

Declaration of Performance – LENO® Cross Laminated Timber

Nr. DOP-ZT-CLT-eng-004

Number description: declaration of performance-ZÜBLIN Timber GmbH-cross laminated timber-English-consecutive number

1. Unique identification code of the product-type:

LENO® cross laminated timber related to ETA-10/0241

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):

The production date can be seen by the component plan.

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by manufacturer:

The solid wood slab is intended to be used as a load-bearing, bracing or non structural element in buildings and timber structures.

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):

**ZÜBLIN Timber GmbH
Industriestraße 2
86551 Aichach
Germany**

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

No authorised representatives

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 1

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Not applicable

8. In case of the declaration of performance concerning a European Technical Approval:

Notified product certification body MPA Stuttgart – Otto-Graf-Institut (FMPA) – 0672 – performed the initial test as well as the initial inspection of the manufacturing plant and of the factory production control and the continuous surveillance, assessment and evaluation of factory production control. The issued certificate of constancy of performance 0672-CPR-0798 certified the compliance to the appointments of the European Technical Approval ETA-10/0241.

9. Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Mechanical resistance	For the calculation the characteristic strength and stiffness values of softwood according to EN 338 shall be used taking into consideration the definitions in ETA-10/0241, annex 2. In addition the following values apply:	ETA-10/0241

	<p>strength class of the lamellas C24 according to EN 338 (distribution of the layers C 24 ≥ 70%; C16 ≤ 30%)</p> <table><tr><td>Mechanical actions in plane of CLT</td><td>Shear strength (5% - fractile)</td><td>$f_{v,k}$</td><td>See Annex 4</td></tr><tr><td rowspan="2">Mechanical action perpendicular to the plane of CLT</td><td>Rolling shear strength (5% - fractile)</td><td>$f_{v,9090,k}$</td><td>0,70 [N/mm²]</td></tr><tr><td>Rolling shear modulus (mean value)</td><td>$G_{9090,mean}$</td><td>50 [N/mm²]</td></tr></table> <p>For layers of one layered solid wood panels, which do not include notches, as characteristic roll shear strength $f_{v,9090,k} = 1,25$ [N/mm²] can be used. If elements are connected by universal finger joints according to EN 387, the characteristic values for bending, tension- and compression shall be reduced by 40% in field of the universal finger joint. For the characteristic values of solid wood panels and structural laminated veneer lumber the rules of the associated European standard of European technical approval apply. For Fineline layers the characteristic values for softwood lamellas of the strength class C 35 apply. National regulations might have to be followed. Use only in service classes 1 und 2, EN 1995-1-1</p>				Mechanical actions in plane of CLT	Shear strength (5% - fractile)	$f_{v,k}$	See Annex 4	Mechanical action perpendicular to the plane of CLT	Rolling shear strength (5% - fractile)	$f_{v,9090,k}$	0,70 [N/mm ²]	Rolling shear modulus (mean value)	$G_{9090,mean}$	50 [N/mm ²]
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Behaviour in case of fire	<p>Charring rate 0,7 mm/min, EN 1995-1-2 Reaction to fire D-s2, d0, EN 13501-1</p>														
Hygiene, health and the environment	<p>Release of formaldehyde E 1, EN 13986 Vapour permeability $\mu = 20 - 50$, EN ISO 10456</p>														
Safety in use	<p>No performance determined (NPD)</p>														
Protection against noise	<p>No performance determined (NPD)</p>														
Energy, economy and heat retention	<p>Thermal conductivity $\lambda = 0,12$ [W/(m²·K)], EN ISO 10456 Thermal inertia $c_p = 1600$ [J/(kg·K)], EN ISO 10456</p>														

10. The performance of the product identified in points 1 and 2 is conformity with the declared performance in point 9.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Christian Scholz / administration director ZÜBLIN Timber GmbH
(name and function)

Aichach, 05.06.2023
(place and date of issue)



(signature)