

DECLARATION OF PERFORMANCE

NO. MW/PW/411-003/CPR/DOP



1. PRODUCT-TYPE:

- Metsä Wood Birch Phoenix structural birch plywood
- Treated against fire (aluminum overlay)
 - Phenol-formaldehyde adhesive (exterior gluing quality)

2. INTENDED USES:

Structural elements in internal or external applications in construction

EN 636-2 S

- for internal structural use in dry conditions
- for internal or protected external structural use in humid conditions

3. MANUFACTURER:

Metsäliitto Cooperative
Metsä Wood
Revontulenpuisto 2 A
FI-02100 Espoo, Finland
Tel. +358 10 4605
www.metsawood.com

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

AVCP System 1

6a. HARMONISED STANDARD:

EN 13986:2004+A1:2015

Notified body:

Eurofins Expert Services Oy, Notified product certification body No. 0809

Certificate of constancy of performance:

0809 – CPR – 1004

7. DECLARED PERFORMANCES

ESSENTIAL CHARACTERISTICS		PERFORMANCE										
Strength and stiffness for structural use:		Sanded Metsä Wood birch plywood										
		Nominal thickness (mm)										
		12	15	18	21	24	27	30	35	40	45	50
		Number of plies										
		9	11	13	15	17	19	21	25	29	32	35
Characteristic bending strength (N/mm ²)		42,9	41,3	40,2	39,4	38,9	38,4	38,1	37,6	37,2	37,0	36,8
	⊥	33,2	33,8	34,1	34,3	34,4	34,5	34,6	34,7	34,7	34,8	34,8
Mean modulus of elasticity in bending (N/mm ²)		10719	10316	10048	9858	9717	9607	9519	9389	9296	9243	9198
	⊥	6781	7184	7452	7642	7783	7893	7981	8111	8204	8257	8302
Characteristic compression strength (N/mm ²)		27,7	27,4	27,2	27,0	26,9	26,8	26,7	26,6	26,5	25,6	26,4
	⊥	24,3	24,6	24,8	25,0	25,1	25,2	25,3	25,4	25,5	26,4	25,6
Characteristic tension strength (N/mm ²)		40,0	39,5	39,2	39,0	38,8	38,7	38,5	38,4	38,3	37,0	38,1
	⊥	35,0	35,5	35,8	36,0	36,2	36,3	36,5	36,6	36,8	38,0	36,9
Mean modulus of elasticity in comp./tension (N/mm ²)		9333	9223	9148	9093	9052	9019	8993	8953	8925	8631	8895
	⊥	8167	8277	8352	8407	8448	8481	8507	8547	8575	8869	8605
Characteristic panel shear strength (N/mm ²)		9,5										
	⊥	9,5										
Mean modulus of rigidity in panel shear (N/mm ²)		620										
	⊥	620										
Characteristic planar shear strength (N/mm ²)		2,78	2,62	2,67	2,59	2,62	2,57	2,59	2,57	2,56	2,55	2,54
	⊥	2,22	2,39	2,34	2,41	2,39	2,43	2,41	2,43	2,44	2,47	2,46
Mean modulus of rigidity in planar shear (N/mm ²)		207	207	206	206	206	205	205	204	204	192	203
	⊥	170	178	183	186	189	190	192	193	195	208	196

|| = along the face veneer grain direction

⊥ = across the face veneer grain direction

The material values in this DoP are to be used for structural calculations with EN 1995 (Eurocode 5).

ESSENTIAL CHARACTERISTICS	PERFORMANCE		
Bonding quality	Class 3 (exterior)		
Release of formaldehyde	E1		
Reaction to fire	End use condition	Minimum thickness (mm)	Class
	<ul style="list-style-type: none"> - substrate of class A1 or A2-s1,d0 and density of at least 30 kg/m³ (e.g. insulation or gypsum board) - without joints or with vertical and horizontal butt joints (≤ 2 mm) - fixed mechanically to wooden or metallic frames 	12	B-s1, d0
Water vapour permeability	5,4 × 10 ⁷ μ		
Airborne sound insulation	NPD		
Sound absorption	0,10 (250 Hz – 500 Hz) 0,30 (1000 Hz – 2000 Hz)		
Thermal conductivity	0,17 W/(m K)		
Impact resistance	NPD		
Strength and stiffness under point load	NPD		
Mechanical durability	k _{mod}	According to EN 1995-1-1	
	k _{def}	According to EN 1995-1-1	
Biological durability (EN 335)	Use class 2		
Content of pentachlorophenol (PCP)	< 5 ppm		
Characteristic embedment strength	Calculated according to EN 1995-1-1: - characteristic density (ρ _k) 630 kg/m ³		
Racking resistance	Calculated according to EN 1995-1-1: - panel thickness 12-50 mm - characteristic embedment strength, see above		
Air permeability	NPD		

The material values in this DoP are to be used for structural calculations with EN 1995 (Eurocode 5).

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

At Espoo on 2.12.2019

Henrik Söderström
SVP, Supply Chain Management
Metsä Wood



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Juha Kasslin
VP, Product Management
Metsä Wood



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