UPM
The Biofore Company

CE

DECLARATION OF PERFORMANCE, UPM PLYWOOD
No. UPM007CPR

1. Unique identification code of the product-type:
Structural birch plywood, uncoated or coated, 4–50 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
For external use as a structural component with coating and edge sealing, EN 636-3

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-7108 (Joensuu), 0416-CPR-7109 (Jyväskylä), 0416-CPR-7110 (Pellos), 0416-CPR-7111 (Savonlinna), 0416-CPR-7112 (Chudovo), 0416-CPR-7113 (Otepää).

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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 90, dry 220 (uncoated)	
	Mean density 680 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	0,17 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 (uncoated)	
	Use class 3 (coated and edge sealed)	

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]	9	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]	9	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
Any [5]	4	E	E_{fl}

[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		4	6,5	9	12	15	18	21	24	27	30	32	35	40	45	50	Harmonised standard EN 13986:2004+A1:2015
Number of plies		3	5	7	9	11	13	15	17	19	21	23	25	29	33	37	
Essential characteristics		Performance															
Characteristic bending strength N/mm²	$f_{m,\parallel}$	65,9	50,9	45,6	42,9	41,3	40,2	39,4	38,9	38,4	38,1	37,8	37,6	37,2	36,9	36,7	
	$f_{m,\perp}$	10,6	29,0	32,1	33,2	33,8	34,1	34,3	34,4	34,5	34,6	34,6	34,7	34,7	34,8	34,8	
Characteristic compression strength N/mm²	$f_{c,\parallel}$	31,8	29,3	28,3	27,7	27,4	27,2	27,0	26,9	26,8	26,7	26,7	26,6	26,5	26,5	26,4	
	$f_{c,\perp}$	20,2	22,8	23,7	24,3	24,6	24,8	25,0	25,1	25,2	25,3	25,3	25,4	25,5	25,5	25,6	
Characteristic tension strength N/mm²	$f_{t,\parallel}$	45,8	42,2	40,8	40,0	39,5	39,2	39,0	38,8	38,7	38,5	38,4	38,4	38,3	38,2	38,1	
	$f_{t,\perp}$	29,2	32,8	34,2	35,0	35,5	35,8	36,0	36,2	36,3	36,5	36,6	36,6	36,8	36,8	36,9	
Mean MOE in bending N/mm²	$E_{m,\parallel}$	16471	12737	11395	10719	10316	10048	9858	9717	9607	9519	9448	9389	9296	9227	9173	
	$E_{m,\perp}$	1029	4763	6105	6781	7184	7452	7642	7783	7893	7981	8052	8111	8204	8273	8327	
Mean MOE in compression and tension N/mm²	$E_{t,c,\parallel}$	10694	9844	9511	9333	9223	9148	9093	9052	9019	8993	8972	8953	8925	8904	8887	
	$E_{t,c,\perp}$	6806	7656	7989	8167	8277	8352	8407	8448	8481	8507	8528	8547	8575	8596	8613	
Char. panel shear N/mm²	$f_{v,\parallel}$	9,5	9,5	9,5	9,5												
	$f_{v,\perp}$	9,5	9,5	9,5	9,5												
Char. Planar shear N/mm²	$f_{r,\parallel}$	2,8	3,2	2,6	2,6												
	$f_{r,\perp}$	NPD	1,8	2,4	2,4												
Mean MOR in panel shear N/mm²	$G_{v,\parallel}$	620	620	620	620												
	$G_{v,\perp}$	620	620	620	620												
Mean MOR in planar shear N/mm²	$G_{r,\parallel}$	170	170	205	205												
	$G_{r,\perp}$	NPD	120	160	180												
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, November 5th, 2018

Sirkku Salmikuukka

Sirkku Salmikuukka, Product Manager
UPM Plywood