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GLAPOR FOAM GLASS INSULATION and LIMECRETE FLOORING SYSTEM INSTALLATION INSTRUCTIONS

1. Preparation of Base Substrate

When the existing floor has been removed, excavate ground to required depth. It is important to level and compact the surface as best as possible, as variations in levels can increase material consumption. A laser level may be used to ensure ground is level.

2. Geotextile Membrane

Once level and clean, lay the **GEOTEXTILE MEMBRANE** on top of the substrate and bring it 200mm minimum up wall (depending on depth of insulation). This is required to wrap around the Foam Glass insulation to keep it all together and to prevent the screed from running down into the insulation. Make sure the joints of the membrane overlap. The Glapor is your hardcore, insulation and main construction layer.

3. Pouring Glapor Foam Glass Aggregate

Pour **GLAPOR FOAM GLASS AGGREGATE** over Membrane (Standard 10/60): 100 – 300mm per layer. The required amount is multiplied by 1.3 to allow for compaction e.g. 130mm is required for a 100mm Foam Glass base. It is advisable to install marker posts to indicate the finished level after compaction.

Install 300mm max of Glapor, compacted to 230mm, at a time. If more depth is required, it should be laid in layers. The minimum recommended depth of Glapor is 100mm after compaction. (Thermal Conductivity of Glapor Foam Glass - 0.080 W/mK)

4. Spreading Out

Use a rake or shovel to spread the Glapor evenly across the whole area.

5. Compaction

Using a vibrating whacker plate (circa 80 to 120kg whacker plate) compact the Glapor base down to your finish level. Once Glapor is compacted and level, pull in the sides of the bottom layer of membrane over the Glapor to make an envelope. Then lay your next Geotextile Membrane on top, taking care to overlap joints.

6. OPTIONAL: Underflooring Heating

If required, lay **GEOGRID Underfloor Heating Grid** flat on top of the membrane, weighted down to prevent coiling and taking care not to puncture the membrane. Plumbers to lay **underfloor heating pipes**.

7. Cork Perimeter Insulation Board

Fit **30 or 40mm thick CORK INSULATION BOARD** around all wall perimeters to prevent cold bridging – cut boards down to 100mm height to match screed. Cork boards are supplied in 1000mm x 500mm sheets and will need to be cut to size on site.
(Thermal Conductivity of Cork - 0.039 W/mK)

8. Limecrete

Pour **100mm LIMECRETE SCREED MIX** at a ratio of 1-part NHL5 to 2-parts limecrete aggregate, by volume (not weight). (Concrete gravel mix consisting of fine sand to 20mm max aggregate sourced from local quarry is a good option). Typically 1 tonne for every 8/9 bags of NHL5 (25kg). To calculate NHL5 requirement, multiply square meters of floor area by 1.5, and that will give the number of 25kg bags required.

Mix limecrete, adding sufficient water to make a stiff but workable mix. Reinforcement fibres are recommended. (1 bag per tonne of aggregate). Ideally mix for 20 minutes after adding sufficient water. Mix should be semi-dry to ensure the volume isn't over increased, this will prevent shrinkage during the curing process. Can be laid thicker than 100mm, if required.

When laying the limecrete finish, tamp with a wooden or steel tamper. Float with a timber or polyurethane float. The final surface should be screeded and tamped in a float screeding manner, then scoured with the float and trowelled.
(Thermal Conductivity of Limecrete - 0.45 W/mK).

9. Aftercare

Limecrete should always be kept damp for a minimum of 96 hours and protected from freezing conditions for the first 10 days after laying. If you have installed underfloor heating this should not be used for a minimum of 4 weeks. Follow supplier's guidelines.