

Declaration of Performance

CLT/2019/01

In accordance with Annex III of Regulation (EU) no. 305/2011

CLT – Cross Laminated Timber

1. Unambiguous identification of the product type
CLT – Cross Laminated Timber in accordance with ETA-14/0349
2. Intended use
Intended for use as a load-bearing, bracing or also non-load-bearing element in buildings or timber structures. May only be used in structures with predominantly static traffic loads in accordance with Eurocode 5 (EN 1995).
3. Manufacturer
Stora Enso Wood Products QY Ltd
Kanavaranta 1, 00160 Helsinki, Finland
4. Name and address of authorised representative

Stora Enso Timber AB
Timmervägen 2, 664 33 Grums, Sweden
5. System for assessing and examining the constancy of performance
System 1
6.
 - a) Harmonised standard: not relevant
Notified body: not relevant
 - b) European Assessment Document: European Assessment Document EAD 130005-00-0304 – “Solid wood construction elements in the form of slabs or panels for load-bearing components in structures”, January 2019 version
European Technical Assessment: ETA-14/0349 of 07.01.2019
Technical assessment body: Österreichisches Institut für Bautechnik (Austrian Institute for Structural Engineering), Schenkenstraße 4, 1010 Vienna, Austria
Notified body: Holzforschung Austria 1359
7. Declared performance

Number of layers:	$3 \leq n \leq 20$
Dimensions:	thickness 42 to 350 mm, width < 3.50 m, length ≤ 16.50 m
Wood type:	PCAB/ABAL
Sorting:	dry graded
Adhesive:	PUR type 1
Reaction to fire:	D-2s, d0
Thermal conductivity λ :	0,13 W/mK
Service class:	1 and 2
Specific heat capacity c_p :	1600 J/(kgK)
Resistance to vapour diffusion μ :	20 to 50
Durability classification:	According to EN 350
Strength class:	C24 according to EN 338 ($\geq 90\%$ C24/T14 / $\leq 10\%$ C16/T11)
Timber treatment:	NPD
Release of hazardous substances:	NPD

8. Specific technical documents

Requirement	Verification method	Numerical value/standard
Mechanical resistance and stability		
1. Mechanical actions perpendicular to the panel		
Strength class of lamellas	EN 338	C24 / T14
Modulus of elasticity:		
• parallel to the grain direction $E_{0, \text{mean}}$	EAD 130005-00-304, 2.2.1.2	12 000 N/mm ²
• perpendicular to the grain direction $E_{90, \text{mean}}$	EN 338	in accordance with EN 338
Shear modulus:		
• parallel to the grain direction G_{mean}	EN 338	in accordance with EN 338
• perpendicular to the grain direction, rolling shear modulus $G_{90, \text{mean}}$	EAD 130005-00-0304, 2.2.1.1	50 N/mm ²
Bending strength:		
• parallel to the grain direction $f_{m, k}$	EAD 130005-00-0304, 2.2.1.1	C24, $1/k_{\text{sys}} \cdot 26.4 \text{ N/mm}^2$ [1]
Tensile strength:		
• perpendicular to the grain direction $f_{t, 90, k}$	EN 338	0.12 N/mm ²
Compressive strength:		
• perpendicular to the grain direction $f_{c, 90, k}$	EN 338	In accordance with EN 338
Shear strength:		
• parallel to the grain direction $f_{v, 090, k}$	EN 338	in accordance with EN 338
• perpendicular to the grain direction (rolling shear strength) $f_{v, 9090, k}$	EAD 130005-00-0304, 2.2.1.3	spruce: min. {1.25; $1.45 - t_{cr}/100$ } [2]
Comments:		
[1] $k_{\text{sys}} = \max. \{1.0; 1.1 - 0.025 \cdot n\}$, (n = number of boards in the cover layer)		
[2] t_{cr} = greatest transverse layer thickness in the cross-section		
2. Mechanical actions in the panel plane		
Strength class of lamellas	EN 338	C24 / T14
Modulus of elasticity:		
• parallel to the grain direction $E_{0, \text{mean}}$	EAD 130005-00-0304, 2.2.1.1	12 000 N/mm ²
Shear modulus:		
• parallel to the grain direction $G_{090, \text{mean}}$	EAD 130005-00-0304, 2.2.1.3	460 N/mm ²
Bending strength:		
• Parallel to the grain direction $f_{m, k}$	EAD 130005-00-0304, 2.2.1.1	in accordance with EN 338
Tensile strength:		
• Parallel to the grain direction $f_{t, 0, k}$	EN 338	in accordance with EN 338
Compressive strength:		
• Parallel to the grain direction $f_{c, 0, k}$	EN 338	in accordance with EN 338
Shear strength:		
• Parallel to the grain direction $f_{v, 090, k}$	EAD 130005-00-0304, 2.2.1.3	3.9 N/mm ²
3. Other mechanical actions		
Creep and duration of load	EN 1995-1-1	
Dimensional stability	Moisture content during use shall not change to such an extent that adverse deformations occur.	
Fasteners	According to EN 1995-1-1, the grain direction of the cover layer is taken as a reference.	

The performance of the product specified above corresponds to the declared performance. The above-mentioned manufacturer is solely responsible for creating this Declaration of Performance in accordance with Regulation (EU) no. 305/2011.

Grums, on 08.01.2019

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Maja Bergström
(Project Director, Grums)