

## **Declaration of Performance**

## CLT/2020/04

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 Wood Products GmbH Bahnhofstraße 31, 3370 Ybbs, Austria

System for assessing and examining the constancy of performance System 1

6.

a) <u>Harmonised standard</u>: not relevant Notified body: not relevant

b) <u>European Assessment Document</u>: European Assessment Document EAD 130005-00-0304 – "Solid wood

construction elements in the form of slabs or panels for load-bearing

components in structures", april 2020 version

European Technical Assessment: ETA-14/0349 from 06.04.2020

<u>Technical assessment body</u>: 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:  $3 \le n \le 20$ 

Dimensions: thickness 42 to 350 mm, width< 3.50 m, length ≤ 16.50 m

Wood type: WPPA
Sorting: dry graded
Adhesive: PUR type 1
Reaction to fire: D-s2, d0

Thermal conductivity λ: 0,12 W/mK
Service class: 0,12 W/mK
1 and 2 according to EN 1995-1-1

Specific heat capacity  $c_{p:}$  1600 J/(kgK) Resistance to vapour diffusion  $\mu$ : 20 to 50

Durability: According to EN 350-2

Strength class: C24 according to EN 338 (≥ 90% C24/T14 / ≤ 10% C16/T11)

Timber treatment: NPD Release of hazardous substances: NPD

## 8. Specific technical documents

Requirement	Verification method	Numerical value/standard
	Mechanical resistance and s	ability
Mechanical actions perpendicular to the pan		
rength class of lamellas	EN 338	C24 / T14
odulus of elasticity:		
<ul> <li>parallel to the grain direction E<sub>0, mean</sub></li> </ul>	EAD 130005-00-304, 2.2.1.2	12 000 N/mm² [2]
<ul> <li>perpendicular to the grain direction E<sub>90, mean</sub></li> </ul>	EN 338	370 N/mm²
hear modulus		
<ul> <li>parallel to the grain direction G<sub>mean</sub></li> </ul>	EN 338	690 N/mm²
<ul> <li>perpendicular to the grain direction,</li> </ul>		
rolling shear modulus G <sub>9090, mean</sub>	EAD 130005-00-0304, 2.2.1.1	50 N/mm²
ending strength:	EAD 400005 00 0004 0 0 4 4	004.4/1 00.4 N/ 0.503
parallel to the grain direction f <sub>m, k</sub>	EAD 130005-00-0304, 2.2.1.1	C24, 1/k <sub>sys</sub> •26.4 N/mm <sup>2</sup> [3]
ensile strength:	EN 000	0.40 N/3
perpendicular to the grain direction f <sub>t, 90, k</sub>	EN 338	0.12 N/mm²
ompressive strength:	EN 229	2 E N/mm²
perpendicular to the grain direction f <sub>c, 90, k</sub>	EN 338	2,5 N/mm²
hear strength:	EN 338	4,0 N/mm²
parallel to the grain direction f <sub>v,090 k</sub> parallel to the grain direction	EAD 130005-00-0304, 2.2.1.3	
<ul> <li>perpendicular to the grain direction (rolling shear strength) f<sub>v,9090, k</sub></li> </ul>	EAD 130005-00-0304, 2.2.1.3	spruce: min. {1.25; 1.45 - t <sub>cr</sub> /100} [4] pine: min. {1.70; 1.90 - t <sub>cr</sub> /100} [4]
(rolling streat strength) Iv,9090, k		REX: min. {1.70, 1.90 – t <sub>cr</sub> /100} [4]
comments: $ \begin{array}{l} \text{CDT} - \text{Cross Laminated Timber with transverse} \\ \text{2} \text{ E}_0, _{\text{mean}} = 6800 \text{ N/mm}^2 \text{ for lamellae type "REX"} \\ \text{3} _{\text{kys}} = \text{max. } \{1.0;1.1-0,025 \cdot \text{n}\},  (\text{n} = \text{number of }) \\ \text{1} _{\text{cr}} = \text{greatest transverse layer thickness in the c} \\ \end{array} $	boards in the cover layer)	be considered equivalent to C24/T14
] CLT – Cross Laminated Timber with transverse :] Eo, mean= 6800 N/mm² for lamellae type "REX" ] ksys = max. {1.0;1.1 – 0,025 • n}, (n = number of ] t <sub>cr</sub> = greatest transverse layer thickness in the c	boards in the cover layer) ross-section	
] CLT – Cross Laminated Timber with transverse ] E <sub>O</sub> , mean= 6800 N/mm² for lamellae type "REX" ] k <sub>sys</sub> = max. (1.0;1.1 – 0,025 • n), (n = number of ] t <sub>cr</sub> = greatest transverse layer thickness in the comparison of the comparison of the panel plane trength class of lamellas	boards in the cover layer)	be considered equivalent to C24/T14  C24 / T14
] CLT – Cross Laminated Timber with transverse Pl Eo, mean= 6800 N/mm² for lamellae type "REX"   Ksys = max. (1.0;1.1 – 0,025 • n), (n = number of   tcr = greatest transverse layer thickness in the complete trength class of lamellas lodulus of elasticity:	boards in the cover layer) ross-section	C24 / T14
CLT - Cross Laminated Timber with transverse   E <sub>O</sub> , mean= 6800 N/mm² for lamellae type "REX"   ksys = max. {1.0;1.1 - 0,025 • n}, (n = number of   t <sub>cr</sub> = greatest transverse layer thickness in the companied trength class of lamellas   lodulus of elasticity:  • parallel to the grain direction E <sub>0, mean</sub>	boards in the cover layer) ross-section	
CLT - Cross Laminated Timber with transverse   E <sub>0</sub> , mean= 6800 N/mm² for lamellae type "REX"   ksys = max. {1.0;1.1 - 0,025 • n}, (n = number of   t <sub>cr</sub> = greatest transverse layer thickness in the companied trength class of lamellas   lodulus of elasticity:  • parallel to the grain direction E <sub>0, mean</sub>   hear modulus:	boards in the cover layer) ross-section  EN 338  EAD 130005-00-0304, 2.2.1.1	C24 / T14  12 000 N/mm²
] CLT - Cross Laminated Timber with transverse   E <sub>O, mean</sub> = 6800 N/mm² for lamellae type "REX"   k <sub>sys</sub> = max. {1.0;1.1 - 0,025 • n}, (n = number of   t <sub>cr</sub> = greatest transverse layer thickness in the c   Mechanical actions in the panel plane trength class of lamellas   lodulus of elasticity:  • parallel to the grain direction E <sub>0, mean</sub>   hear modulus:  • parallel to the grain direction G <sub>090, mean</sub>	boards in the cover layer) ross-section	C24 / T14
CLT - Cross Laminated Timber with transverse  Eo, mean= 6800 N/mm² for lamellae type "REX"  ksys = max. {1.0;1.1 - 0,025 • n}, (n = number of ltr = greatest transverse layer thickness in the complete layer layer thickness in the complete layer l	boards in the cover layer) ross-section  EN 338  EAD 130005-00-0304, 2.2.1.1  EAD 130005-00-0304, 2.2.1.3	C24 / T14  12 000 N/mm²  460 N/mm²
CLT - Cross Laminated Timber with transverse   E <sub>O, mean</sub> = 6800 N/mm² for lamellae type "REX"   k <sub>ys</sub> = max. {1.0;1.1 - 0,025 • n}, (n = number of   t <sub>cr</sub> = greatest transverse layer thickness in the composition of the lambda of lamellas   Mechanical actions in the panel plane   trength class of lamellas   lodulus of elasticity:  • parallel to the grain direction E <sub>0, mean</sub>   hear modulus:  • parallel to the grain direction G <sub>090, mean</sub>   ending strength:  • Parallel to the grain direction f <sub>m, k</sub>	boards in the cover layer) ross-section  EN 338  EAD 130005-00-0304, 2.2.1.1	C24 / T14  12 000 N/mm²
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CLT - Cross Laminated Timber with transverse   Eo, mean= 6800 N/mm² for lamellae type "REX"   Rsys = max. {1.0;1.1 - 0,025 • n}, (n = number of   tcr = greatest transverse layer thickness in the complete transverse layer thickness in the co	EN 338  EAD 130005-00-0304, 2.2.1.1  EAD 130005-00-0304, 2.2.1.1  EN 338  EN 338  EN 338  EN 338  EN 130005-00-0304, 2.2.1.1  Moisture content during use sha occur.	C24 / T14  12 000 N/mm²  460 N/mm²  24 N/mm²  14,5 N/mm²  21 N/mm²  3.9 N/mm²

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.

