

DECLARATION OF PERFORMANCE

NO. MW/LVL/312-001/CPR/DOP



1. PRODUCT-TYPE:

Kerto-Q
Structural Laminated Veneer Lumber

2. TYPE, BATCH OR SERIAL NUMBER OR OTHER IDENTIFICATION:

Kerto-Q
Structural Laminated Veneer Lumber

3. INTENDED USE OR USES:

Buildings and bridges

4. NAME AND ADDRESS OF THE MANUFACTURER:

Metsäliitto Cooperative
Metsä Wood
P.O.Box 24
FI-08101 Lohja, Finland
Tel. +358 10 4656 499
www.metsawood.com

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

AVCP System 1

7. CONSTRUCTION PRODUCT COVERED BY A HARMONISED STANDARD:

VTT Expert Services Ltd, Notified product certification body No. 0809 performed determination of the product type on the basis of type testing (including sampling), type calculation, tabulated values or descriptive documentation of the product; initial inspection of the manufacturing plants and of factory production control and performs the continuous surveillance, assessment and evaluation of factory production control under system 1 and issued the certificate of constancy of performance:

0809 – CPR – 1002

9. DECLARED PERFORMANCE

ESSENTIAL CHARACTERISTICS	SYMBOL	PERFORMANCE		HARMONIZED TECHNICAL SPECIFICATION
		KERTO-Q THICKNESS 21 - 24 mm	KERTO-Q THICKNESS 27 - 75 mm	
Modulus of elasticity and shear modulus		N/mm² or kg/m³	N/mm² or kg/m³	EN 14374:2004
<u>Modulus of elasticity, mean values</u>				
Parallel to grain, along	$E_{0,mean}$	10000	10500	
Parallel to grain, across	$E_{90,mean}$	1200 ¹	2000	
Perpendicular to grain, edgewise	$E_{90,edge,mean}$	2400	2400	
Perpendicular to grain, flatwise	$E_{90,flat,mean}$	NPD	NPD	
<u>Modulus of elasticity, fifth percentile value</u>				
Parallel to grain, along	$E_{0,k}$	8300	8800	
Parallel to grain, across	$E_{90,k}$	1000 ¹	1700	
Perpendicular to grain, edgewise	$E_{90,edge,k}$	2000	2000	
Perpendicular to grain, flatwise	$E_{90,flat,k}$	NPD	NPD	
<u>Shear modulus, mean values</u>				
Edgewise	$G_{0,edge,mean}$	600	600	
Flatwise, parallel to grain	$G_{0,flat,mean}$	60	120	
Flatwise, perpendicular to grain	$G_{90,flat,mean}$	22	22	
<u>Shear modulus, fifth percentile value</u>				
Edgewise	$G_{0,edge,k}$	400	400	
Flatwise, parallel to grain	$G_{0,flat,k}$	50	100	
Flatwise, perpendicular to grain	$G_{90,flat,k}$	16	16	
Strength, fifth percentile values				
<u>Bending strength</u>				
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	$f_{m,90,flat,k}$	8.0 ¹	8.0	
<u>Compression strength</u>				
Parallel to grain	$f_{c,0,k}$	19.0	26.0	
Perpendicular to grain, edgewise	$f_{c,90,edge,k}$	9.0	9.0	
Perpendicular to grain, flatwise (spruce)	$f_{c,90,flat,k}$	2.2	2.2	
Perpendicular to grain, flatwise (pine)	$f_{c,90,flat,k}$	3.3	3.3	
<u>Tension strength</u>				
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	
<u>Shear strength</u>				
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	
Bonding quality		requirement fulfilled		
Reaction to fire		D-s1,d0		
Release of formaldehyde		E1		
Natural durability against biological attack (EN 350-2)		Class 4		

¹ For the lay-up I-III-I the values 14.0, 2900 and 3300 can be used instead of 8.0, 1000 and 1200
The material values in this DoP are to be used for structural calculations with EN 1995 (Eurocode 5).

10. The performance of the product identified in points 1 and 2 is in 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.

Signed for and on behalf of the manufacturer by:

Arto Salo
VP, Product Category Kerto
Building and Industry business line

Lohja 15.10.2013

.....*Arto Salo*.....