

UPM ProFi Lifecycle

Technical Specification

Material: UPM ProFi Lifecycle is an advanced wood composite made using the latest technologies. Recycled American red and white oak fibres are heat treated, encapsulated in a hard polymer matrix, and then allowed to cool naturally. This process takes longer than typical WPC production. The result is an exceptionally stable, water resistant solid board that is protected to the core. Compared to traditional WPC boards, the closed surface is also more resistant to oil spills and stains.

Structure: Solid profile made by extrusion technology

Physical and mechanical properties:

Property	Test method	Value
Density, g/cm ³		0.93
Falling mass impact, J (1 kg/1500 mm)	EN 477 *	No break (> 15)
Maximum allowable Uniform Live Load-Sleeper Mount, kN/m ²	ICC-ES AC 174 ASTM D7032 ASTM D6109	4.79
Maximum allowable Uniform Live load-joist mount, kN/m ²	ICC-ES AC 174 ASTM D7032 ASTM D6109	2.87
Modulus of Rupture, MN/m ²	ASTM D7032	17 **
Thermal expansion, 1/°C	ASTM D1037	3.6 x 10 ⁻⁵
Coefficient of Friction	ASTM D2394	0.59/0.64 Static Dry Parallel/Perpendicular to grain
	ASTM D2394	0.92/0.84 Static Wet Parallel/Perpendicular to grain
Flame Spread	ASTM E84	Class "C" or Class III. Within the range of wood species commonly used for joists.
Modulus of Elasticity, MN/m ²	ASTM D7032, ICC-ES AC174	690 ***
	ASTM D7032	1,850 **
Water Absorption (24 h), %	EN 317 *	< 2.5

* (Based on CEN/TS 15534 wood plastic composites (WPC).)

** (Average value at ambient temperature. Not adjusted for temperature, freeze-thaw, UV exposure etc.)

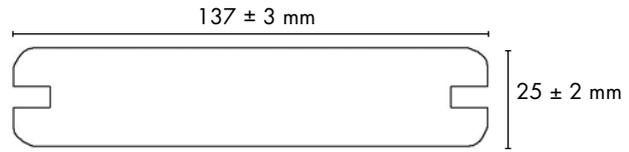
*** (1. Value used to compute maximum allowable uniform live load for decking and railing applications. 2. Includes deductions for loss in stiffness due to temperature, UV exposure, and freeze-thaw cycles per ASTM D7032. 3. This value is given for informational purposes only and is NOT presented as a general design value.)



Profile dimensions: 25 mm x 137 mm; length 4 m; weight: 3.3 kg/m

Tolerances: The boards may have a slight curvature on one side due to the special production and natural cooling method. To ensure maximum drainage of water from the boards it is recommended to install the boards the curved side facing upwards.

Length: 4000 + 20 mm



Thermal expansion: UPM ProFi Lifecycle will expand and contract with changes in temperature. The following table shows this effect over different temperature changes. The temperature change listed relates to the temperature of Lifecycle material, not the air temperature. In strong sunshine, darker coloured boards will reach higher temperatures than lighter coloured boards. Desert Sand is particularly suitable for southern facing decks in hotter countries.

Thermal expansion/shrinkage of UPM ProFi Lifecycle

Temperature change of board	mm expansion / shrinkage			
	1 m board	2 m board	3 m board	4 m board
10 °C	1	1	1	1
20 °C	1	1	2	3
30 °C	1	2	3	4
40 °C	1	3	4	6
50 °C	2	4	5	7
60 °C	2	4	6	9

Based on an expansion coefficient of $3.6 \times 10^{-5} \text{ 1/}^\circ\text{C}$.

Scratches or surface abrasions: UPM ProFi Lifecycle has a hardwearing surface, however superficial marks and scratches may be caused if furniture or other heavy objects are dragged over the deck. Markings of this type on your deck should fade within 12-16 weeks. Deeper scratches may be repaired by careful use of a hot air gun, such as the type used for stripping paint. Care should be taken not to scorch the board.

Maintenance and colour weathering: UPM ProFi Lifecycle requires no annual sanding, varnishing or staining. While most spills and stains can be wiped off easily, periodic cleaning with a jet wash is recommended (cf. cleaning instructions for UPM ProFi Lifecycle).

The manufacturing process and pigments in Lifecycle decking help the materials retain their rich colour, unlike many other composites that weather to a greater degree. The boards weather slightly to their natural patina over the first six months after installation.



The pictures above give an indication of the colour change that occurs during a three year simulation of climate conditions in Central & Northern Europe

Environment: 95 % of the materials used to manufacture the boards are recycled, including the oak fibres and plastic polymers. Giving these high quality materials a second life reduces landfill and waste incineration. No PVC is used in the manufacture of UPM ProFi Lifecycle, and the material is itself fully recyclable.

UPM ProFi Lifecycle is a durable, long-lasting alternative to conventional decking materials. They do not require paint or stains, therefore eliminating pollutants associated with those types of products.

For further information and updated advice, please visit www.upmprofi.com

