Wood Preservation Canada
Préservation du bois Canada

SPECIFIER GUIDE

No. WPC – 03-2020

Glue Laminated Timber

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SPECIFYING GLUED-LAMINATED TIMBER

WPC – 03-2020

Product Introduction

Glued-laminated timber is produced by gluing multiple layers of dimensional wood together using waterproof adhesives under controlled conditions and as finished products they are commonly referred to as "Glulam" timber. Glulam products are used as structural members to form vertical columns, horizontal beams, as well as curved or arched timber beams.

Glulam timbers are used in variety of structural applications ranging from bridge construction, trestles and other industrial construction projects that require products that can span large distances. The high strength and stiffness of Glulam timber is what allows these products to span large distances and the addition of preservatives provides longevity, allowing them to be used in a variety of exposure conditions.

The information in this guide focuses only on the requirements for pressure treating of glued-laminated members as specified in the CAN/CSA O80 Series – 15 Wood Preservation©. Refer to CAN/CSA O122-16 – Structural Glued-laminated Timber for the minimum requirements for the manufacture of glulam products.

Allowable Wood Species, Preservatives and Related Use Categories

Preservative Systems Used in Treatment of Glued – Laminated Members and Related Use Categories		
Chemical Name	**Abbreviation**	**Allowable Use Categories**
Creosote	CR	UC1, UC2, UC3.2, UC4.1, UC4.2
Creosote - PS	CR-PS	UC1, UC2, UC3.2, UC4.1, UC4.2
Pentachlorophenol	PCP-A / PCP-C	UC1, UC2, UC3.2, UC4.1, UC4.2

Preservative Treatments – Glued – Laminated beams				
UC1 – Above ground – Interior – Protected – Insect only UC2 – Above ground – Interior – Protected – Damp UC3.2 – Above ground – Structural – Above ground - Exterior				
	Preservative System Retention – kg/m³*			
	CR and CR-PS		PCP – A and PCP - C	
Species	≤114 mm thick	≥114 mm thick	≤114 mm thick	≥114 mm thick
Western hemlock	128	96	6.4	6.4
Coastal Douglas fir	128	96	6.4	6.4
** Refer to CAN / CSA O80.1-15 Table 20 for complete details.* *Source: © 2015 Canadian Standards Association*				

Preservative Treatments – Glued – Laminated beams				
UC4.1 - Highway – Critical Structural – Above ground – Exterior UC4.1 – Highway – General Structural – Ground contact or freshwater – low decay				
	Preservative System Retention – kg/m³*			
	CR and CR-PS		PCP – A and PCP - C	
Species	≤114 mm thick	≥114 mm thick	≤114 mm thick	≥114 mm thick
Western hemlock	160	128	8.0	8.0
Coastal Douglas fir	160	128	8.0	8.0
** Refer to CAN / CSA O80.1-15 Table 20 for complete details.* *Source: © 2015 Canadian Standards Association*				

Preservative Treatments – Glued – Laminated beams				
UC4.2 - Highway – Critical Structural – Ground contact or freshwater – high decay UC4.2 – Highway – Critical Structural – Ground contact or saltwater splash – high decay				
	Preservative System Retention – kg/m³*			
	CR and CR-PS		PCP – A and PCP - C	
Species	≤114 mm thick	≥114 mm thick	≤114 mm thick	≥114 mm thick
Western hemlock	192	192	9.6	9.6
Coastal Douglas fir	192	192	9.6	9.6
** Refer to CAN / CSA O80.1-15 Table20 for complete details.* *Source: © 2015 Canadian Standards Association*				

Product registration

Wood preservatives and their uses are regulated by Health Canada's Pest Management Regulatory Agency (PMRA).

Recommended Reference Standards

CAN/CSA – O80 Series – 15 Wood Preservation© – Revised August 2017*
CAN/CSA O122-16 – Structural Glued-laminated timber
Source © 2015 Canadian Standards Association