

DECLARATION OF PERFORMANCE

NO. MW/PW/422-001/CPR/DOP



1. PRODUCT-TYPE:

- Metsä Wood Conifer structural softwood plywood
 - Uncoated
 - Phenol-formaldehyde adhesive (exterior gluing quality)

| THICKNESS | NUMBER OF VENEERS | VENEER THICKNESS | LAY-UP |
|-----------|-------------------|------------------|---------------------------------------|
| 9 mm | 7 | 1.4 mm | - - - |
| 12 mm | 9 | 1.4 mm | - - - - |
| 15 mm | 11 | 1.4 mm | - - - - - |
| 18 mm | 13 | 1.4 mm | - - - - - - |
| 21 mm | 15 | 1.4 mm | - - - - - - - |
| 24 mm | 17 | 1.4 mm | - - - - - - - - |
| 27 mm | 19 | 1.4 mm | - - - - - - - - - |
| 30 mm | 21 | 1.4 mm | - - - - - - - - - - |

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 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 | | | | | | | |
|---|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Sanded Metsä Wood Conifer plywood | | | | | | | |
| | | Nominal thickness (mm) | | | | | | | |
| Strength and stiffness for structural use: | | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| | | Number of plies | | | | | | | |
| | | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 |
| Characteristic bending strength (N/mm²) | | 26,0 | 24,5 | 23,6 | 23,0 | 22,5 | 22,2 | 22,0 | 21,8 |
| | ⊥ | 18,3 | 19,0 | 19,3 | 19,5 | 19,6 | 19,7 | 19,7 | 19,8 |
| Mean modulus of elasticity in bending (N/mm²) | | 8465 | 7963 | 7663 | 7464 | 7323 | 7218 | 7137 | 7072 |
| | ⊥ | 4535 | 5037 | 5337 | 5536 | 5677 | 5782 | 5863 | 5928 |
| Characteristic compression strength (N/mm²) | | 19,6 | 19,2 | 19,0 | 18,8 | 18,7 | 18,6 | 18,6 | 18,5 |
| | ⊥ | 16,4 | 16,8 | 17,0 | 17,2 | 17,3 | 17,4 | 17,4 | 17,5 |
| Characteristic tension strength (N/mm²) | | 15,2 | 14,9 | 14,8 | 14,6 | 14,5 | 14,5 | 14,4 | 14,4 |
| | ⊥ | 12,8 | 13,1 | 13,2 | 13,4 | 13,5 | 13,5 | 13,6 | 13,6 |
| Mean modulus of elasticity in comp./tension (N/mm²) | | 7065 | 6933 | 6851 | 6795 | 6755 | 6724 | 6700 | 6681 |
| | ⊥ | 5935 | 6067 | 6149 | 6205 | 6245 | 6276 | 6300 | 6319 |
| Characteristic panel shear strength (N/mm²) | | 7,0 | | | | | | | |
| | ⊥ | 7,0 | | | | | | | |
| Mean modulus of rigidity in panel shear (N/mm²) | | 530 | | | | | | | |
| | ⊥ | 530 | | | | | | | |
| Characteristic planar shear strength (N/mm²) | | 1,72 | 1,78 | 1,68 | 1,71 | 1,66 | 1,68 | 1,65 | 1,66 |
| | ⊥ | 1,51 | 1,42 | 1,53 | 1,50 | 1,55 | 1,53 | 1,56 | 1,54 |
| Mean modulus of rigidity in planar shear (N/mm²) | | 68,5 | 68,9 | 68,9 | 68,8 | 68,6 | 68,4 | 68,3 | 68,2 |
| | ⊥ | 51,7 | 56,7 | 59,4 | 61,0 | 62,1 | 62,8 | 63,4 | 63,8 |

|| = 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 ¹ | Minimum thickness (mm) | Class (excluding floorings) | Class (floorings) |
| | <ul style="list-style-type: none"> - without an air gap behind the panel - mounted directly against class A1 or A2-s1, d0 products with minimum density 10 kg/m³ or at least class D-s2, d2 products with minimum density 400 kg/m³ - a substrate of cellulose insulation material of at least class E may be included if mounted directly against the panel, but not for floorings | 9 | D-s2, d0 | D _{fl} -s1 |
| | <ul style="list-style-type: none"> - with a closed or an open air gap not more than 22mm behind the panel - the reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 10 kg/m³ | 9 | D-s2, d2 | - |
| | <ul style="list-style-type: none"> - with a closed air gap behind the panel - the reverse face of the cavity shall be at least class D2-s2, d2 products with minimum density 400 kg/m³ | 15 | D-s2, d1 | D _{fl} -s1 |
| | <ul style="list-style-type: none"> - with an open air gap behind the panel - the reverse face of the cavity shall be at least class D2-s2, d2 products with minimum density 400 kg/m³ | 18 | D-s2, d0 | D _{fl} -s1 |
| | - any | 3 | E | E _{fl} |
| Water vapour permeability | Mean density | Wet cup | Dry cup | |
| | 520 kg/m ³ | 50 μ | 510 μ | |
| Airborne sound insulation | NPD | | | |
| Sound absorption | 0,10 (250 Hz – 500 Hz) 0,30 (1000 Hz – 2000 Hz) | | | |
| Thermal conductivity | 0,13 W/(m K) | | | |
| Impact resistance | NPD | | | |
| Strength and stiffness under point load | NPD | | | |

¹ 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 panel and a substrate if there are no air gaps in between.

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

| ESSENTIAL CHARACTERISTICS | | PERFORMANCE |
|------------------------------------|-----------|---|
| 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) 460 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 10.3.2022

Juha Kasslin
SVP, Supply Chain Management
Metsä Wood



Henrik Söderström
SVP, Sales and Marketing
Metsä Wood

