

DECLARATION OF PERFORMANCE

NO. MW/LVL/316-002/CPR/DOP

**1. PRODUCT-TYPE:**

Kerto LVL D-panel
Structural Laminated Veneer Lumber, with crosswise veneers (LVL-C)

NOMINAL THICKNESS	NUMBER OF VENEERS	LONG GRAINED	CROSS GRAINED	LAY-UP
15 mm	5	3	2	— —
18 mm	6	4	2	— —

2. INTENDED USES:

Buildings and bridges

3. MANUFACTURER:

Metsäliitto Cooperative
Metsä Wood
P.O.Box 24
FI-08101 Lohja, Finland
Tel. +358 10 4605
metsagroup.com/metsawood/

5. SYSTEM OF ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE:

AVCP System 1

6a. HARMONISED STANDARD:

EN 14374:2004

Notified body:

Eurofins Expert Services Oy, Notified product certification body No. 0809

Certificate of constancy of performance:

0809 – CPR – 1002

7. DECLARED PERFORMANCES

ESSENTIAL CHARACTERISTICS	SYMBOL	PERFORMANCE	
		KERTO LVL D-panel THICKNESS 15 mm	KERTO LVL D-panel THICKNESS 18 mm
Modulus of elasticity and shear modulus		N/mm² or kg/m³	N/mm² or kg/m³
<u>Modulus of elasticity, mean values</u>			
Parallel to grain, along	$E_{m,0,flat,mean}$	8900	8200
Parallel to grain, across	$E_{m,90,flat,mean}$	2500	3400
Parallel to grain, along	$E_{c,0,mean}^1$	5900	6200
Perpendicular to grain, edgewise	$E_{c,90,edge,mean}^3$	3800	3200
Perpendicular to grain, flatwise	$E_{c,90,flat,mean}$	NPD	NPD
<u>Modulus of elasticity, fifth percentile value</u>			
Parallel to grain, along	$E_{m,0,flat,k}$	7100	6500
Parallel to grain, across	$E_{m,90,flat,k}$	1500	2000
Parallel to grain, along	$E_{c,0,k}^2$	4700	4900
Perpendicular to grain, edgewise	$E_{c,90,edge,k}^4$	2200	1900
Perpendicular to grain, flatwise	$E_{c,90,flat,k}$	NPD	NPD
<u>Shear modulus, mean values</u>			
Edgewise	$G_{0,edge,mean}$	500	500
Flatwise, parallel to grain	$G_{0,flat,mean}$	51	69
Flatwise, perpendicular to grain	$G_{90,flat,mean}$	28	24
<u>Shear modulus, fifth percentile value</u>			
Edgewise	$G_{0,edge,k}$	330	330
Flatwise, parallel to grain	$G_{0,flat,k}$	42	57
Flatwise, perpendicular to grain	$G_{90,flat,k}$	20	17
Strength, fifth percentile values			
<u>Bending strength</u>			
Edgewise (depth 300mm)	$f_{m,0,edge,k}$	NPD	NPD
Size effect parameter	s	0.15	0.15
Flatwise, parallel to grain	$f_{m,0,flat,k}$	30.0	28.0
Flatwise, perpendicular to grain	$f_{m,90,flat,k}$	13.0	15.0
<u>Compression strength</u>			
Parallel to grain	$f_{c,0,k}$	18.0	19.0
Perpendicular to grain, edgewise	$f_{c,90,edge,k}$	9.0	8.0
Perpendicular to grain, flatwise	$f_{c,90,flat,k}$	2.0	2.0
<u>Tension strength</u>			
Parallel to grain (length 3000mm)	$f_{t,0,k}$	15.0	16.0
Perpendicular to grain, edgewise	$f_{t,90,edge,k}$	6.0	5.0
Perpendicular to grain, flatwise	$f_{t,90,flat,k}$	NPD	NPD
<u>Shear strength</u>			
Edgewise	$f_{v,0,edge,k}$	4.0	4.0
Flatwise, parallel to grain	$f_{v,0,flat,k}$	1.2	1.2
Flatwise, perpendicular to grain	$f_{v,90,flat,k}$	0.8	0.8
Density			
Density, mean value	ρ_{mean}	470	470
Density, fifth percentile value	ρ_k	420	420

The material values in this DoP are to be used for structural calculations with EN 1995 (Eurocode 5).

¹ Covering $E_{t,0,mean}$

² Covering $E_{t,0,k}$

³ Covering $E_{t,90,edge,mean}$

⁴ Covering $E_{t,90,edge,k}$

ESSENTIAL CHARACTERISTICS	PERFORMANCE			
Bonding quality	requirement fulfilled			
Reaction to fire	End use condition ¹	Minimum thickness (mm)	Class (excluding floorings)	Class (floorings)
	<ul style="list-style-type: none"> - without an air gap behind the panel - mounted directly against class A1 or A2-s1, d0 products with minimum density 10kg/m³ or at least class D-s2, d2 products with minimum density 400 kg/m³ - a substrate of cellulose insulation material of at least class E may be included if mounted directly against the panel, but not for floorings 	15	D-s2, d0	D _{fl} -s1
	<ul style="list-style-type: none"> - with a closed or an open air gap not more than 22mm behind the panel - the reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 10 kg/m³ 	15	D-s2, d2	-
	<ul style="list-style-type: none"> - with a closed air gap behind the panel - the reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m³ 	15	D-s2, d1	D _{fl} -s1
	<ul style="list-style-type: none"> - with a closed air gap behind the panel - the reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m³ 	18	D-s2, d0	D _{fl} -s1
	- any	15	E	E _{fl}
Release of formaldehyde	E1			
Natural durability against biological attack (EN 350-2)	Class 5 (includes sapwood)			

The material values in this DoP are to be used for structural calculations with EN 1995 (Eurocode 5).

¹ A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m² can be mounted in between the panel and a substrate if there are no air gaps in between.

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

At Espoo on 18.10.2024

Sakari Kainumaa
Director, Product Management
Metsä Wood



Juha Kasslin
SVP, Supply Chain Management
Metsä Wood


