

## Over Purlin Insulation

IsoBoard Insulation installed over purlin under roof sheet. - In South Africa, the bulk of retail and industrial buildings are steel-sheet clad frames, where 70% of the heat gain is through the roof. IsoBoard over purlin insulation is the most cost effective method of achieving thermal efficiency in these buildings.

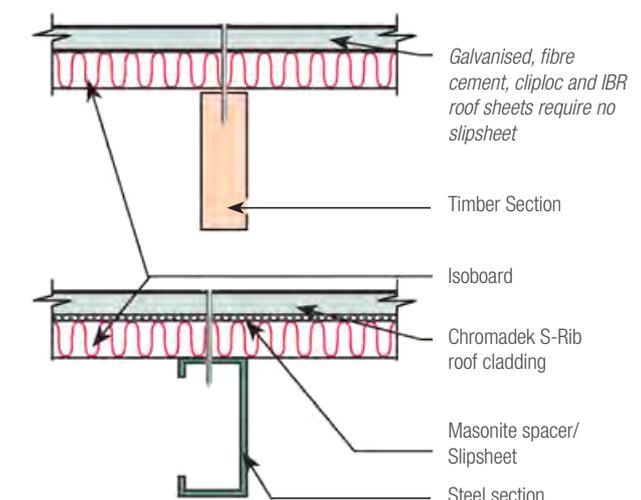
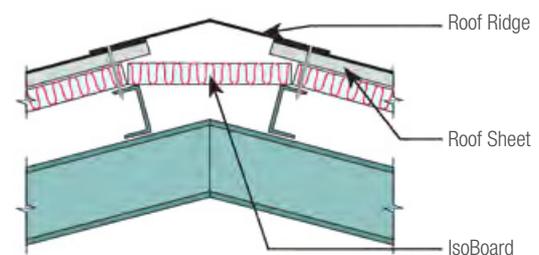
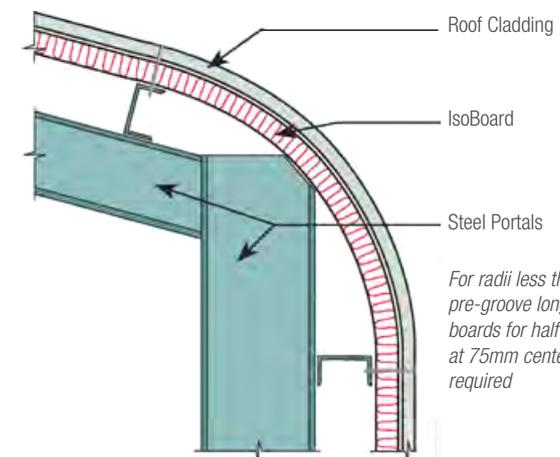
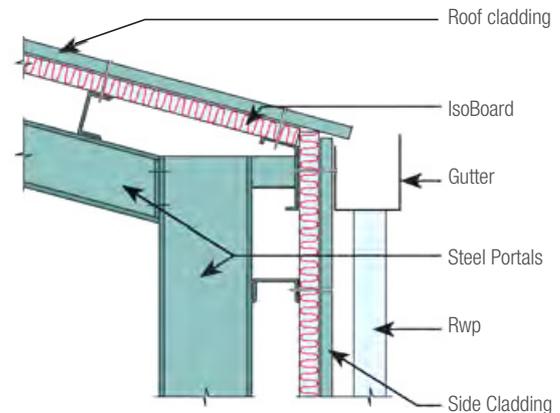
*As a general rule for cavity wall applications, 30mm IsoBoard will be effective in dwellings and 40/50mm in temperature controlled buildings.*

### Typical uses for IsoBoard in this application

1. **Industrial developments** to improve staff comfort and productivity;
2. **Agricultural applications** such as poultry-, pig-, mushroom-, crocodile-and fish-farming requiring consistent optimum growth conditions;
3. **Temperature controlled** environments such as vegetable, flower and fruit processing areas and wine cellars;
4. **Warehouses** containing perishable and temperature sensitive goods;
5. **Retail developments** to provide comfort and reduce air conditioning costs.

### Over Purlin guidelines

1. For minimum deflection, do not exceed recommended spans as per table overleaf, use T-sections to support board where spanning limits per thickness is exceeded.
2. Wipe boards before installation to remove static.
3. To avoid friction noise between paint treated roof sheets (chromadek) and IsoBoard, separate the products with a 3mm masonite washer. Spacers are not necessary with cliplock systems, galvanized and aluzinc roof sheets.
4. Butt join boards over purlins.
5. Install roof ridge vents above IsoBoard of 40 mm or thicker to prevent excessive heat buildup.
6. IsoBoard can follow a 5m radius when using 50mm or thinner board.
7. Please consult a representative for the appropriate thickness of IsoBoard for use in your region.
8. The board is an extrusion and flow lines can be visible. Paint with two coats of good quality matt acrylic paint and/ or edge bevel board for aesthetically finished requirements.
9. Fit boards below purlins using retrofit H sections.



## Suggested bill of quantity specification

IsoBoard high density 32-36kg/m<sup>3</sup> rigid extruded polystyrene 100% closed cell insulation board of \_\_\_ mm thickness and 600 mm wide, with tongue and groove joints, fixed concurrently with roof covering, over steel purlins at approximately \_\_\_ mm centres, with S mm gap between boards buttjoined on top of purlins.

**Please note:** The fixing of any laminates e.g. vinyl facing or slipsheet to IsoBoard will result in a higher fire risk. Please consult Sales Office.

## Site Handling Instructions

1. Handle and install with care to prevent damage to board edges.
2. Store boards flat within original packaging until required.
3. Protect from adverse weather conditions and direct sunlight for the storage period.
4. IsoBoard is easily cut to length using a sharp blade or hacksaw.
5. **In potentially dusty conditions during or after construction, wipe boards clean with a weak softened water solution immediately prior to over purlin installation. This removes possible static charges present on the board surface which attract dirt and dust.**

Please contact IsoBoard for any queries with respect to the above.

## Ordering information

- Standard stock lengths and thicknesses are generally available through your nearest Regional Distribution Centre. Contact us for a quotation.
- Order IsoBoard with square edge profile if board is to be supported by T or H-sections.
- Consult with a representative.
- Standard lengths from 4,8m to 7,2m in 0,6m increments and in 8m for 25, 30, 40, 50 mm boards. Tolerance  $\pm$  5mm. Enquire availability of lengths of thicker board or shorter lengths.



## Recommended installation

1. Wipe boards clean with a softened water solution immediately prior to installation. This removes any static charges built-up during the transport and handling of the board, preventing dust particles from adhering to the board.
2. Boards are laid from apex to eave, always beginning and ending on a purlin. Where necessary, boards are to be butt-joined centrally on top of purlins, with a 5mm expansion gap between boards. Note: Butt-joined/Staggered boards may not align due to width tolerance.
3. Longitudinal jointing is effected using the tongue and groove edge profile, enabling the boards to support each other and lock together tightly. Fix roof sheet concurrently with IsoBoard so that IsoBoard is secured positively between purlins and roof sheets, using roof screws.
4. To avoid friction noise between paint treated roof sheets (chromadek) and IsoBoard, separate the products with a 3mm masonite washer. Spacers are not necessary with cliplock systems, galvanized and aluzinc roof sheets.
5. See table below for recommended purlin spacing limitations for unsupported IsoBoard allowing for a 15mm deflection at mid-span.

**Table 1 : Spacing limits for unsupported IsoBoard**

Thickness	Maximum Purlin Spacing	Domestic & Chromadek
25mm	1100mm	900mm
30mm	1400mm	1200mm
40mm and thicker	1600mm	1500mm

6. Note: The recommended purlin spacings are reduced under Chromadek due to the higher temperature buildup, and for the higher aesthetic requirement in domestic applications. IsoBoard can be supported using aluminium T-sections, should purlin spacings exceed the recommended maximum.
7. In Industrial and Commercial applications where the designed purlin spacing exceeds that recommended for IsoBoard, please consult your nearest IsoBoard Regional Distribution Centre for installation advice.
8. Profiled roofing closures or coverstrips should be used, where damage by birds or vermin to exposed board ends can be expected.
9. The full text of the Large Scale Fire Test as conducted by the CSIR Building Technology unit with respect to the over purlin installation method is available on the IsoBoard website.
10. We recommend that roof ridge air vents are installed for IsoBoard of 40mm or thicker, particularly under chromadek roof sheets. Hot air ventilation prevents deflection through heat build-up above the board.