



THE LIME CENTRE

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Limecrete Floors

- First layer of geotextile membrane
- Geocell –Usually 200-300mm (compacted)
- Second layer of geotextile membrane
- Screed – 1:2 mix ratio by volume of St Astier NHL 5/MS 5mm (approx. depth 80mm)
- Floor to be laid on top
- If laying slabs on top this will require lime mortar.
- If using tiles this requires adhesive and is not breathable.
- If laying carpet this will require a suspended wooden floor with ventilation.
- Underfloor heating will require a large fibre mesh to tie the pipes to.
- If it is a large area you will need to consider movement joints.

When the existing floor has been removed, excavate (if required) to the depth as calculated, taking care not to undermine foundations. Accurately level and compact the surface, variations in levels can significantly increase material consumption.

NOTE - Please consult a specialist for high water table/ground water issues as additional drainage maybe required.

Once level, lay the geotextile membrane over the soil, overlapping joints. Ensure the geotextile laps up the walls far enough to fold back onto the GEOCELL foam glass.

Prior to filling the area with GEOCELL, install marker posts to indicate the finished level after compaction. Allow a compaction ratio of 1.3:1 by measurement, e.g. Loose fill to 195mm and compact to 150mm.

Rake the GEOCELL level ensuring an even fill depth is achieved. If the compacted fill depth exceeds 300mm height, the installation must take place in multiple layers with compaction of each layer.

Once the loose GEOCELL has been levelled, compaction can be undertaken with a light vibration plate with strong drive (~80 - 120kg, approx. frequency 100Hz, centrifugal force <18kN).

Alternatively, a medium weight, non-propelled or self-propelled roller, running weight <7.5t, static line loads ~ 20kg/cm, approx. frequency 65Hz.

Compaction is finished when the target level is reached, further compaction will increase material consumption. Remove posts and level off.

Fold back the excess geotextile membrane around the edges over the compacted GEOCELL, then lay the second layer of geotextile, again lapping up the wall to the depth of the screed.



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If installing underfloor heating, the Geogrid is laid over the second layer of geotextile membrane. This is used as a fixing layer for pipe clip rails (not supplied), which are cable tied to the Geogrid. Heating pipes can be fixed directly to the Geogrid using cable ties, this will position the pipes lower within the screed.

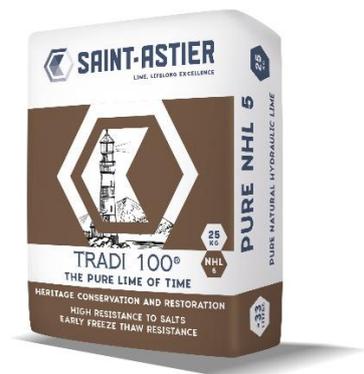
Cork insulation is positioned around the perimeter walls to the depth of the screed (typically 100mm). These are supplied in 1000mm x 500mm sheets and will need to be cut on site.

Screed:

Mix 1-part St Astier NHL5 to 2 parts Morestead 5mm coarse sand by volume, adding sufficient water to make a stiff but workable mix. Add 1kg of screed fibres per cubic metre. Mix for approximately 20 minutes after adding sufficient water. Lay and tamp the screed level, then float to appropriate finish. The curing time is approximately 7-14 days depending on temperature, care should be taken to ensure the screed does not dry/cure too quickly. To avoid rapid drying mist spray to add moisture to the screed. If you have installed underfloor heating this should not be used for a minimum of 4 weeks and temperature increased slowly over several days once in operation. Always follow underfloor heating suppliers' guidelines.

Coverings:

Ensure that the lime screed has dried out sufficiently to allow for finishes to be laid. For maximum breathability lay natural materials as finishes only. Lay all stone, slate or other slab finishes in lime mortar. Floor slabs being laid onto the screed will require a lime mortar for bedding, resulting in a breathable floor. Lighter weight tiles will require adhesive which reduces breathability. Wooden floors should be ventilated using either vents or spaces at the perimeter under the skirting. If carpets are required, then a well-ventilated wooden floor is required.



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