

1.0 About

1.1 Introduction

HTL H-LAM™ GluLam is recommended for residential & commercial use. Including, but not limited to: Posts, Beams, Ridge Beams, Rafters, Lintels, Columns and Portal Frames.

HTL H-LAM™ GluLam is manufactured with kiln dried finger-jointed laminas of NZ Pinus Radiata. HTL H-LAM™ GluLam has been laminated to enhance the dimensional stability of the timber.

2.0 Code Compliance

2.1 Building Standards

HTL H-LAM™ GluLam meets the requirements and limitations of the following:

- AS/NZS 1328:1998 Glue Laminated Structural Timber (all parts)
- AS/NZS 1604.5 2010 Specification for preservative treatment Part 5: Glued laminated timber products
- AS/NZS 1748:2011 Timber – Solid – Stress graded for structural purposes (all parts)
- AS/NZS 4063:2010 Characterization of structural timber (all parts)
- AS/NZS 4364:2010 Timber – Bond performance of structural adhesives
- AS 5068:2006 Timber – Finger joints in structural products
- NZS 3602:2003 Timber and Wood based Products for Use in Building
- NZS 3603:2011 Timber design and construction
- NZS 3631:1988 New Zealand timber grading rules
- NZS 3640: 2003 Chemical Preservation of Round & Sawn Timber

3.0 Adhesives

HTL H-LAM™ GluLam is manufactured using Resorcinol and/or PUR.

3.1 Resorcinol

Resorcinol glue is dark brown in colour and made up of two parts:

- 'Jowat PRF Resin 950.80'
- 'Jowat Hardener 950.85'

3.2 PUR

PUR (polyurethane) glue is translucent (slightly white) and two types are used:

- Finger jointing – 'Jowapur 680.03'
- Laminating– 'Jowapur 681.10' or 'Jowapur 681.40' or 'Jowapur 681.70' (the .xx refers to glue open time)

Jowat can certify the PUR adhesive durability for 50 year subject to conditions and exclusions including:

- Posts must be fully encased in concrete (not in direct contact with soil).

4.0 Timber Properties

HTL H-LAM™ GluLam is manufactured with kiln dried finger-jointed laminas. Moisture content is up to 15%.

HTL H-LAM™ GluLam is manufactured to Service Class 3 – Exterior, fully exposed.

HTL H-LAM™ GluLam 'shall be protected against damage from moisture, and against significant variations of moisture content, both before and after installation or enclosure' (NZS 3604:2011, para. 4.3.2).

HTL H-LAM™ GluLam shall be coated with an appropriate coating system to protect the integrity of the GluLam. And this coating shall be kept up to date with the coating manufacturers maintenance program.

HTL H-LAM™ GluLam is manufactured to the following timber properties:

Timber Properties	NZ/AU (EU)	SG8	GL8 (GL19)	GL10 (GL22)	GL12 (GL25)
Modulus of Elasticity (MOE)	(E) GPa	8	8	10	11.5
Modulus of Rupture (MOR)	(G) GPa	5.4	5.3	6.7	7.7
Bending	(fb) MPa	14	19	22	25
Tension parallel to grain	(ft) MPa	6	10	11	12.5
Compression parallel to Grain	(fc) MPa	18	24	26	29
Shear in Beam	(fs) MPa	3	3.7	3.7	3.7

Glulam Properties - ASNZS1328.2-1998-Glued Laminated Structural Timber
For the GL grade - NZ & Aus use the MOE number, the EU use the Bending Strength number

HTL H-LAM™ GluLam is Treated as shown in the following table:

Timber Treatment					
Hazard Classes	U/T	H1.2	H3.1	H3.2	H5
Applications					
Interior non-structural components	●				
Framing and interior construction timber not in direct weather exposure		●			
Exterior non-structural building components			●		
Outdoors, exposed to weather			●	●	●
Above ground			●	●	
Exterior structural building components				●	
Applications with a risk of moisture entrapment				●	
Encased in Concrete, or on a bracket					●
Species Manufactured					
Douglas Fir - Glulam	●	●			
Radiata - Glulam	●	●	●	●	●