UPM
The Biofore Company

CE

DECLARATION OF PERFORMANCE, UPM PLYWOOD
No. UPM021CPR

1. Unique identification code of the product-type:
Structural spruce plywood, uncoated, 15–22 mm

2. Intended uses:
For internal use as a structural component in dry conditions, EN 636-1
For protected external use as a structural component in humid conditions, EN 636-2

3. Manufacturer:
WISA®
UPM Plywood Oy
P.O. Box 203
FI-15141 Lahti, Finland
www.wisaplywood.com

5. System of AVCP:
AVCP system 2+

6a. Harmonised standard:
EN 13986:2004 + A1:2015

Notified body:
Inspecta Sertifiointi Oy No. 0416 has performed the initial inspection of the manufacturing plant and a factory production control and continuous surveillance, assessment and evaluation of factory production control and issued the certificates of conformity of the factory production control 0416-CPR-7110.

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7. Declared performance:

Essential characteristics	Performance	Harmonised standard
Point load strength and stiffness	NPD	EN 13986:2004+A1:2015
Racking resistance	Calculation according to EN 1995-1-1	
Impact resistance	NPD	
Water vapour permeability μ	Wet 66, dry 190 (uncoated)	
	Mean density 460 kg/m^3	
Release of formaldehyde	E1	
Content of pentachlorophenol (PCP)	≤ 5 ppm	
Airborne sound insulation	NPD	
Sound absorption α	0,10/0,30	
Thermal conductivity λ	0,13 W/mK	
Embedment strength	Calculation according to EN 1995-1-1	
Air permeability	NPD	
Bonding quality (acc. to EN 314-2)	Class 3	
Biological durability	Use class 2	

Reaction to fire			
End use condition [6]	Minimum thickness (mm)	Class [7] (excluding floorings)	Class [8] (floorings)
Without an air gap behind the wood-based panel [1], [2], [5]	15	D-s2, d0	D_{fl}-s1
With a closed or an open air gap not more than 22 mm behind the wood-based panel [3], [5]	15	D-s2, d2	–
With a closed air gap behind the wood-based panel [4], [5]	15	D-s2, d1	D_{fl}-s1
With an open air gap behind the wood-based panel [4], [5]	18	D-s2, d0	D_{fl}-s1

[1] Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m3 or at least class D-s2, d2.
[2] A substrate of cellulose insulation material of at least class E may be included if mounted directly against the wood-based panel, but not for floorings.
[3] Mounted with an air gap behind. The reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 10 kg/m3.
[4] Mounted with an air gap behind. The reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m3.
[5] Veneered, phenol- and melamine-faced panels are included for class excl. floorings.
[6] 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 wood-based panel and a substrate if there are no air gaps in between.
[7] Class as provided for in Table 1 of the Annex to Decision 2000/147/EC.
[8] Class as provided for in Table 2 of the Annex to Decision 2000/147/EC.

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Nominal thickness		15 unsanded	15	18	18 unsanded	19	21	22	
Number of plies		5	6	7	7	6	7	7	
Essential characteristics		Performance							Harmonised standard EN 13986:2004+A1:2015
Characteristic bending strength N/mm²	$f_{m,\parallel}$	23,8	21,3	27,5	21,3	23,4	20,8	20,6	
	$f_{m,\perp}$	10,4	12,6	5,7	12,1	10,2	12,8	12,8	
Characteristic compression strength N/mm²	$f_{c,\parallel}$	18,0	19,6	21,1	17,1	21,8	16,0	16,8	
	$f_{c,\perp}$	12,0	10,4	8,9	12,9	8,2	14,0	13,2	
Characteristic tension strength N/mm²	$f_{t,\parallel}$	10,8	11,8	12,7	10,3	13,1	9,6	10,1	
	$f_{t,\perp}$	7,2	6,2	5,3	7,7	4,9	8,4	7,9	
Mean MOE in bending N/mm²	$E_{m,\parallel}$	9504	8500	10994	8536	9359	8319	8243	
	$E_{m,\perp}$	2496	3500	1006	3464	2641	3681	3757	
Mean MOE in compression and tension N/mm²	$E_{t,c,\parallel}$	7200	7840	8455	6857	8733	6408	6716	
	$E_{t,c,\perp}$	4800	4160	3545	5143	3267	5592	5284	
Char. panel shear N/mm²	$f_{v,\parallel}$	3,5	3,5	3,5	3,5	3,5	3,5	3,5	
	$f_{v,\perp}$	3,5	3,5	3,5	3,5	3,5	3,5	3,5	
Char. Planar shear N/mm²	$f_{r,\parallel}$	1,1	1,2	1,0	1,0	1,2	1,0	1,0	
	$f_{r,\perp}$	0,6	0,4	0,4	0,8	0,5	0,8	0,8	
Mean MOR in panel shear N/mm²	$G_{v,\parallel}$	350	350	350	350	350	350	350	
	$G_{v,\perp}$	350	350	350	350	350	350	350	
Mean MOR in planar shear N/mm²	$G_{r,\parallel}$	51	72	59	52	89	48	52	
	$G_{r,\perp}$	28	25	21	36	22	41	37	
Strength and stiffness under point load		NPD							
Impact resistance		NPD							
k_{mod} and k_{def} values according to EN 1995-1-1									

The performance of the product identified above is in conformity with the set of declared performances. 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:

Lahti, Finland, March 1st, 2019

Riku Härkönen, Product Manager
UPM Plywood