

DECLARATION OF PERFORMANCE

NO. MW/PW/421-005/CPR/DOP



1. PRODUCT-TYPE:

Metsä Wood Spruce Flex structural spruce plywood
- Overlaid with thermoplastic overlay
- Phenol-formaldehyde adhesive (exterior gluing quality)

2. INTENDED USES:

Structural elements in internal 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 2+

6a. HARMONISED STANDARD:

EN 13986:2004+A1:2015

Notified body:

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

Certificate of conformity of the factory production control:

0809 – CPR – 1003

7. DECLARED PERFORMANCES

ESSENTIAL CHARACTERISTICS		PERFORMANCE								
Strength and stiffness for structural use:		Sanded Metsä Wood spruce plywood								
		Nominal thickness (mm)								
		9	12	12	15	18	21	24	27	30
		Number of plies								
		3	4	5	5	6	7	8	9	10
Characteristic bending strength (N/mm ²)	II	22,9	20,6	25,6	23,1	21,5	20,7	20,5	19,4	18,9
	⊥	3,0	6,5	8,1	11,1	12,3	12,7	12,4	13,4	13,7
Mean modulus of elasticity in bending (N/mm ²)	II	9178	8237	10235	9237	8615	8277	8205	7752	7558
	⊥	422	1363	1765	2763	3385	3723	3795	4248	4442
Characteristic compression strength (N/mm ²)	II	15,5	11,5	21,1	17,6	19,7	16,8	22,3	16,4	17,8
	⊥	8,5	12,5	8,9	12,4	10,3	13,2	7,7	13,6	12,2
Characteristic tension strength (N/mm ²)	II	9,3	6,9	12,6	10,6	11,8	10,1	13,4	9,8	10,7
	⊥	5,1	7,5	5,4	7,4	6,2	7,9	4,6	8,2	7,3
Mean modulus of elasticity in comp./tension (N/mm ²)	II	6212	4591	8430	7034	7886	6732	8936	6566	7119
	⊥	3388	5009	3570	4966	4114	5268	3064	5434	4881
Characteristic panel shear strength (N/mm ²)	II	3,5								
	⊥	3,5								
Mean modulus of rigidity in panel shear (N/mm ²)	II	350								
	⊥	350								
Characteristic planar shear strength (N/mm ²)	II	1,42	0,94	1,58	1,63	1,76	1,41	2,15	1,46	1,50
	⊥	NPD	NPD	0,81	0,87	0,64	1,18	0,39	1,12	0,72
Mean modulus of rigidity in planar shear (N/mm ²)	II	45,1	35,5	66,1	50,5	71,4	51,8	142,9	52,1	63,2
	⊥	NPD	NPD	20,9	29,1	24,9	37,4	24,6	41,3	35,2

II = 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"> - with or without an air gap between the product and a substrate of class A1 or A2-s1,d0 and density of at least 540 kg/m³ - with thermal insulation of class A1 and density of at least 30 kg/m³ - without joints or with ≤ 8 mm open vertical and horizontal joints - fixed mechanically to wooden or metallic frames 	12	D-s2, d0
Water vapour permeability	872 000 μ		
Airborne sound insulation	NPD		
Sound absorption	0,10 (250 Hz – 500 Hz) 0,30 (1000 Hz – 2000 Hz)		
Thermal conductivity	0,12 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) 400 kg/m ³		
Racking resistance	Calculated according to EN 1995-1-1: - panel thickness 9-30 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



Juha Kasslin
VP, Product Management
Metsä Wood

