe required in UF floating sections if the repair and site conditions dictate this use.

## Sanding Surface Laitance

It is necessary to sand the screed surface to remove the surface Laitance Non Low Skin versions of the Gyvlon product. The time at which this sanding takes place is dependent upon the drying conditions within the building envelope. In a damp or humid environment the age at which the screed can be sanded will be greatly extended against the good drying conditions. In good conditions the screed should be capable of being sanded at between 4 and 7 days of age. The surface Laitance will in many cases walk off as the screed dries; however the presence of the surface skin will result in a small increase in the drying time of the finished screed. It is important that the skin is removed at an early age, as this is the point at which it is most friable. Sanding should be carried out using an industrial orbital sander using an appropriate abrasive disk, with dust extraction if necessary.

Gyvlon screeds designed to have a low Skin will still require sanding ahead of finishes application, however this is to provide a mechanical key for primers, adhesives etc. and remove site traffic contamination prior to application of finishing systems, this is in line with industry recommendations for application of finishes.

## Surface Damage - Remedial 3

If surface damage or an excess of surface laitance has occurred, due to physical damage or incorrect application flow, flood damage etc., then the following repair method may be used:

1. Carry out sanding to the entire area in the usual manner and vacuum the screed surface to remove all friable surface laitance.  
  
**Note: (Where excessive bleed has taken place to the screed as a result of high flow application or water ingress into the building structure, an excess of fines may congregate at the screed surface, this will require removal before finishes can be bonded to the surface, additional heavy sanding may be required to remove this material.)**
2. Ensure the screed has dried <75% RH and is free from surface contamination, where underfloor heating is present this may be commissioned 7 days after application to speed up the drying process.  
(This must be done in line with the manufacturer's recommendations)
3. Ensure the screed is clean and free from contamination and apply a suitable penetrating primer. (A water based epoxy is best suited in areas where heavy sanding has left a porous surface, priming must be carried out in line with manufacturer's instructions)
4. Apply suitable smoothing compound to make good surface levels where necessary, this must be carried out in line with the manufacturer's instructions. Gyvlon would recommend a compatible Gypsum based system is utilised whenever repairs are required.