Woodfibre and Lime Plaster Internal Wall Insulation

Installation Guide

The Woodfibre and Solo lime plaster system is designed and tested to allow solid walls to stay dry, while offering modern levels of insulation and ease of application.

Wall Preparation

- Remove any masonry paints or materials which are sealing the wall or acting as a vapour barrier.
- Externally check the pointing, paint or render is in fair condition. If not repair with suitable breathable materials (e.g. natural lime render or mortar)
- Internally, remove vinyl finishes and sealed plasters (e.g. gypsum)
- Masonry must be flat, level and porous. Old smooth lime plasters should be opened by scouring or sanding. Uneven walls, bare brick or stone must be levelled with a lime plaster base coat (approx. 12mm).
- Cables etc should be chased and run in the masonry or plaster before fitting the boards.

Insulation Board

- Masonry – square edge wood fibre boards 0.6m x 1.35m per board. Depth of 20mm, 40mm, or 60mm.
- Timber – tongue & groove 0.38m x 1.2m per board. Depth of 40 or 60mm

Fixings

- Masonry – WT insulated hammer fixing. Drill through board and hammer home fixing.
- Timber – EJOT screw fixing. Insulated screw/washer plate for fixing the boards onto wooden backgrounds.
- Typically, 5 fixings per board are required on masonry, or 2 per stud on timber.
- Fixings should be 25mm minimum into solid wall (not including existing plaster)
- The boards are fixed in a lattice horizontally and pushed tightly together.
- They should alternate down corners.
- Vertical joints must be staggered.
- Don’t line boards up with window edges, always stagger joints.
- Butt the boards up as tightly as possible.
- Cut pieces must be at least 200mm wide.
- Always insulate reveals, thinner 20mm boards may be required.
- Make sure the boards have an air tight fit around windows and doors. Use expanding foam tape if necessary.
Lime Plaster on boards

- Before plastering, inspect the boards. Check they have been fixed correctly. Steps in the boards must be dubbed out with Solo lime plaster and allowed to set before applying finishing plaster. Gaps greater than 10mm between the board connections must be foam filled or packed out.
- Apply Solo lime plaster in 2 passes to a combined thickness of 8-12mm – see separate Solo Product Data Sheet. 1 x 25kg bag covers 1.6m² at 9mm.
- The first pass is applied approx. 5-6mm thick.
- Apply 454 glass fibre mesh, push into the plaster immediately while it is still tacky. Overlap joins in the mesh by 100mm.
- 454 glass fibre mesh is doubled up around windows and doors, with a diagonal layer applied. The diagonal piece should be at least 200mm x 400mm.
- The second pass of Solo is applied over the top usually within 4 hours to give a total thickness approx. 8-12mm thick.
- Level plaster with a straight edge and finish.
- Do not over-work the surface as this may lead to “fine cracking”.
- Allow at least 2 weeks drying time, during which time the plaster should be protected from rapid or forced drying.
- Apply in temperatures above 5°C and below 30°C.

Decoration

- The system is vapour-open and functions by allowing moisture to pass freely. It is therefore important that only vapour-permeable paints are used for decoration.
- We recommend and supply Beeck Insil mineral paint or Earthborn Clay Paint. Contact The Lime Centre for further advice or information about breathable paints.

Typical U values

<table>
<thead>
<tr>
<th></th>
<th>20mm Lime Plaster</th>
<th>40mm WFB &amp; Solo</th>
<th>60mm WFB &amp; Solo</th>
</tr>
</thead>
<tbody>
<tr>
<td>215 Brick wall</td>
<td>1.73</td>
<td>0.64</td>
<td>0.49</td>
</tr>
<tr>
<td>330 Brick wall</td>
<td>1.28</td>
<td>0.57</td>
<td>0.45</td>
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(Assumed Thermal Conductivity W/mk – Woodfibre = 0.04)