



Tŷ-Mawr sublime®



Preparation of existing floor



Lay Geotextile



Deposit the GLAPOR® foamed glass gravel



Distribute the GLAPOR® foamed glass gravel



Compact the GLAPOR® foamed glass gravel



Fold back Geotextile and lay Geogrid

- Remove the existing floor, excavate to required depth (as calculated by Tŷ-Mawr) with care, do not undermine foundations, level and compact the surface. This should be done as accurately and consistently as possible for best results plus even small variations over a large floor area will significantly effect the amount of material ultimately required.
- Assess ground water issues consult architect/engineer to provide suitable drainage if required.
- Lay the geotextile membrane over the soil, overlapping the joints by 1 metre. Run the geotextile up the walls far enough to fold back onto the GLAPOR® SG 600 foamed glass gravel.
- Put in marker posts to indicate the final level of GLAPOR® SG 600 foamed glass gravel after compaction, as per the specification for your floor.
- Bags can be emptied manually or with the help of crane, telescopic handler etc.
- It is best to deposit GLAPOR® SG 600 foamed glass gravel from the back to the front so that the already distributed material no longer needs to be manipulated.
- The material is normally distributed with a rake or shovel. It is important to ensure that an even fill depth is achieved over the whole installation area. For deep fill areas the installation and compaction must take place in layers of maximum depth 300mm.
- Compaction is executed with a plate vibrator (~80 - 120kg, approx frequency 100 Hz), or a steamroller (static, ~5t -~6.5t).
- Compaction is finished when the target level is reached. Further compacting increases the material wear and brings no advantage in load bearing capacity and will reduce thermal performance.
- Fold back the excess Geotextile around the edges over the compacted GLAPOR® SG 600 foamed glass gravel.
- Lay the second layer of geotextile and the Geogrid over the surface of the compacted GLAPOR® SG 600 foamed glass gravel ready for the fixing of the underfloor heating clip rails.
- Fold back the excess Geotextile around the edges 'before' laying the Geogrid, i.e. Fold back the excess of the second Geotextile.
- If required, slab can be used to weigh down geogrid to prevent rucking.

The heating pipes

- We would recommend the use of a clip rail system or aluminium composite pipe for your underfloor heating pipe work. The clip rails can be attached to the Geogrid using cable ties, the pipes can then be clipped into place as per your heating system's manufacturer/ designer's specification' or similar.
- Alternatively, heating pipes can be fixed directly to the geogrid using cable ties (although this will place the pipes lower in the slab layer). (NB. Plastic tray type fixings will compromise the breathability of your floor)

Tŷ-Mawr Lime Slab

- Lay edge insulation around perimeter walls to the depth of the slab, used as a slabbing board (depending on edge insulation choice).
- Put shuttering in place to the thickness of the slab.
- Mix 3 parts of the Tŷ-Mawr Slabbing Aggregate to 1 part of the recommended Tŷ-Mawr Hydraulic Lime Binder (by volume) and the synthetic fibres (at a ratio of 1kg per tonne dry slab mix), add sufficient water to make a stiff but workable mix.
- **MIX FOR 20 MINS AFTER THE ADDITION OF ALL OF THE WATER.**
- Lay and tamp to the shuttering level, float the floor to an appropriate finish for the floor covering specified.
- After 24 hrs brush the surface of the floor using a stiff brush to remove any sinter skin (this is particularly important if laying tiles or slabs onto the slab).

Protecting the floor

- Ensure the floor does not dry/cure too quickly or too slowly. As with all lime products ensure the room is well ventilated with ambient temperatures between 10 and 18 degrees, while at the same time making sure that no direct heat/ventilation is applied to avoid spot drying.
- In warm dry weather you will need to wet down the lime slab (do not saturate) to help prevent the product drying too quickly.
- Do not turn on underfloor heating or undertake any heavy work on the floor until it is thoroughly set and dry.
- Between the months of October and March lime work should be carried out with caution, especially externally. The chemical reactions with hydraulic lime products slow down as the temperature falls, and will stop below 5 degrees. At around 2 degrees the lime will start to become irrevocably damaged.

Floor finishes

Various coverings are appropriate but please consult your building consultant/architect for precise installation instructions. It is desirable but not essential that the floor finish is 'breathable' e.g. unglazed tiles

(laid using Tŷ-Mawr floor tile bedding grout, please see application guide), stone slabs (which can be laid on a sand:lime mortar) or timber flooring. (This should be laid when the slab is fully cured and dry. We would recommend an air gap be maintained between lime slab and floor boards. This air gap can prevent timber from warping if moisture is still present, however, it can affect the performance of underfloor heating systems).

Commissioning underfloor heating

This should be carried out in accordance with BS EN 1264 Part 4: Introducing Heat Through Underfloor Heating. The slab, screed or tile bedding should be at least 28 days old and the Underfloor Heating guidelines should be followed.

Every care has been taken to provide concise but comprehensive installation instructions, however, this is no substitute for employing a professional with experience in laying floors. Lime requires tending and the right environment to carbonate/set otherwise it is very similar to laying a conventional concrete slab and slab. We are happy to provide telephone support if you have any concerns and if appropriate, visit the site.

Please note

Care should be taken to ensure that the right components are used in the right layers (check the aggregate sizes if in any doubt) and in the right mix ratios. Any variation in mix ratios or depths laid will effect the quantity of material required. Care should be taken to be precise as possible.

Health and Safety Information

WARNING



Skin Irritation 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory problems.

DANGER



Eye Damage 1 H318 Causes serious eye damage.

Precautionary Statements

P102 Keep out of reach of children.

P280 Wear protective gloves, eye protection/face mask.

P305 + P351 + P310 If in eyes rinse cautiously with water for several minutes and immediately get medical assistance.

P352 + P352 If on skin, wash affected parts immediately with plenty of soap and water.