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ROOFING SHEETS
ANTI-CONDENSATION
FLASHINGS
ROOFLIGHTS
PVC GUTTER
FIBRE CEMENT

Composite Panel Installation Guide

Insulated Roof and Wall Panels

Standard Composite panel is supplied with an external weather sheet Plastisol Coated 0.5mm with an internal liner White Polyester 0.4mm. The steel sandwiches a PIR insulation core which expands during the manufacturing process and bonds to the steel sheets forming a strong rigid panel. The core thickness required is dependent upon building use and/or local building regulations. Below is a table of common core thicknesses along with U-Value's.

Panel Thickness	U-Value
40mm	0.43
60mm	0.30
80mm	0.23
100mm	0.19

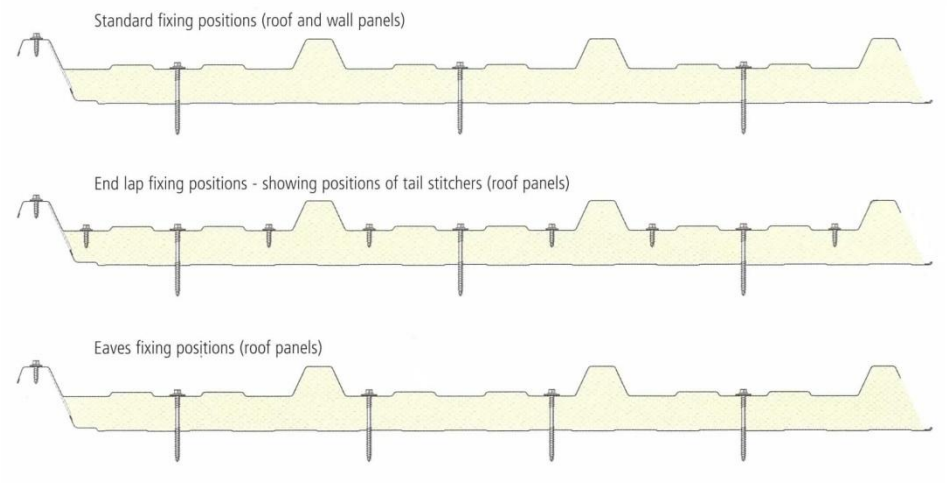
A range of Factory Assembled Insulated Rooflights are offered to supplement the composite panels and usually consist of two skins of GRP along with a thinner central sheet where building regulations must be achieved and where higher thermal performance is needed. Each Rooflight is assembled using foam spacers and end pieces, again to suit the profiled sheets to ensure a rigid construction.

Fixings for composite panels provide restraint against wind and uplift forces; whilst panels can be fixed through the valley or crown, we would recommend valley fixing. This provides for more accurate fixing and the loads on the fixings are reduced and are less likely to distort the panels in any way, also better compression of Butyl Lap Strip is achieved at end laps.

Fixings should be of a high thread design to restrain the weather face of the panel and should have a suitable plastic colour cap or integral moulded head screw to match the finish of the Plastisol. Each fixing is provided with an EPDM washer to seal.

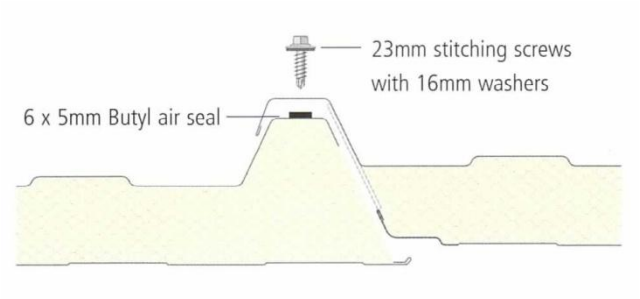
Fixings for Light Section and Heavy gauge steel should pass through the panel and steel and leave a minimum of 5mm of thread exposed on the underside of the steel. Fixings to Timber should pass through the panel and penetrate the timber by at least 40mm.

For normal exposure, fixings are usually applied as per the following drawings.



Side Laps

Side laps between panels are formed by lapping the extended weather sheet of the female side of one panel over the male crown of the adjacent panel. It is always recommended that the exposed edge of the lap should face away from the prevailing wind. The lap should then be sealed with Butyl Lap Strip 6mm wide by 5mm high and the lapped edges then stitched together with self drilling screws. It is advised that roof panels be stitched at 450mm centres with wall panels stitched at 300mm centres.



Where end laps are required on large span roofs or where rooflights are to be incorporated within the design of the roof. End laps are formed where the weather sheet of the upper panel overlaps the lower panel. The end lap dimension is governed by the building design and pitch of roof. These laps are sealed with **three** runs of Butyl Lap Strip 6mm wide x 5mm high. The first run is fixed 10 – 15mm

up the slope, the second run 10 – 15mm down from the primary fixings and the third run 15mm from the bottom lap. The end of the lap should be stitched to improve compression of the lap strip.

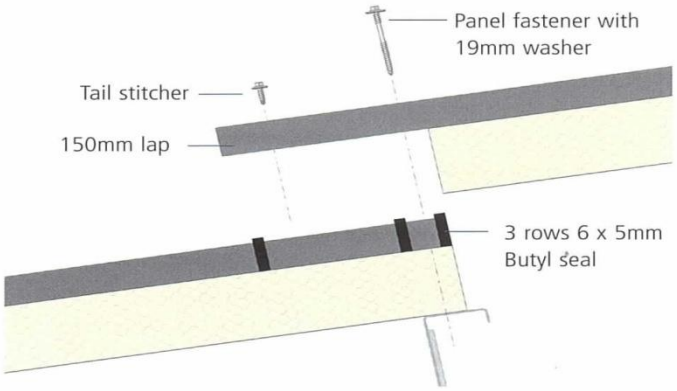


Figure 03: End lap fixing details - roof panels

Composite panels provide class O resistance to surface spread of flame and can be used to form roof and wall linings without any additional treatment.

For further guidance regarding fire performance, thermal performance or any other details please contact our sales team.

Always handle composite panels with care. When lifting panels from the pack do not drag them. Carry panels by the male (FILLED) edge do not lift them from the female edge as this may lead to stress of the weather sheet away from the insulation core. Before fixing any panels always check the squareness and accuracy of the building structure, and check for any panel damage before fixing, also remove any excess insulation from side and end laps.

Observe all relevant health and safety procedures and results of manual handling assessments