

## **DECLARATION OF PERFORMANCE, UPM PLYWOOD**

**No. UPM022CPR**

1. Unique identification code of the product-type:  
Structural birch plywood, uncoated, 12–30 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](http://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).

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 $\mu$	Wet 90, dry 220	
	Mean density 680 kg/m <sup>3</sup>	
Release of formaldehyde	E1	
Content of pentachlorophenol (PCP)	≤ 5 ppm	
Airborne sound insulation	NPD	
Sound absorption $\alpha$	0,10/0,30	
Thermal conductivity $\lambda$	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	

Reaction to fire			
End use condition <sup>(6)</sup>	Minimum thickness (mm)	Class <sup>(7)</sup> (excluding floorings)	Class <sup>(8)</sup> (floorings)
Without an air gap behind the wood-based panel <sup>(1), (2), (5)</sup>	12	D-s2, d0	D <sub>fi</sub> -s1
With a closed or an open air gap not more than 22 mm behind the wood-based panel <sup>(3), (5)</sup>	12	D-s2, d2	-
With a closed air gap behind the wood-based panel <sup>(4), (5)</sup>	15	D-s2, d1	D <sub>fi</sub> -s1
With an open air gap behind the wood-based panel <sup>(4), (5)</sup>	18	D-s2, d0	D <sub>fi</sub> -s1

- <sup>(1)</sup> Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m<sup>3</sup> or at least class D-s2, d2.  
<sup>(2)</sup> 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.  
<sup>(3)</sup> 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/m<sup>3</sup>.  
<sup>(4)</sup> 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/m<sup>3</sup>.  
<sup>(5)</sup> Veneered, phenol- and melamine-faced panels are included for class excl. floorings.  
<sup>(6)</sup> A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m<sup>2</sup> can be mounted in between the wood-based panel and a substrate if there are no air gaps in between.  
<sup>(7)</sup> Class as provided for in Table 1 of the Annex to Decision 2000/147/EC.  
<sup>(8)</sup> Class as provided for in Table 2 of the Annex to Decision 2000/147/EC.

Nominal thickness		12	15	18	21	24	27	30		
Number of plies		9	11	13	15	17	19	21		
Essential characteristics		Performance								Harmonised standard EN 13986:2004+A1:2015
Characteristic bending strength N/mm <sup>2</sup>	$f_{m\parallel}$	59,0	55,5	52,9	50,9	49,2	47,9	46,8		
	$f_{m\perp}$	18,9	21,8	23,9	25,4	26,5	27,4	28,1		
Characteristic compression strength N/mm <sup>2</sup>	$f_{c\parallel}$	33,8	32,3	31,3	30,6	30,0	29,6	29,3		
	$f_{c\perp}$	18,2	19,7	20,7	21,4	22,0	22,4	22,8		
Characteristic tension strength	$f_{t\parallel}$	48,8	46,6	45,2	44,1	43,3	42,7	42,2		
	$f_{t\perp}$	26,3	28,4	29,8	30,9	31,7	32,3	32,8		
Mean MOE in bending N/mm <sup>2</sup>	$E_{m\parallel}$	14749	13886	13228	12715	12305	11970	11692		
	$E_{m\perp}$	2751	3614	4272	4785	5195	5530	5808		
Mean MOE in compression and tension N/mm <sup>2</sup>	$E_{t,c\parallel}$	11375	10878	10540	10294	10108	9962	9844		
	$E_{t,c\perp}$	6125	6622	6960	7206	7392	7538	7656		
Char. panel shear N/mm <sup>2</sup>	$f_{v\parallel}$	9,5			9,5					
	$f_{v\perp}$	9,5			9,5					
Char. Planar shear N/mm <sup>2</sup>	$f_{r\parallel}$	2,7	2,8	2,7	2,8	2,7	2,7	2,7		
	$f_{r\perp}$	1,8	1,8	2,0	2,0	2,1	2,1	2,2		
Mean MOR in panel shear N/mm <sup>2</sup>	$G_{v\parallel}$	620			620					
	$G_{v\perp}$	620			620					
Mean MOR in planar shear N/mm <sup>2</sup>	$G_{r\parallel}$	222	219	217	215	214	213	213		
	$G_{r\perp}$	119	138	150	158	164	168	172		
Strength and stiffness under point load	NPD									
Impact resistance	NPD									
k <sub>mod</sub> and k <sub>def</sub> 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



Sirku Salmikuukka, Product Manager  
UPM Plywood