**GypLyner CEILING**

**GypLyner CEILING** is a general purpose ceiling lining system suitable for most internal applications. It is used in all types of buildings from residential properties to large commercial developments, and is equally suited to both new-build and refurbishment. The system caters for bulkheads and novel design details and fully complements GypLyner wall lining.

The ceiling is based on an independent metal framework comprising channel sections friction fitted to a track at the perimeter. The channel sections are fixed back to the background with support brackets or connectors. The framing assembly is clad with Gyproc boards. The lining is jointed to achieve a seamless surface suitable to receive most decorative finishes.

**Key facts**

- General purpose and versatile ceiling lining
- Suitable for concrete soffits or timber joists
- Seamless lining surface
- Ceiling void accommodates small service routings
- Stand-off can be adjusted up to 175mm
- Commonality of ceiling and wall lining components

**Sector Guide**

- Offices
- Commercial
- Retail
- Shops & Leisure
- Education
- Healthcare
- Industrial
- Auditoria
- Cultural
- Entertainment
- Residential - Housing
- Residential - Apartments
- Residential - High Rise

**GypLyner CEILING** is easy to handle and simple to construct. By maintaining a cavity to the background, it readily facilitates the inclusion of services. The framework can be used with all types of background and the stand-offs which can be achieved enable background irregularities to be corrected. Generally no preparation work is required.

**Diagram**: Illustration of GypLyner CEILING components and installation process.
### COMPONENTS

#### Gyproc board products

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc WallBoard</td>
<td>12.5, 15mm</td>
<td>900, 1200mm</td>
</tr>
<tr>
<td>Gyproc SoundBloc</td>
<td>12.5, 15mm</td>
<td>1200mm</td>
</tr>
<tr>
<td>Gyproc fineLine</td>
<td>12.5, 15mm</td>
<td>1200mm</td>
</tr>
<tr>
<td>Gyproc Plank</td>
<td>19mm</td>
<td>600mm</td>
</tr>
<tr>
<td>Glasroc F MultiBoard</td>
<td>12.5mm</td>
<td>1200mm</td>
</tr>
</tbody>
</table>

1 Moisture resistant boards are specified in intermittent wet use areas e.g. shower areas, bathrooms and kitchens.
2 Also available in duplex grades where vapour control is required.

#### Gyproc fireLine

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc Plank</td>
<td>19mm</td>
<td>600mm</td>
</tr>
</tbody>
</table>

#### Gypsum metal products

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc GL1 Lining Channel</td>
<td>12.5mm</td>
<td>1200mm</td>
</tr>
<tr>
<td>Gyproc GL8 Track</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gyproc GL2 Bracket</td>
<td>(max 75mm stand-off from structure)</td>
<td></td>
</tr>
<tr>
<td>Gyproc GL9 Bracket</td>
<td>(max 125mm stand-off from structure)</td>
<td></td>
</tr>
</tbody>
</table>

#### Fixing and finishing products

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyproc ProFlex Access Panels</td>
<td>For access to the plenum for maintenance purposes.</td>
</tr>
<tr>
<td>Gyproc Wafer Head Drywall Screws</td>
<td>For metal-to-metal fixing up to 0.79mm thick.</td>
</tr>
<tr>
<td>Gyproc Drywall Timber Screws</td>
<td>For fixing timber connectors to timber supports.</td>
</tr>
<tr>
<td>Gyproc GL11 GypLyner Anchors</td>
<td>For fixing GL2, GL9 or GL12 Brackets to concrete / masonry.</td>
</tr>
<tr>
<td>Gyproc Drywall Screws</td>
<td>For fixing boards to framing up to 0.79mm thick.</td>
</tr>
<tr>
<td>Gyproc Sealant</td>
<td>Sealing air paths for optimum sound insulation.</td>
</tr>
<tr>
<td>Gyproc jointing materials</td>
<td>For a seamless finish.</td>
</tr>
</tbody>
</table>

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*Moisture resistant boards are specified in intermittent wet use areas e.g. shower areas, bathrooms and kitchens.*

*Also available in duplex grades where vapour control is required.*
GypLyn®
Concealed grid ceiling lining system

6.3

Gyproc Skimcoat, Gyproc Carlite Finish or Gyproc Board Finish
To provide a plaster skim finish.

Isover Modular Roll
For providing acoustic/thermal insulation.

or

Isover Acoustic Roll
For enhanced acoustic performance.

COMPONENTS CONTINUED

Health and Safety
Safety Data Sheets for all Gypsum Industries' products are available to download from our website: www.gypsum.ie, or via the Technical Sales Department.
Fixing to a concrete soffit
Gypframe GL8 Track is fixed at the perimeter with the longer leg at the bottom. Gypframe GL2, GL9 or GL12 Brackets are fixed at the required centres. Gypframe GL1 Lining Channel is located into the perimeter track and each leg of the GL2, GL9 or GL12 Bracket is screw-fixed to the Gypframe GL1 Lining Channel. The protruding legs of each bracket are bent to sit back from the channel face.
Gypframe GL1 Lining Channel sections are joined using Gypframe GL3 Channel Connectors.

Additional channel or supplementary framing is installed if required to support fixtures. Boards are fixed to the Gypframe GL1 Lining Channels to form one or two layer linings as specified.

Fixing to timber joists
Gypframe GL5 or GL6 Timber Connectors are fixed to the side of joists using Gyproc Drywall Screws. The connectors must be aligned accurately since they can not be adjusted once Gypframe GL1 Lining Channel is engaged into a row of timber connectors and twisted into position. The channels are located into Gypframe GL8 Track at the perimeter. Gypframe GL1 Lining Channel sections are joined using Gypframe GL3 Channel Connectors. Additional channel or supplementary framing is installed if required to support fixtures. Boards are fixed to the Gypframe GL1 Lining Channels to form one or two layer linings as specified.

If the existing ceiling is to be retained, Gypframe GL2, GL9 or GL12 Brackets are fixed to joists through the retained ceiling with suitable fixings. Gypframe GL1 Lining Channels and boards are fixed to form the new ceiling.

For full installation details, refer to the Installation Guide at www.gypsum.ie
Please refer to section 6.1 - Introduction - for general considerations.

Table 2 - Dimensions and performance

**Existing basic floor (18mm T&G flooring grade chipboard) and ceiling**

<table>
<thead>
<tr>
<th>Detail</th>
<th>Ceiling boards</th>
<th>Joint size</th>
<th>Fire resistance[a]</th>
<th>Laboratory sound insulation (100 - 2750Hz)</th>
<th>Performance substantiation report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm x mm</td>
<td>mm x mm</td>
<td>Airborne Impact</td>
<td>Impact Lw dB</td>
<td></td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Existing layer of 9.5mm Gyproc Plasterboard</td>
<td>450 x 195</td>
<td>30 60</td>
<td>80 62</td>
<td>C154001</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Two layers of 12.5mm Gyproc SoundBloc</td>
<td>450 x 200</td>
<td>30 60</td>
<td>57 61</td>
<td>C154002</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>One layer of 12.5mm Gyproc FireLine</td>
<td>450 x 195</td>
<td>30 60</td>
<td>53 64</td>
<td>C154003</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Two layers of 12.5mm Gyproc SoundBloc</td>
<td>450 x 200</td>
<td>30 60</td>
<td>54 65</td>
<td>C154004</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Two layers of 12.5mm Gyproc FireLine</td>
<td>450 x 195</td>
<td>30 60</td>
<td>59 64</td>
<td>C154005</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>Two layers of 12.5mm Gyproc FireLine</td>
<td>450 x 195</td>
<td>30 60</td>
<td>53 66</td>
<td>C154006</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>Inner layer of Gyproc Plank and an outer layer of 12.5mm Gyproc WallBoard</td>
<td>600 x 195</td>
<td>60 90</td>
<td>52 61</td>
<td>C206004</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td>One layer of 12.5mm Gyproc MultiBoard</td>
<td>600 x 200</td>
<td>60 90</td>
<td>–   –</td>
<td>G106030</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td>Two layers of 12.5mm Gyproc MultiBoard</td>
<td>600 x 200</td>
<td>60 90</td>
<td>–   –</td>
<td>G106033</td>
</tr>
</tbody>
</table>

[a] The fire resistance and sound insulation performances are for imperforate ceilings with all joints taped and filled in accordance with Gyproc Industries’ recommendations. The quoted performances are achieved only if Gyproc Industries components are used throughout, and the Company’s fixing recommendations are strictly adhered to. Any variation in the specification should be checked with Gyproc Industries.

[b] Gyproc GL6 Timber Connectors are bent at a position between the third and fourth holes along (forming a 30mm horizontal leg) to form a right angle, and fixed through the existing ceiling with suitable fixings.

[c] Existing lath and plaster ceiling (up to 20mm thick) should be supported by chicken wire, securely nailed to the joists.

[d] Board joints must be reinforced with Gyproc Paper Joint Tape for the quoted fire resistance periods to be achieved. Please refer to section 22 for full details.
Table 3 - Dimensions and performance* - upgrading to compartment / separating floor standard

<table>
<thead>
<tr>
<th>Detail</th>
<th>Ceiling boards</th>
<th>Joint centres</th>
<th>Joint size</th>
<th>Fire resistance&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Laboratory sound insulation&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Performance substantiation</th>
<th>Performance report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>mm/mm</td>
<td>dB</td>
<td></td>
<td>100 - 3150Hz</td>
<td>mins mins</td>
<td>dB</td>
</tr>
<tr>
<td>1. One layer of 12.5mm Gyproc plasterboard</td>
<td>450</td>
<td>195 x 45</td>
<td>30 (modified)</td>
<td>36</td>
<td></td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>2. Two layers of 12.5mm Gyproc SoundBloc</td>
<td>600</td>
<td>195 x 45</td>
<td>30</td>
<td>62</td>
<td></td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>3. Inner layer of Gyproc Plank and an outer layer of 12.5mm Gyproc SoundBloc</td>
<td>450</td>
<td>200 x 50</td>
<td>60</td>
<td>63</td>
<td></td>
<td></td>
<td>55</td>
</tr>
</tbody>
</table>

<sup>1</sup> The fire resistance and sound insulation performances are for imperforate ceilings incorporating tapered edge boards with all joints taped and filled according to Gypsum Industries’ recommendations. The quoted performances are achieved only if Gypsum Industries’ components are used throughout, and the Company’s fixing recommendations are strictly adhered to. Any variation in the specification should be checked with Gypsum Industries.

<sup>2</sup> Platform floor comprising of a walking surface of 18mm T&G wood board flooring, spot-bonded with Gyproc Sealant at 300mm centres to a substrate of Gyproc Plank laid on 25mm Isover Sound Deadening Floor Slabs (64kg/m<sup>3</sup>) on minimum 12mm wood based sheet sub-deck, nailed to joists.

<sup>3</sup> Board joints must be reinforced with Gyproc Paper Joint Tape for the quoted fire resistance periods to be achieved. Please refer to section 22 for full details.
Environmental
GypLynner is unsuitable for use in areas subject to continuously damp or humid conditions.

Plasterboards are not suitable for use in temperatures above 49ºC but can be subjected to freezing conditions without risk of damage.

Fire protection
For reaction to fire classifications for Gyproc and Glasroc boards please refer to Section 2.1.

Fire resistance
The fire resistances given in Tables 2 - 3 are for imperforate ceilings tested to BS 476: Part 8: 1972, or BS 476: Part 21: 1987, or assessments based on these tests.

Sound insulation
The airborne and impact sound ratings given in Tables 2 - 3 are for imperforate ceilings and have been tested in accordance with BS EN ISO 140-3: 1995, and rated in accordance with BS EN ISO 717-1: 1997.

Airtightness is essential for optimum sound insulation. While most junctions will be sealed with standard jointing materials, gaps at the perimeter of the floor and ceiling, and other small airpaths, can be sealed using Gyproc Sealant.

The sound insulation data quoted was measured in the absence of flanking transmission. The performance of the floor in practice will generally be governed by flanking transmission.

Thermal properties
Thermal insulation can be laid over the suspension grid to provide increased thermal insulation.

DESIGN
Please refer to section 6.1 - Introduction - for general considerations.

Planning - key factors
The depth of the ceiling cavity is determined by the positioning of the fixing brackets. For concrete soffits the fixing brackets allow sufficient adjustment for levelling the ceiling. Allow for a stand-off of 25mm - 75mm plus the lining thickness when using Gypframe GL2 Brackets, 25mm - 125mm plus lining thickness when using Gypframe GL9 Brackets and 25mm-175mm plus the lining thickness when using GL12 Brackets. When fixing to timber joists using Gypframe GL5 or Gypframe GL6 Timber Connectors, allow for a maximum cavity depth of 35mm and 120mm respectively measured from the bottom of the joists to the underside of the GL1.

Cavity barriers
Cavity barriers are required these can be formed using Gyproc FireLine (limited combustibility) or Gyproc MultiBoard (non-combustible) screw-fixed to a simple metal frame. The framing should be fixed to the structure to avoid undue loading of the ceiling suspension system. Please refer to section 5.7 - Cavity barriers.

Fixing to the structure
Gypframe brackets should be positioned equidistant at up to 1200mm maximum centres. Gypframe GypLyner Anchors are suitable for fixing brackets to solid concrete or masonry backgrounds. The safe working load is 350N per fixing, tested in concrete of characteristic strength of 30 N/mm². When fixing to hollow backgrounds proprietary fixings will be necessary.

When lining timber joists, Gypframe timber connectors should be fixed to the joists to support the channels at max. 1200mm centres. When lining engineered timber joists, please contact the joist manufacturer for advice.

Services
The cavity above the metal framework facilitates the incorporation of services. Pipes and conduits should be fixed in position before installing the framing. Where lighting fittings, Gyproc Profilex Access Panels and similar components are incorporated as part of the design requirements, consideration must be given to maintaining the integrity of the ceiling to meet fire resistance and sound insulation requirements.

The installation of services should be in accordance with all available standards, guidelines and recommendations.

Fixtures
Fixings to the system should always be made into the channels or to supplementary framing.
Control joints
Gyproc Control joints may be required in the ceiling to relieve stresses induced by expansion and contraction of the structure. The location of the control joints is at the discretion of the specifier. It is recommended that they coincide with movement joints within the structure.

Finishing
Please refer to section 1.5 - Finishing Coat Plasters, section 2.2 - Jointing, and section 2.5 - Decorative Effects.

Estimating
The estimated construction time is 3m²/hour (single layer ceiling) or 2 - 2.5m²/hour (double layer ceiling) ready for finishing.

CONSTRUCTION DETAILS
Fig 1 - Connection to timber joists using a Gypframe GL5 Timber Connector (one hole between screw fixings into the joists).

Fig 2 - Connection to timber joists using a Gypframe GL6 Timber Connector (two holes between screw fixings into the joists).
CONSTRUCTION DETAILS - CONTINUED

Fig 3 - Typical layout (12.5mm board on 450mm GL1 centres)

Fig 4 - Typical layout (15mm board on 600mm GL1 centres)