Kerto® LVL

UK DECLARATION OF CONFORMITY

NO. MW/LVL/312-001/UKCA/UKDOC

UK CA

1. PRODUCT-TYPE:
Kerto LVL Q-panel
Structural Laminated Veneer Lumber, with crosswise veneers (LVL-C)

NOMINAL THICKNESS	NUMBER OF VENEERS	LONG GRAINED	CROSS GRAINED	LAY-UP
21 mm	7	5	2	|—|||—|
21 mm	7	5	2	||—|—||
24 mm	8	6	2	||—||—||
27 mm	9	7	2	||—|||—||
30 mm	10	8	2	||—||||—||
33 mm	11	9	2	||—|||||—||
39 mm	13	10	3	||—|||—|||—||
45 mm	15	12	3	||—||||—||||—||
51 mm	17	14	3	||—|||||—|||||—||
57 mm	19	15	4	||—|||—|||||—|||—||
63 mm	21	16	5	||—|||—|||—|||—|||—||
69 mm	23	18	5	||—||||—|||—|||—||||—||
75 mm	25	20	5	||—|||||—|||—|||—|||||—||

2. INTENDED USES:
Buildings and bridges

Metsä

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. DESIGNATED STANDARD:
EN 14374:2004

Approved body:
CATG Ltd, No. 1245

Certificate of constancy of performance:
1245-CPR-8002 (Lohja LVL mill)
1245-CPR-8003 (Punkaharju LVL mill)

7. DECLARED PERFORMANCES

ESSENTIAL CHARACTERISTICS	SYMBOL	PERFORMANCE	
		KERTO LVL Q-panel LVL 32 C THICKNESS 21 - 24 mm	KERTO LVL Q-panel LVL 36 C THICKNESS 27 - 75 mm
Modulus of elasticity and shear modulus		**N/mm² or kg/m³**	**N/mm² or kg/m³**
Modulus of elasticity, mean values			
Parallel to grain, along	$E_{0,mean}$ [3]	10000	10500
Parallel to grain, across	$E_{m,90,flat,mean}$	1200 [1]	2000
Perpendicular to grain, edgewise	$E_{c,90,edge,mean}$ [5]	2400	2400
Perpendicular to grain, flatwise	$E_{c,90,flat,mean}$	NPD	NPD
Modulus of elasticity, fifth percentile value			
Parallel to grain, along	$E_{0,k}$ [4]	8300	8800
Parallel to grain, across	$E_{m,90,flat,k}$	1000 [1]	1700
Perpendicular to grain, edgewise	$E_{c,90,edge,k}$ [6]	2000	2000
Perpendicular to grain, flatwise	$E_{c,90,flat,k}$	NPD	NPD
Shear modulus, mean values			
Edgewise	$G_{0,edge,mean}$	600	600
Flatwise, parallel to grain	$G_{0,flat,mean}$	80	120
Flatwise, perpendicular to grain	$G_{90,flat,mean}$	22	22
Shear modulus, fifth percentile value			
Edgewise	$G_{0,edge,k}$	400	400
Flatwise, parallel to grain	$G_{0,flat,k}$	60	100
Flatwise, perpendicular to grain	$G_{90,flat,k}$	16	16
Strength, fifth percentile values			
Bending strength			
Edgewise (depth 300mm)	$f_{m,0,edge,k}$	28.0	32.0
Size effect parameter	s	0.12	0.12
Flatwise, parallel to grain	$f_{m,0,flat,k}$	32.0	36.0
Flatwise, perpendicular to grain	$f_{m,90,flat,k}$	7.0 [1]	8.0
Compression strength			
Parallel to grain	$f_{c,0,k}$	19.0 [2]	26.0 [2]
Perpendicular to grain, edgewise	$f_{c,90,edge,k}$	9.0	9.0
Perpendicular to grain, flatwise	$f_{c,90,flat,k}$	2.2	2.2
Tension strength			
Parallel to grain (length 3000mm)	$f_{t,0,k}$	19.0	26.0
Perpendicular to grain, edgewise	$f_{t,90,edge,k}$	6.0	6.0
Perpendicular to grain, flatwise	$f_{t,90,flat,k}$	NPD	NPD
Shear strength			
Edgewise	$f_{v,0,edge,k}$	4.5	4.5
Flatwise, parallel to grain	$f_{v,0,flat,k}$	1.3	1.3
Flatwise, perpendicular to grain	$f_{v,90,flat,k}$	0.6	0.6
Density			
Density, mean value	ρ_{mean}	510	510
Density, fifth percentile value	ρ_k	480	480

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

[1] For the lay-up I-III-I the values 14.0, 2900 and 3300 can be used instead of 7.0, 1000 and 1200

[2] In service class 2 the values 19.0 N/mm^2 and 26.0 N/mm^2 are recommended to be divided by 1.2

[3] Covering $E_{m,0,edge,mean}$, $E_{m,0,flat,mean}$, $E_{t,0,mean}$, and $E_{c,0,mean}$

[4] Covering $E_{m,0,edge,k}$, $E_{m,0,flat,k}$, $E_{t,0,k}$, and $E_{c,0,k}$

[5] Covering $E_{t,90,edge,mean}$

[6] Covering $E_{t,90,edge,k}$

ESSENTIAL CHARACTERISTICS	PERFORMANCE			
Bonding quality	requirement fulfilled			
Reaction to fire	**End use condition**	**Minimum thickness (mm)**	**Class (excluding floorings)**	**Class (floorings)**
	- any substrate or air gap behind the product	21	D-s2, d0	D_{fl}-s1
	- with or without an air gap between the product and a substrate of class A1 or A2-s1, d0, thickness of at least 6 mm and density of at least 800 kg/m^3 - fixed mechanically to wooden or metallic frames	27	D-s1, d0	-
	- free standing applications	27	D-s1, d0	-
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).

The performance of the product identified above is in conformity with the set of declared performance/s. This UK declaration of conformity is issued, in accordance with Regulation 305/2011/EU as it has effect in the United Kingdom, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

At Espoo on 10.7.2023

Sakari Kainumaa
Director, Product Management
Metsä Wood

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Juha Kasslin
SVP, Supply Chain Management
Metsä Wood

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Metsä