

Installation Guide - Concrete Soffit / Ceiling

PrimePanel Insulation is a high-performance rigid thermal insulation panel designed for commercial and residential developments, where superior thermal and fire performance is required. PrimePanel Insulation comprises a thermoset phenolic core with dual reflective aluminium foil surfaces.

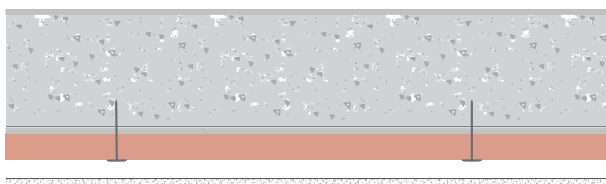
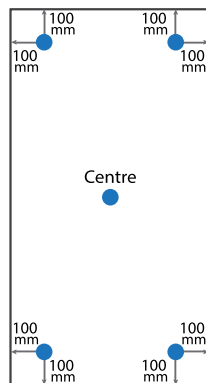
Preparation

The concrete ceiling or soffit should be level, clean, dry and free from contaminants prior to installing PrimePanel Insulation. Check for high points that can result from gaps or irregularities in the original form work. Level off any high points as these could prevent the insulation boards from sitting flat against the concrete soffit. Ensure insulation panels are evenly aligned and closely fitted together before fixing to the concrete.

Concrete Soffit - 5 Fasteners (With suspended ceiling)

Where PrimePanel Insulation is installed behind a suspended ceiling, or another ceiling lining material, use a minimum of five (5) fasteners to directly fix each panel to the concrete soffit.

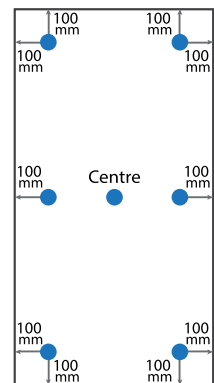
Fix 1 fastener in the centre of the panel first, then fix 1 fastener in each of the 4 corners of the panel, 100mm in from the panel edges.



Concrete Soffit - 7 Fasteners (Without suspended ceiling)

Where PrimePanel Insulation is not installed behind a ceiling (ie. the insulation will be exposed), use a minimum of seven (7) fasteners to directly fix each panel to the concrete soffit.

Fix 1 fastener in the centre of the panel first, then fix 3 fasteners evenly spaced along both long sides of the panel, 100mm in from the panel edges.

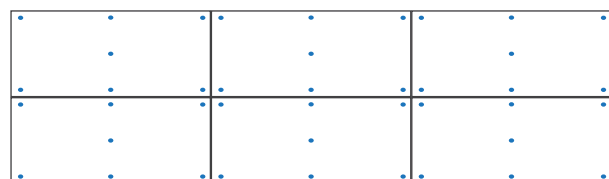


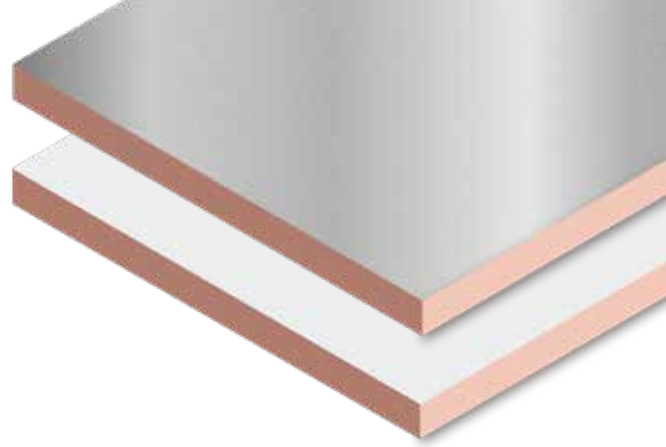
Fastener Specifications

Ensure all fastener specifications, including washer diameter, pin length and material, are suitable for the intended application and panel thickness, and comply with project specifications and exposure conditions in accordance with the fastener manufacturer's recommendations.

Layout Pattern

PrimePanel Insulation can be laid out in a square set grid pattern, with the fasteners laser aligned in rows to create a neat finish. Adjacent insulation panels should be evenly aligned and closely fitted together before fixing to the substrate. Fix all panels before taping.





Handling and Storage

PrimePanel Insulation should be stored indoors on a flat, level base and kept clean, dry and protected from contaminants, weather and impact.

Safety Precautions

Foil facings and tape are conductive. Ensure safety precautions are taken to avoid contact with electrical cables, equipment and fittings.

Cutting PrimePanel Insulation

PrimePanel Insulation may be cut to size with a fine-tooth saw, or by scoring the panel with a sharp knife and snapping in position over a straight edge, then scoring the reflective facer on the reverse side. Off-cuts may be used to fill gaps. Accurate trimming is important to ensure adjoining panels are evenly and closely fitted together.

Surface Variations

Surface variations or cosmetic imperfections may occur during manufacturing or between different batches. These are not considered defects and do not affect the performance of the insulation.

Condensation Risk Analysis

The risk of condensation occurring inside a building depends on many factors including the geographical location of the building, the components that make up the building and the manner and order in which they are assembled, the use and integrity of vapour barriers, and the degree of passive or mechanical ventilation inside the building envelope. We recommend a Condensation Risk Analysis is undertaken specific to each project.

External Wind Pressure

Where PrimePanel Insulation may be exposed to external wind pressure, the requirement for additional mechanical fasteners must be considered according to the relevant wind load standards. Please consult with an engineering professional to confirm the fastener specifications and installation recommendations for each application and project.

Surface Movement

Differential movement between surfaces joined by taping creates significant pressure on the join. Self-adhesive tapes in this type of application are not designed to be mechanical joining devices. Care should be taken to ensure that panels are not liable or subject to movement. Tape should be applied only after mechanically securing PrimePanel Insulation.

Taping

Adjacent panels should be taped along each join, corner, or angle with high-quality foil insulation tape (minimum 70mm wide). Ensure the tape selected is suitable for the actual application, project specifications and climate conditions as per the tape manufacturer's recommendations.

PrimePanel Insulation surfaces should be clean, dry, and free from dust, oil, moisture, and contaminants prior to taping. The surface should be cleaned immediately prior to the application of tape.

Remove the backing release liner from the tape (no more than 300mm to 600mm at a time) and ensure the adhesive surface of the tape is firmly pressed onto the foil surface of the clean panel.

Carefully apply the tape over the centre of all joins, corners, and angles, taking care to apply adequate tape width on both sides of the join, creating an evenly distributed bond to the insulation panel, to avoid additional shear stress on one side. A second application of tape may be required to ensure minimum 35mm overlap onto the foil surface.

Apply sufficiently firm and uniform pressure to the entire surface of the tape by firmly wiping the tape from the centre out. Use a clean cloth to rub the adhesive tape into the surface grooves of the insulation panel to ensure maximum surface contact. Ensure there are no air bubbles between the tape and the insulation panel. A flexible squeegee may also be used to remove any air bubbles.

All PrimePanel Insulation panel joins, corners, angles, and exposed edges should be taped with an overlap of minimum 35mm onto the foil face of the panel. Any PrimePanel Insulation panels that will be installed to the perimeter of a soffit should be pre-taped prior to installation, along the edges that will be on the perimeter, by applying 2 or more layers of tape with minimum 35mm overlap to both the top and bottom surfaces of the insulation panel.

Tape will not adhere to the foam edges of PrimePanel Insulation. Therefore, when taping exposed foam edges, two or more layers of tape must overlap minimum 35mm onto the top and bottom foil surfaces of the panel and sufficiently overlap in the middle of the panel edge.

Check the tape periodically and replace or reapply any tape that has not properly adhered to the panel.



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