

LSL10 LINTELS

Description and Substitution

Release 1.0 November 2016



Lintels	<p>A Lintel is a horizontal beam contained within a loadbearing wall over openings in the wall frame; generally the openings contain windows and doorways. This common lintel beam assumes that all the roof rafters or trusses supported have the same overhang and span, and therefore apply the same loads at equal spacings across the lintel span.</p> <p>Lintels have tighter design deflections than other members to ensure the opening members below the lintel are not compromised.</p>
LSL10 x90mm	<p>90mm LSL is a strand-based product created in a steam injection press.</p> <p>The end product is a long length laminated timber strand billet with consistent and predictable properties. The billets are then ripped making it an ideal product for load-carrying beam and lintel applications matched to the common timber framing size of 90mm.</p> <p>Using a 90mm lintel product avoids common remediation problems associated with nail laminating, saves time and reduces the risk of occupational accidents.</p>
Quality	<p>LSL is manufactured in a modern plant in the USA under stringent quality control procedures. APA- The Engineered Wood Association (North America) is the plant auditor who operates the Quality Management System for all client plants throughout USA and Canada. This is an important consideration for designers' confidence and where consistent performance and reliability is required.</p>
Verification	<p>LSL has been verified as meeting the New Zealand Building Code byASUREQuality having issued a CodeMark for the LSL product (Reference AQ-021116-CMNZ).</p>
CodeMark	<p>CodeMark is a product certification scheme demonstrating conformance with the New Zealand Building Code. The product must be accepted by consenting authorities when specified within the approved use and scope.</p> 
Timber Protection	<p>LSL is treated "in-process" with Zinc Borate (ZB) and has been independently laboratory tested during the CodeMark assessment to confirm compliance with the H1.2 hazard class.</p>
Substitution	<p>The following table has been developed using sound engineering practices and in accordance with NZS3603; the table has been approved by a Certified Professional Engineer.</p>

LSL 10 90mm Lintel Substitution for Sawn Timber

Specified Member SG8	Specified Member SG10	LSL10 Permitted Substitution
2/140x45 SG8	-	1/120x90 LSL10 ✓
2/190x45 SG8	2/140x45 SG10	1/150x90 LSL10 ✓
2/240x45 SG8	2/190x45 SG10	1/200x90 LSL10 ✓
2/290x45 SG8	2/240x45 SG10	1/240x90 LSL10 ✓
2/290x45 SG8	2/290x45 SG10	1/300x90 LSL10 ✓

LVL & Glulam Lintel Substitution

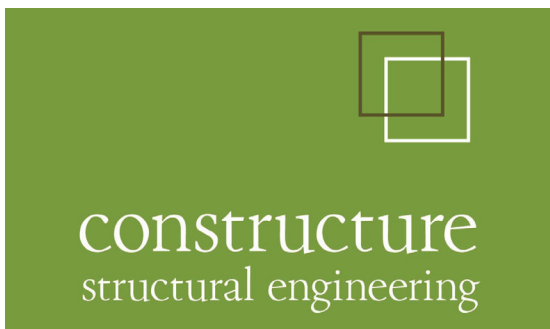
SolidGuard LSL 10 may be used as a direct substitute for other engineered wood products (such as Glulam and LVL) provided the LSL10 is of the same finished size as the member to be substituted and that the strength and stiffness properties are no less than the strength and stiffness properties of the product to be substituted.

SolidGuard LSL 10 Stiffness = 10.6 GPa. SolidGuard LSL 10 Bending Strength = 39 MPa¹

¹ for beams up to 95mm in depth. For beams exceeding 95mm in depth multiply the value above by (95/d)^{0.12} where d= the beam depth.

LSL 10 Garage Lintel

Load Conditions for 4.8m Maximum Span		Lintel Size
Wind Load	Up to Very High	315x90 LSL 10
Snow Load	All regions to 100m altitude (sg 0.90 kPa)	
Roof Load	Up to 40kg/m ² roof + ceiling	
Roof Pitch	Up to 35°	
Roof Span	6m truss + 0.6m O/H (=3.6m loaded dimension)	
Maximum Deflection	<10mm	



I have checked the above table using sound structural engineering practices and with reference to NZS 3603 and certify the table above may be used for buildings within the scope of NZS3604.

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Date: ..21/11/2016.....