

The characteristic properties of our glue-laminated products.

Mechanical Properties

These Mechanical Properties have been determined in limit state form with a comprehensive testing and evaluation program carried out by Hyne Timber. The Modulus of Rigidity is calculated by using $G = E/15$.

Density is a measured property and is determined as average Seasoned Density. However properties such as Bearing Strength (Perpendicular and Parallel to Grain), Shear Strength at Joint Details and Tension Strength (Perpendicular to Grain) are secondary properties dependent on the strength group of the material and are determined in accordance with AS1720.1-2010. Further Joint Group results are based on the material used, and the groups are defined based on species and density as per AS1720.1-2010.

PRODUCT	STRESS GRADE	BENDING STRENGTH (F_b)	TENSION STRENGTH		SHEAR STRENGTH		COMPRESSION STRENGTH (F_c)
			PARALLEL (F_{\parallel})	PERPENDICULAR (F_{\perp})	IN BEAM (F_s)	AT JOINT DETAIL (F_{sj})	
LGL (44mm)	LGL44*	30MPa	16MPa	0.5MPa	3.7MPa	4.2MPa	30MPa
LGL (65mm)	GL13	33MPa	16MPa	0.5MPa	4.2MPa	4.2MPa	26MPa
BEAM 17	GL17	40MPa	20MPa	0.5MPa	4.2MPa	5.4MPa	33MPa
BEAM 18	GL18	45MPa	25MPa	0.6MPa	5MPa	7.3MPa	45MPa
BEAM 21	GL21*	50MPa	25MPa	0.8MPa	5MPa	8.4MPa	50MPa

PRODUCT	BEARING STRENGTH		MODULUS OF ELASTICITY (E)	MODULUS OF RIGIDITY (G)	STRENGTH GROUP	JOINT GROUP	DENSITY
	PARALLEL (F_{\parallel})	PERPENDICULAR (F_{\perp})					
LGL (44mm)	30MPa	10MPa	13,300MPa	890MPa	SD6	JD4**	650KG / M ³
LGL (65mm)	30MPa	10MPa	13,300MPa	900MPa	SD6	JD4**	650KG / M ³
BEAM 17	40MPa	13MPa	16,700MPa	1,100MPa	SD5	JD4**	650KG / M ³
BEAM 18	59MPa	19MPa	18,500MPa	1,230MPa	SD3	JD3	750KG / M ³
BEAM 21	67MPa	23MPa	21,000MPa	1,400MPa	SD2	JD2	1,000KG / M ³

*LGL44 and GL21 are proprietary structural grades. For design advice please refer to the relevant Australian Standards.

**Any connections using the central part of Beam 17 and LGL beams should assume a JD5 joint group.



AS/NZS 1328.1:98 Compliant

We craft for durability and our promise is just as strong as our product. Values of integrity, dependability and accountability underpin our business and that's why we've had our products certified by an independent third-party. The 'S' Mark scheme provides rigorous auditing of GLT glue-line bond processes and product documentation. (Licence No:2757)