technical
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Fixing of Plasterboard to Wesbeam Engineered Wood Products in Residential Housing

Introduction

Due to their reliability, dimensional consistency and long length availability, Engineered Wood Products (EWPs) are now widely used in residential housing from bearers and joists through to roof framing. Technically, this wide spread market acceptance has been due to their uniformity of engineering properties, high strength to weight ratios and reliable performance.

Wesbeam manufactures EWPs that are used in residential housing: e-beam LVL (Laminated Veneer Lumber), which is used in all applications where traditional sawn timber is used, and e-joist (I-joist product) that is typically used in floor joist and roof rafter applications.

Wesbeam Products

e-beam LVL is manufactured by laminating sustainably sourced timber veneers, using phenolic adhesive, in a continuous assembly in which the grain direction of all veneers runs longitudinally. The grade of veneers used complies with the requirements of AS/NZS 2269 Plywood — Structural Part 0 Specifications which allows a range of characteristics, including filled knot holes, sound knots, filled splits and tight gum veins, to be present in veneers. It is pressed as a 1.2 m nominal width continuous billet in various standard thicknesses (35mm, 45mm and 63mm), cut to standard widths and any specified length for use as structural beams or other residential framing components. e-beam LVL conforms with the requirements of AS/NZS 4357 Structural Laminated Veneer Lumber and is manufactured from sustainably sourced timbers, making it an environmentally sustainable resource.

e-joist is an I-joist product that can be used as a floor joist or roof rafter and consists of an LVL flange and a structural plywood or Orientated Strand Board (OSB) web. Flanges are manufactured by laminating, sustainably sourced timber, veneers using phenolic adhesive in a continuous assembly in which the grain direction of all veneers runs longitudinally.

Wesbeam EWPs can be used with plasterboard linings and conform with the substrate requirements of AS/NZS 2589 Gypsum linings — Application and finishing having a minimum nominal face fixing width of 35mm or greater, are seasoned (moisture content of 15% or less) and have been manufactured to consistent machining tolerances.

Fixing of Plasterboard to Wesbeam EWPs

When fixing plasterboard to EWPs, the same principles apply as those used for sawn timber products. Care needs to be taken when fixing near the ends and edges of wood products to ensure that fasteners are firmly held and that no splitting occurs. In addition, with EWPs, the potential presence of filled holes, knots etc in some individual veneers may require a slight repositioning of the fastener to ensure it is firmly held. Recommended plasterboard fasteners for use with Wesbeam EWPs are provided in Table 1.

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Table 1 — Recommended Fasteners

Plasterboard[1] Thickness (mm)	Fastener Size	
	Hand driven nails[2]	Needle Point Screws[2]
10	40 x 2.8 mm Ø galv. or 30 x 2.8 mm Ø ring shank	No. 6 Gauge x 25 mm[3]
13	40 x 2.8 mm Ø galv. or 30 x 2.8 mm Ø ring shank	No. 6 Gauge x 30 mm
16	50 x 2.8 mm Ø galv.	No. 6 Gauge x 45 mm

(1) Installation of plasterboard in accordance with AS/NZS 2589 Gypsum linings — Application and finishing.
(2) Fasteners shall be driven home slightly below the surface without punching through the face linerboard.
(3) Screws used for fixing plasterboard to timber ceiling substrates shall have a minimum length of 30mm.

Figure 1 — e-beam fixing

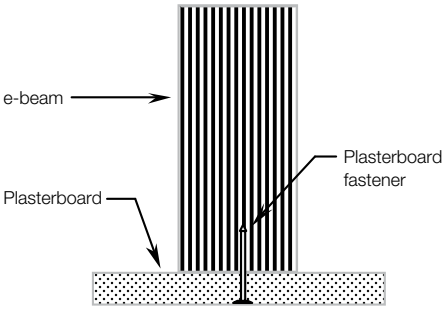
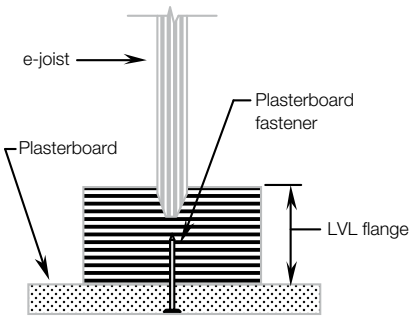


Figure 2 — e-joist fixing



Treated Wesbeam EWPs

Wesbeam EWPs are also available as treated products (e2S treatment) where resistance to termite attack is required for locations south of the Tropic of Capricorn. When using these products, care should be taken in selecting adhesives to ensure adequate adhesion performance — refer adhesive and plasterboard manufacturer's specifications.

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