

DECLARATION OF PERFORMANCE, UPM PLYWOOD

No. UPM007CPR

1. Unique identification code of the product-type:
Structural birch plywood, uncoated or coated, 4–50 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 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 μ | Wet 90, dry 220 (uncoated) | |
| | Mean density 680 kg/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 | 0,17 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 (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 |
| Any ⁽⁵⁾ | 4 | E | E _{fl} |

⁽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.

| Nominal thickness | 4 | 6,5 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 32 | 35 | 40 | 45 | 50 | |
|---|--------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| Number of plies | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 29 | 33 | 37 | |
| Essential characteristics | Performance | | | | | | | | | | | | | | | |
| Characteristic bending strength N/mm ² | f _m | 65,9 | 50,9 | 45,6 | 42,9 | 41,3 | 40,2 | 39,4 | 38,9 | 38,4 | 38,1 | 37,8 | 37,6 | 37,2 | 36,9 | 36,7 |
| | f _{m⊥} | 10,6 | 29,0 | 32,1 | 33,2 | 33,8 | 34,1 | 34,3 | 34,4 | 34,5 | 34,6 | 34,6 | 34,7 | 34,7 | 34,8 | 34,8 |
| Characteristic compression strength N/mm ² | f _c | 31,8 | 29,3 | 28,3 | 27,7 | 27,4 | 27,2 | 27,0 | 26,9 | 26,8 | 26,7 | 26,7 | 26,6 | 26,5 | 26,5 | 26,4 |
| | f _{c⊥} | 20,2 | 22,8 | 23,7 | 24,3 | 24,6 | 24,8 | 25,0 | 25,1 | 25,2 | 25,3 | 25,3 | 25,4 | 25,5 | 25,5 | 25,6 |
| Characteristic tension strength N/mm ² | f _t | 45,8 | 42,2 | 40,8 | 40,0 | 39,5 | 39,2 | 39,0 | 38,8 | 38,7 | 38,5 | 38,4 | 38,4 | 38,3 | 38,2 | 38,1 |
| | f _{t⊥} | 29,2 | 32,8 | 34,2 | 35,0 | 35,5 | 35,8 | 36,0 | 36,2 | 36,3 | 36,5 | 36,6 | 36,6 | 36,8 | 36,8 | 36,9 |
| Mean MOE in bending N/mm ² | E _m | 16471 | 12737 | 11395 | 10719 | 10316 | 10048 | 9858 | 9717 | 9607 | 9519 | 9448 | 9389 | 9296 | 9227 | 9173 |
| | E _{m⊥} | 1029 | 4763 | 6105 | 6781 | 7184 | 7452 | 7642 | 7783 | 7893 | 7981 | 8052 | 8111 | 8204 | 8273 | 8327 |
| Mean MOE in compression and tension N/mm ² | E _{t,c} | 10694 | 9844 | 9511 | 9333 | 9223 | 9148 | 9093 | 9052 | 9019 | 8993 | 8972 | 8953 | 8925 | 8904 | 8887 |
| | E _{t,c⊥} | 6806 | 7656 | 7989 | 8167 | 8277 | 8352 | 8407 | 8448 | 8481 | 8507 | 8528 | 8547 | 8575 | 8596 | 8613 |
| Char. panel shear N/mm ² | f _v | 9,5 | 9,5 | 9,5 | 9,5 | | | | | | | | | | | |
| | f _{v⊥} | 9,5 | 9,5 | 9,5 | 9,5 | | | | | | | | | | | |
| Char. Planar shear N/mm ² | f _r | 2,8 | 3,2 | 2,6 | 2,6 | | | | | | | | | | | |
| | f _{r⊥} | NPD | 1,8 | 2,4 | 2,4 | | | | | | | | | | | |
| Mean MOR in panel shear N/mm ² | G _v | 620 | 620 | 620 | 620 | | | | | | | | | | | |
| | G _{v⊥} | 620 | 620 | 620 | 620 | | | | | | | | | | | |
| Mean MOR in planar shear N/mm ² | G _r | 170 | 170 | 205 | 205 | | | | | | | | | | | |
| | G _{r⊥} | NPD | 120 | 160 | 180 | | | | | | | | | | | |
| 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



Sirku Salmikuukka, Product Manager
UPM Plywood