

# **DECLARATION OF PERFORMANCE**

DoP-1948-TG-EUCA-01-01

### Manufacturer Identification

| Manufacturer   | Representative in the EU   | Manufacturing Facility  |
|--|--|---|
| <b>Uruply S.A.</b> Ruta 5, Km 400,5 Tacuarembó, 45000 – Uruguay <i>Tel.:</i> +598 (0)63 222 00 | Lumin Forest Products Ltd Carmanhall Road, SANDYFORD Dublin 18 – D18 Y3X2 – Ireland europe-sales@lumin.com | <b>Urubrama S.R.L.</b> Ruta 31, Paraje Zapará Tacuarembó, 45000 – Uruguay |

#### **Product Identification**

| Product Type  | Technical Class   | Intended Use   | AVCP (*) |
|---|---|--|----------|
| Lumin® Plywood  Pine and/or Eucalyptus Plywood  for Structural Use in Internal  Humid Conditions (EN 636 – 2 S) | EN 636 – 2 – S<br>(structural)<br>FLOORING &<br>ROOFING | Load-bearing structural panels in dry covered service conditions (***) (EN 1995-1-1 - Service Class 1 or 2) for FLOORING or ROOFING. | 2+       |

<sup>(\*)</sup> Assessment and Verification of Constancy of Performance system according to Annex V of regulation (EU) No 305/2011

## Notified Body Reference

| Notified Body  | Certificate or Assessment  | Tasks performed for AVCP  |
|--|--|---|
| EXOVA BM TRADA Stocking Lane, Hughenden Valley HIGH WYCOMBE, Buckinghamshire HP14 4ND - United Kingdom | 1224 – CPR – 0290<br>EC Certificate of factory Production<br>Control from 03/04/2017 | Initial inspection of factory Continuous Surveillance Certification of Factory Production Control |

#### **Declared Performance**

The declared properties of the product are given in the table overleaf, based on the following Harmonised Technical Specifications:

EN 13986:2004+A1:2015 – Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking

**EN 636:2012+A1:2015** – Plywood - Specifications

Installation instructions and safety data sheets can be found on www.lumin.com.

The performance of the product identified is in conformity with the declared performance. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

For and on behalf of the manufacturer by:

05/10/2017 in Tacuarembó, Uruguay

'Alvaro Molinari Industrial Manager Uruply S.A.

<sup>(\*\*)</sup> Batch identification: 7-digit number on bundle

<sup>(\*\*\*)</sup> The conditions of Service Class 3 may correspond to the biological Hazard Class 3 to EN 335, for which this product cannot be used without further treatment and/or appropriate design.

| Essential Characteristics            |              | Performance for indicated Panel Thickness (mm) |                 |              |                         |  |                               |                               |
|--------------------------------------|--------------|--|-----------------|--------------|-------------------------|--|-------------------------------|-------------------------------|
|                                      |              | 9  | 12              | 15           | 18                      | 21   | 22                            |                               |
| Panel Layup <sup>1)</sup>            |              |  | EEE             | EEEE<br>EPPE | EEEEE<br>EPEPE<br>EEPEE | EEEEEE<br>EEEEE<br>EPEPE<br>EEPEE<br>EPPPE | EEEEEEE<br>EEPEPEE<br>EEPPPEE | EEEEEEE<br>EEPEPEE<br>EEPPPEE |
| Characteristic Strength 2)3)         |              |  |                 |              |                         |  |                               |                               |
| Bending – parallel                   | $f_{m,0,k}$  | (N/mm²)  | 20.0            | 20.0         | 20.0                    | 20.0                                       | 20.0                          | 20.0                          |
| Bending – perpendicular              | $f_{m,90,k}$ | (N/mm <sup>2</sup> )                           | 10.0            | 10.0         | 10.0                    | 10.0                                       | 10.0                          | 10.0                          |
| Compression                          | $f_{c,0,k}$  | (N/mm <sup>2</sup> )                           | NPD             | NPD          | NPD                     | NPD  | NPD                           | NPD                           |
| Tension                              | $f_{t,0,k}$  | (N/mm <sup>2</sup> )                           | NPD             | NPD          | NPD                     | NPD  | NPD                           | NPD                           |
| Panel Shear                          | $f_{v,k}$    | (N/mm <sup>2</sup> )                           | 3.0             | 3.0          | 3.0                     | 3.0  | 3.0                           | 3.0                           |
| Planar Shear                         | $f_{r,k}$    | (N/mm²)  | 0.5             | 0.5          | 0.5                     | 0.5  | 0.5                           | 0.5                           |
| Mean Stiffness (MOE) 4)              |              |  |                 |              |                         |  |                               |                               |
| Bending – parallel                   | $E_{m,0}$    | (N/mm²)  | 3000            | 3000         | 3000                    | 3000                                       | 3000                          | 3000                          |
| Bending – perpendicular              | Em,90        | (N/mm²)  | 1000            | 1000         | 1000                    | 1000                                       | 1000                          | 1000                          |
| Compression                          | Ec,0         | (N/mm <sup>2</sup> )                           | NPD             | NPD          | NPD                     | NPD  | NPD                           | NPD                           |
| Tension                              | $E_{t,0}$    | (N/mm²)  | NPD             | NPD          | NPD                     | NPD  | NPD                           | NPD                           |
| Panel Shear                          | $G_{v}$      | (N/mm²)  | 300             | 300          | 300                     | 300  | 300                           | 300                           |
| Planar Shear                         | Gr           | (N/mm²)  | 20              | 20           | 20                      | 20   | 20                            | 20                            |
| Density                              |              |  |                 |              |                         |  |                               |                               |
| Characteristic Density 2)            | $\rho_k$     | $(kg/m^3)$                                     | 430             | 430          | 430                     | 430  | 430                           | 430                           |
| Mean Density 5)                      | homean       | $(kg/m^3)$                                     | 480             | 480          | 480                     | 480  | 480                           | 480                           |
| Bonding quality / durability         |              |  | Bonding Class 3 |              |                         |  |                               |                               |
| Biological Durability                |              |  | Hazard Class 2  |              |                         |  |                               |                               |
| Reaction to fire class               |              |  | D-s2, d0        |              |                         |  |                               |                               |
| Release of formaldehyde class        |              |  | E1              |              |                         |  |                               |                               |
| Water vapour permeability            | μ            |  |                 |              |                         |  |                               |                               |
| Wet cup                              |              |  | 70              | 70           | 70                      | 70   | 70                            | 70                            |
| Dry cup                              |              |  | 200             | 200          | 200                     | 200  | 200                           | 200                           |
| Airborne sound insulation            | R            |  | 22.20           | 23.80        | 25.10                   | 26.10                                      | 27.00                         | 27.30                         |
| Sound absorption                     | α            |  |                 |              |                         |  |                               |                               |
| Frequency range 250Hz to 500 Hz      |              |  | 0.10            | 0.10         | 0.10                    | 0.10                                       | 0.10                          | 0.10                          |
| Frequency range 1000Hz to 2000 Hz    |              |  | 0.30            | 0.30         | 0.30                    | 0.30                                       | 0.30                          | 0.30                          |
| Thermal Conductivity                 | λ            | (W/m.K)  | 0.13            | 0.13         | 0.13                    | 0.13                                       | 0.13                          | 0.13                          |
| Release (Content) of Pentachloropher | nol (PCP     | )  | < 5 ppm         | < 5 ppm      | < 5 ppm                 | < 5 ppm                                    | < 5 ppm                       | < 5 ppm                       |

<sup>1)</sup> P = Pine ; E = Eucalyptus

<sup>2) &</sup>quot;Characteristic" = lower 5<sup>th</sup> percentile calculated as defined in EN 636:2012+A1:2015

<sup>3)</sup> The characteristic values are as specified in EN 12369-2:2004 and shall be modified for the given Service Class as described in EN 1995-1-1 using the relevant  $k_{mod}$  and  $k_{def}$  modification factors

<sup>4)</sup> The characteristic value for Stiffness should be taken as 0.8 times the mean value

<sup>5)</sup> The mean density for design should be taken as 1.1 times the characteristic value

| Essential Characteristics           |                    | Performance for indicated Panel Thickness (mm) |     |              |                         |  |                               |                               |
|-------------------------------------|--------------------|--|-----|--------------|-------------------------|--|-------------------------------|-------------------------------|
|                                     |                    | 9  | 12  | 15           | 18                      | 21   | 22                            |                               |
| Panel Layup <sup>1)</sup>           |                    |  | EEE | EEEE<br>EPPE | EEEEE<br>EPEPE<br>EEPEE | EEEEEE<br>EEEEE<br>EPEPE<br>EEPEE<br>EPPPE | EEEEEEE<br>EEPEPEE<br>EEPPPEE | EEEEEEE<br>EEPEPEE<br>EEPPPEE |
| Reaction to fire class for Flooring |                    |  |     |              |                         | D <sub>FL</sub> -s1                        | D <sub>FL</sub> -s1           | D <sub>FL</sub> -s1           |
| Roofing – Cat. of Use H – spacing:  | 610                | mm   |     |              |                         |  |                               |                               |
| Characteristic Point Load           | F <sub>max,k</sub> | (kN)   | NPD | 2.50         | 2.50                    | 4.04                                       | 3.66                          | 3.66                          |
| Mean Stiffness                      | Rmean              | (kN)   | NPD | 165          | 165                     | 322  | 408                           | 408                           |
| Serviceability Point Load           | F <sub>ser,k</sub> | (kN)   | NPD | 3.57         | 3.57                    | 5.78                                       | 5.24                          | 5.24                          |
| Soft Body Impact Resistance Class   |                    |  | NPD | I            | I                       | I  | I                             | ı                             |
| Roofing – Cat. of Use H – spacing:  | 1220               | mm   |     |              |                         |  |                               |                               |
| Characteristic Point Load           | $F_{max,k}$        | (kN)   | NPD | NPD          | NPD                     | 4.04                                       | 4.04                          | 4.04                          |
| Mean Stiffness                      | Rmean              | (kN)   | NPD | NPD          | NPD                     | 99   | 99                            | 99                            |
| Serviceability Point Load           | $F_{ser,k}$        | (kN)   | NPD | NPD          | NPD                     | 5.78                                       | 5.78                          | 5.78                          |
| Soft Body Impact Resistance Class   |                    |  | NPD | NPD          | NPD                     | II   | II                            | II                            |
| Flooring – Cat. of Use A – spacing: | 500                | mm   |     |              |                         |  |                               |                               |
| Characteristic Point Load           | $F_{max,k}$        | (kN)   | NPD | NPD          | NPD                     | 4.04                                       | 3.66                          | 3.66                          |
| Mean Stiffness                      | $R_{mean}$         | (kN)   | NPD | NPD          | NPD                     | 496  | 408                           | 408                           |
| Serviceability Point Load           | $F_{ser,k}$        | (kN)   | NPD | NPD          | NPD                     | 5.78                                       | 5.24                          | 5.24                          |
| Soft Body Impact Resistance Class   |                    |  | NPD | NPD          | NPD                     | I  | I                             | I                             |
| Flooring – Cat. of Use A – spacing: | 610                | mm   |     |              |                         |  |                               |                               |
| Characteristic Point Load           | F <sub>max,k</sub> | (kN)   | NPD | NPD          | NPD                     | NPD  | 3.66                          | 3.66                          |
| Mean Stiffness                      | R <sub>mean</sub>  | (kN)   | NPD | NPD          | NPD                     | NPD  | 408                           | 408                           |
| Serviceability Point Load           | F <sub>ser,k</sub> | (kN)   | NPD | NPD          | NPD                     | NPD  | 5.24                          | 5.24                          |
| Soft Body Impact Resistance Class   |                    |  | NPD | NPD          | NPD                     | NPD  | I                             | I                             |
| Racking Resistance for Walls        |                    |  | NPD | NPD          | NPD                     | NPD  | NPD                           | NPD                           |
| Soft Body Impact Resistance Class   |                    |  |     |              |                         |  |                               |                               |
| for Walls                           |                    |  | NPD | NPD          | NPD                     | NPD  | NPD                           | NPD                           |

<sup>1)</sup> P = Pine ; E = Eucalyptus

NOTE: Panels used for Flooring or Roofing application shall have their short edge supported by the joists and their long edge either tongued & grooved or entirely supported by and fixed to a nogging or batten.