



Technical Specification

System Type:	External Insulated Cladding for the Off-Site Construction Industry.
Manufacturer:	Excel Laminating Ltd
Nominal Thickness:	31mm
Maximum height:	3600mm

Properties

Fire resistance (minutes): 60 minutes - with OSB or Weather Defence sheathing and 15mm Mega Excel boarding inside. The assembled system has been tested at Exova for fire resistance in accordance with BS EN 1364 – 1 : 2015 . It achieved a fire rating of 60 minutes in both cases of fire exposed from outside to inside (using Weather Defence sheathing) and also inside to outside (using OSB sheathing) in two separate tests.

Fire test code references

External Fire Exposure: BMT/FEP/F/15246 10/11/2015

Internal Fire Exposure: BMT/FEP/F/15247 13/11/2015

20dB for the Panel; 50dB for the assembled system.

Sound Reduction Rw: Severe

BS 5234 duty grade: R value is 0.90 m²K/W. Typical system

Thermal Insulation: U value is 0.28 W/m²K using 100mm mineral wool insulation and 0.21 W/m²K using 140mm mineral wool insulation.

Framing installation

Studs, Top and Bottom rails: Single frame of CLS Timber studs can be 120x38mm or 140x38mm at 400 or 600 mm centres as appropriate factory manufactured frames by others.

30mm Eco Polyfoam XPS + 0.50mm or 0.70mm Pre-coated Steel

Panel Specification: Mid height noggins are recommended. The product is secretly fixed to the studs with 38mm self tapping wafer head zinc plated screws, at 300mm centres down the tongued vertical edge. A silicon bead line is then also added down the full length of tongued vertical edge. It is fixed to the centre studs using 6 mm zig zag beads of Solvent free grip adhesive when fixing Polyfoam directly to another substrate (limitations apply). There is a fixed angle trim top and bottom. It is advised to drill drainage into the bottom trim at 600mm centres. Panels can be laid vertically or horizontally.

Bracing type and fixings:

Distance between frames: No maximum limit

Plasterboard linings

Inner leaf: One layer of 15mm GTEC MegaExcel wallboard.

Sheathing: One layer of 11mm OSB 3 or 12.5mm GTEC Weather Defence board.

Plasterboard fixings:

First Layer Size: 50mm GTEC Drywall Hi thread screws all at 300mm centres.

Cavity Insulation: Glass mineral wool type insulation.

Density: 10 kg/m³ minimum.

Thickness: 120mm or 140mm depending on the stud size and required U value.

Insulation fixing: By way of friction inside the stud cavities.

Acoustic/Fire Protection: Apply 6mm continuous beads of Intumescent Sealant around the perimeter in order to make the panel air tight.

Finishes

Type of finish - internal: GTEC Taping and jointing system or Excel PVC Pre-decorated MegaExcel boards with a 2 Part PVC H-Section.