UPM
The Biofore Company

CE

DECLARATION OF PERFORMANCE, UPM PLYWOOD
No. UPM001CPR

1. Unique identification code of the product-type:
Structural spruce plywood, uncoated or coated, 9–50 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 certificate of conformity of the factory production control 0416-CPR-7110 & 0416-CPR-7109.

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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 460kg/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 (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

[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		9	12	15	18	21	24	27	30	40	50	Harmonised standard EN 13986:2004+A1:2015
Number of plies		3	5	5	7	7	9	9	11	13	17	
Essential Characteristics		Performance										
Characteristic bending strength N/mm²	$f_{m\,\|\|}$	28,7	22,8	23,0	20,4	18,9	19,4	19,3	18,7	16,8	15,6	
	$f_{m\_\|\_}$	3,8	11,4	11,2	13,0	14,3	13,1	13,8	13,3	14,9	15,9	
Characteristic compression strength N/mm²	$f_{c\,\|\|}$	19,3	17,4	17,5	16,7	16,0	17,0	15,5	17,2	15,5	14,7	
	$f_{c\_\|\_}$	10,7	12,6	12,5	13,3	14,0	13,0	14,5	12,8	14,5	15,3	
Characteristic tension strength N/mm²	$f_{t\,\|\|}$	11,6	10,5	10,5	10,0	9,6	10,2	9,3	10,3	9,3	8,8	
	$f_{t\_\|\_}$	6,4	7,5	7,5	8,0	8,4	7,8	8,7	7,7	8,7	9,2	
Mean MOE in bending N/mm²	$E_{m\,\|\|}$	11461	9123	9201	8170	7547	7751	7702	7479	6723	6227	
	$E_{m\_\|\_}$	539	2876	2799	3830	4453	4249	4298	4521	5277	5773	
Mean MOE in compression and tension N/mm²	$E_{t,c\,\|\|}$	7733	6968	7013	6682	6408	6800	6182	6868	6211	5880	
	$E_{t,c\_\|\_}$	4267	5032	4987	5318	5592	5200	5818	5132	5789	6120	
Char. panel shear N/mm²	$f_{v\,\|\|}$	3,5	3,5		3,5							
	$f_{v\_\|\_}$	3,5	3,5		3,5							
Char. Planar shear N/mm²	$f_{r\,\|\|}$	1	1		1							
	$f_{r\_\|\_}$	NPD	0,6		0,8							
Mean MOR in panel shear N/mm²	$G_{v\,\|\|}$	350	350		350							
	$G_{v\_\|\_}$	350	350		350							
Mean MOR in planar shear N/mm²	$G_{r\,\|\|}$	45	50		50							
	$G_{r\_\|\_}$	NPD	30		40							
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

Riku Härkönen, Product Manager
UPM Plywood