

DECLARATION OF PERFORMANCE no: 002DoP2024-07-03

1.- Unique Identification code of the product type

Radiata pine softwood plywood

Thickness ≥ 8.1 mm and density $\geq 450\text{kg/m}^3$

2.- Intended use or uses of the construction product

Internal uses as:

Structural components in dry or humid conditions

Structural floor decking on joists in dry conditions

Structural roof decking on joists in dry or humid conditions

3.- Manufacturer

Maderas Arauco S.A

Los Horcones S/N

P.O Box 167

Arauco- Chile

4.- Authorized Representative

Not Relevant

5.- System of assessment and verification of constancy of performance

System 2+

6.- Tasks for the notified body(s)

Dancert A/S - 1073 has performed initial inspection of the manufacturing plant and factory production control and continuous surveillance, assessment and evaluation of factory production control under system 2+ and issued a certificate of conformity of the factory production control (1073-CPR-809). Danish Institute of Fire and Security Technology-0845 has performed initial type testing of Reaction to fire performance on 8 mm plywood and issued a Classification report, documented in file: PC10139 dated 2007-06-12.



7.- Essential Characteristic

Harmonized technical specification EN 13986 +A1:2015

| Essential Characteristics | Harmonized Standard | Performance -Arauco Ply |
|--|----------------------------|---|
| Bonding Quality | EN 314-2 | Class 3 |
| Release of Formaldehyde | EN 717-1 | E1 |
| Reaction to fire | EN 13986, table 8 | Thickness $\geq 8,1$ mm Declared- table 8 -D-s2,d0/Dfl-s1 Thickness $< 8,1$ mm : E D-s2,d0 Declared by testing PC10139 dated 2007-06-12 |
| Water vapour permeability | EN 13986, table 9 | Wet cup μ 60 Dry cup μ 180 |
| Sound Absorption coefficient | EN 13986, table 10 | 0,10 (250 to 500 Hz) 0,30 (1000 to 2000 Hz) |
| Airborne sound insulation | EN 13986 | NPD |
| Thermal Conductivity | EN 13986, table 11 | $0.11 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ |
| Impact Resistance for structural use at Floor and Roof decking | EN 1195/EN 12871 | See section 9 of this DoP |
| Strength and stiffness under point of load | EN 1195/EN 12871 | See section 9 of this DoP |
| Strength and stiffness for structural use | EN 789 | EN 1058/EN 789 Characteristic Strength, Stiffness and Density Values for Structural Design |
| Mechanical Durability | EN 1995-1-1 | K_{mod} and K_{def} is to be taken from EN 1995-1-1 |
| Content of pentachlorophenol | | < 5 ppm |
| Biological Durability | EN 335 CEN/TS 1099:2007 | Uncoated or overlaid- Use Class 1 and 2 Overlaid and edges protected- Use class 1 and 2 |

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.



8.- Essential Characteristic Harmonized technical specification EN 13986 +A1:2015

| ESSENTIAL CHARACTERISTIC | | PERFORMANCE | | | | | | | |
|---|----------------------|------------------------|------|------|------|------|------|------|------|
| Strength and Stiffness for Structural use: | | Radiata Pine Plywood | | | | | | | |
| | | Nominal thickness (mm) | | | | | | | |
| | | 9 | 12 | 15 | 18 | 21 | 25 | 30 | |
| | | Number of Plies | | | | | | | |
| | | 3 | 5 | 5 | 7 | 7 | 9 | 11 | |
| Characteristic bending strength | (N/mm ²) | | 16,4 | 22,1 | 23 | 17,5 | 11,3 | 11 | 8,7 |
| | | ⊥ | 1,3 | 4,4 | 5 | 5,4 | 4,6 | 4,1 | 5,2 |
| Mean modulus of elasticity in bending | (N/mm ²) | | 5393 | 5452 | 5576 | 3940 | 3984 | 3991 | 3268 |
| | | ⊥ | 192 | 1604 | 1548 | 2576 | 1501 | 1494 | 2165 |
| Characteristic compression strength | (N/mm ²) | | 8,7 | 11,2 | 10,4 | 9 | 7,4 | 7,9 | 6,4 |
| | | ⊥ | 2,9 | 3,5 | 3,5 | 4,5 | 3,8 | 3,4 | 4,5 |
| Characteristic tension strength | (N/mm ²) | | 8,7 | 11,2 | 10,4 | 9 | 7,4 | 7,9 | 6,4 |
| | | ⊥ | 2,9 | 3,5 | 3,5 | 4,5 | 3,8 | 3,4 | 4,5 |
| Mean modulus of elasticity in Comp./Tension | (N/mm ²) | | 3696 | 3648 | 3945 | 3039 | 3168 | 3370 | 2727 |
| | | ⊥ | 1716 | 2533 | 2521 | 3000 | 2206 | 2019 | 2616 |
| Characteristic panel shear strength | (N/mm ²) | | 7,2 | | | | | | |
| | | ⊥ | 7,2 | | | | | | |
| Mean modulus of rigidity in panel shear | (N/mm ²) | | 700 | | | | | | |
| | | ⊥ | 700 | | | | | | |
| Characteristic planar shear strength | (N/mm ²) | | 1,8 | | | | | | |
| | | ⊥ | 1,8 | | | | | | |
| Mean modulus of rigidity in planar shear | (N/mm ²) | | 140 | | | | | | |
| | | ⊥ | 140 | | | | | | |

|| = 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)



9.- Essential Characteristic for Roof/Floor

EN 12871 : Characteristic Values for structural performance as floor/roof decking on joists.

| Thickness (nominal) mm | Veneers/ Layers | Maximun Span mm Note 2 | Concentrated point load | | | Impact Resistance | Assesment | |
|----------------------------------|--------------------|-------------------------------------|-------------------------|--------------------|------------------------|-------------------|------------------|------------------|
| | | | Characteristic Strength | | Mean Stiffness | | Service Class | Load Category |
| | | | Serviceability N | Ultimate Load N | R _m N/mm | | | |
| FLOOR | | | | | | | | |
| 15 | 5/5 | 400 | 4450 | 4921 | 584 | Fulfilled | 1 | A |
| 18 | 7/7 | 600 | 4671 | 4910 | 408 | Fulfilled | 1 | A |
| 21 | 7/7 | 600 | 4775 | 5470 | 499 | Fulfilled | 1 | H |
| ROOF | | | | | | | | |
| 12 | 5/5 | 600 | 3785 | 4749 | 203 | Fulfilled | 2 | H |
| 15 | 5/5 | 800 | 3672 | 3931 | 195 | Fulfilled | 2 | H |
| 18 | 7/7 | 1200 | 4674 | 4724 | 133 | Fulfilled | 2 | H |
| 21 | 7/7 | 1200 | 4793 | 5784 | 144 | Fulfilled | 2 | H |

EN 12871 : Characteristic Values for structural performance as floor/roof decking on joist. Installed with flying joints.

| Thickness (nominal) mm | Veneers/ Layers | Maximun Span mm | Concentrated point load | | | Impact Resistance | Assesment | |
|----------------------------------|--------------------|---------------------------|-------------------------|--------------------|------------------------|-------------------|------------------|------------------|
| | | | Characteristic Strength | | Mean Stiffness | | Service Class | Load Category |
| | | | Serviceability N | Ultimate Load N | R _m N/mm | | | |
| FLOOR | | | | | | | | |
| 18 | 7/7 | 600 | 4250 | 4838 | 436 | Fulfilled | 1 | A |
| ROOF | | | | | | | | |
| 18 | 7/7 | 800 | 1646 | 2588 | 159 | Fulfilled | 2 | H |

Note 1: Load category A. Areas for domestic and residential activities. Load Category H. Roofs that are not accessible except for maintenance, repair, and cleaning. Normal maintenance repair and cleaning painting and minor repairs.

Note 2: See separate accompanying commercial documents with regard to the guidance of installation.

Signed for and on behalf of the manufacturer by:

JUAN PABLO PACHECO GILBERT
(name and function)

GENERAL MANAGER OF PLYWOOD WORKS PLANT
(Place and date of issue)

19/07/2024

(Signature)

July, 2024

