THEURL
AUSTRIAN PREMIUM TIMBER®

Nr. 01/2020

Declaration of performance

DOP CLTPLUS 2020-12

acc. to EU Regulation No. 305/2011

1. Unique product type identifier:	CLTPLUS Cross Laminted Timber by THEURL
2. Designated use:	Load-bearing and non-load-bearing use in structural engineering acc. to Eurocode 5 (EN 1995)
3. Manufacturer:	Theurl Timber Structures GmbH
4. Authorised representative:	No external representative
5. System for assessment and verification of performance reliability:	System 1
6b. European assessment document:	EAD 13005-00-0304
European technical assessment:	ETA-20/0843, 16.11.2020
Technical assessment centre:	Österreichisches Institut für Bautechnik (OIB), Schenkenstraße 4, 1010 Wien - AT
Notified body:	Holzforschung Austria 1359
Certificate number	1359-CPR-0810

7. Product characteristics	
Number of layers	3-9, symmetric design
Max. Number of parallel layers	2
Geometric data	Width 2,25 - 3,5 m Length 8 - 16 m Thickness 60 - 320 mm
Type of wood	Spruce PCAB or similar conifer, fir and pine
Strength class	Top layer C24 (EN338), innerlayer ≥ 90% C24, ≤ 10% C16
Wood moisture	10-12% (+/-2%)
Adhesive	1K PUR, EN 15425, finger jointing and surface bonding formaldehyde-free
Finger jointing	EN 14080
Adhesive strength of adhesive bonding between layers	Delamination test acc. to EN 14080, Appendix C, Method B
Fire characteristics	D-s2, D0, resolution of the Commission 2005/610/EC
Heat conductivity	0,12 W/m²K, EN ISO 10456
Specific heat capacity	1600 J/kgK, EN ISO 10456
Air permeability	Class 4 see air-tight, Class 4 acc. to EN 12207
Water vapour resistance factor μ	20-50, EN ISO 10456
Use class	1 and 2, EN 1995-1-1

CLT PLUS
CROSS LAMINATED TIMBER
BY THEURL

8. Declared performance:			
Essential characteristics:	Performance		Assessment method
Mechanical characteristics:	CLTPLUS Cross Laminated Timber by Theurl acc. Appendix 2, ETA-20/0843		
Panel loads:			
Strength class of lamellae:	C24		Acc. to EN 338
Young's modulus:	$E_{0,mean}$= 11600 N/mm² parallel	$E_{90,mean}$= 370 N/mm² vertical	Appendix 3 ETA-20/0843
Shear modulus:	$G_{0,mean}$= 690 N/mm² parallel	$G_{90,mean}$= 50 N/mm² vertical	EAD 130005-00-0304, 2.2.1.1
Flexural strength:	$f_{m,k}$ = 1/ksys • 26,4 N/mm² [1]		EAD 130005-00-0304, 2.2.1.1
Tensile strength:	$f_{t,90,k}$ = 0,12 N/mm²		EN 338
Compressive strength:	$f_{c,90,k}$ = 2,5 N/mm²		EN 338
Shear strength:	$f_{v,090,k}$ = 4,0 N/mm²	Rolling shear $f_{v,9090,k}$ = 1,3 N/mm²	EN 338 Appendix 3 EAD 130005-00-0304, 2.2.1.3
Remarks: [1]	$k_{sys} = \max\{\frac{1,1 - 0,025 * n}{1}\}$	n = number of boards in top layer	
Slab loads:			
Strength class of lamellae:	C24		Acc. to EN 338
Young's modulus:	$E_{0,mean}$= 11600 N/mm² parallel		Appendix 3 ETA-20/0843
Shear modulus:	$G_{0,mean}$= 450 N/mm² parallel		EAD 130005-00-0304, 2.2.1.1
Flexural strength:	$f_{m,k}$ = 24,0 N/mm²		Appendix 3 ETA-20/0843
Tensile strength:	$f_{t,0,k}$ = 14,5 N/mm²		EN 338
Compressive strength:	$f_{c,0,k}$ = 21,0 N/mm²		EN 338
Shear strength:	$f_{v,090,k}$ = 5,0 N/mm²		Appendix 3 EAD 130005-00-0304, 2.2.1.3

9. The performance of the above product corresponds to the declared performance. The manufacturer named above is solely responsible for drawing up the declaration of performance in accordance with Regulation (EU) No. 305/2011.

Steinfeld, 01.12.2020	Signed on behalf of the manufacturer: