

Metrix Timber LVL E13 Material Property Verification

Metrix Timber has undertaken a statistical analysis of E13 LVL in accordance with AS/NZS 4063.1 and AS/NZS 4063.2. The objective of the analysis was to determine characteristic design values for use when designing to AS 1720.1.

Metrix E13 LVL is a structural LVL manufactured in accordance with AS/NZS 4357.0 from mixed species, and supplied in Australia by Metrix Timber. The testing data was taken as a representative sample and analysed to produce the characteristic design values shown in Table 1 below:

Characteristic Limit States Design Stresses and Elastic Moduli

Property		Edge (Mpa)	Flat (Mpa)
Modulus of Elasticity	E	13200	13200
Modulus of Shear Rigidity	G	660	660
Bending	f_b^1	61.6	48.7
Tension Parallel to Grain	f_t^1	33	-
Compression Parallel to Grain	f_c	33	-
Shear in Beams	f_s	5.8	4
Bearing Perpendicular to Grain	f_p	12	3.7
Joint Group	(Nails & Screws)	JD 4	JD 4
	(Bolts)	JD 3	JD 3
Strength Group		SD6	SD6
Density (kg/m3)	ρ	580-640	-

Notes:

1. For beams exceeding 95mm – multiply the published characteristic value for bending by $(95/d)^{0.154}$ where d is depth of the beam.
2. For tension members with the largest cross-sectional dimension exceeding 150mm – multiply the published characteristic value for tension by $(150/d)^{0.167}$, where d is the largest cross-sectional dimension of the tension member.

Regards,

Mena Kamel
Director