



bambudeck



Bamboo is one of the fastest-growing plants in the world. Certain species can reach heights of approximately 20 meters in a single month, with growth rates exceeding one meter per day. These rates make it possible to harvest a new bamboo plantation just 3 to 6 years after planting. Furthermore, bamboo is an infinite natural resource that can sustain its life cycle through proper harvesting alone, without the need for replanting. Despite its rapid growth, bamboo outperforms even the hardest timbers in terms of technical specifications, offering superior hardness and flexibility.

Bamboo stands as the premier eco-friendly alternative for green buildings. When compared to conventional materials, its energy consumption ratios are remarkably efficient: 1/8 that of concrete and 1/50 that of steel. For thousands of years, bamboo has been a prized and reliable construction material across Asia—a reliability rooted in its high technical performance. In recent years, bamboo flooring and facade cladding have gained significant global traction as a rising trend.

**Bambudeck** is an outdoor decking and wall panel material produced in bamboo's homeland, China. Following years of R&D and utilizing advanced technology, it is manufactured to pass rigorous technical tests for hardness, durability, density, and fire resistance. Often described by architectural circles as "vegetable steel," **Bambudeck** is a next-generation, non-toxic material engineered through high-tech processes.

# About Us

Being a responsible company requires adopting a long-term approach that is sensitive to human health, nature, and natural resources. The philosophy of our company is to work with products that are sustainable, healthy, safe, and have a long life cycle.

Thanks to its inherent properties, Bambudeck is a product capable of fulfilling these commitments. Bamboo, with its innovative, ecological, high-quality structure and long service life, is a strong alternative to existing imported wood materials used in outdoor flooring and façade cladding.

Bambudeck is a brand of Asmaz Ahşap A.Ş. Founded in 2015, ASMAZ Ahşap was established with the mission of responding to the demand for wood products with the right solutions and contributing to the improvement of service standards in this field. The company represents some of the most successful companies in the world in its sector and supplies advanced technology structural wood products.

As with all Asmaz Ahşap products, Bambudeck is supported with sales, installation, and after-sales maintenance services for both domestic and international projects. Standard products are kept in high stock levels and offered with immediate delivery opportunities. For special projects requiring different sections and dimensions, supplies can be arranged in a short time through close coordination with the production line abroad.



# Products

Bambudeck exterior cladding products are available in our stocks with 5 different surface pattern alternatives, 3 different thickness alternatives, and two color alternatives. Light-colored products are named caramel, and dark-colored products are named chocolate.

## Caramel



DOUBLE WAVE (DW)



WAVE (W)



SMALL WAVE (SW)



SMALL GROOVE (SG)

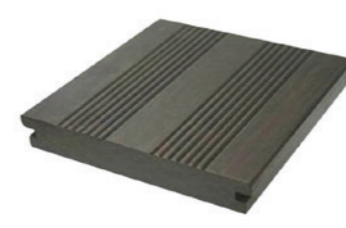


FLAT (F)



PLASTIC T CLIP

## Chocolate



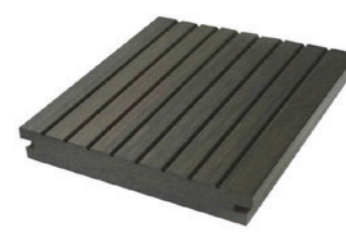
DOUBLE WAVE (DW)



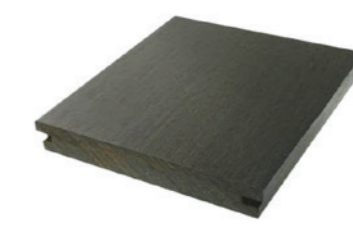
WAVE (W)



SMALL WAVE (SW)



SMALL GROOVE (SG)



FLAT (F)



METAL CLIP AND SCREW

Product No	Length mm	Width mm	Thickness mm	m <sup>2</sup>
BD WSL 20	1860	139	20	0.25854
BD WSL 30	1860	139	30	0.25854
BD WSL 38	1860	139	38	0.25854

Grooved (Double Sided)	Cladding	Surface
Yes	Yes	As seen
Yes	Yes	As seen
Yes	Yes	As seen

# Technical Comparison



**Natural Anti-Corrosive Hardwood (Merbau, Teak, etc.)**

Natural and stylish, yet features a very long growth cycle (more than 100 years), scarcity, and negative environmental factors.



**Chemical Anti-Corrosive Wood (CCA)**

Subject to strict environmental protection regulations in some countries. Banned in areas near water sources due to toxic effects.



**Chemical Anti-Corrosive Wood (ACQ)**

Non-toxic treatment under chemical methods; however, limited application (unsuitable for contact with soil).



**Carbonized Wood**

Good eco-friendly performance and wide usage, but negative for forest resources and limited in application (unsuitable for contact with soil).



**PVC-Wood Composite Material**

A type of entirely industrial product; not natural, easily deformed, fragile and breaks, difficult to decompose, and lacks eco-friendly properties.

## Data Comparison

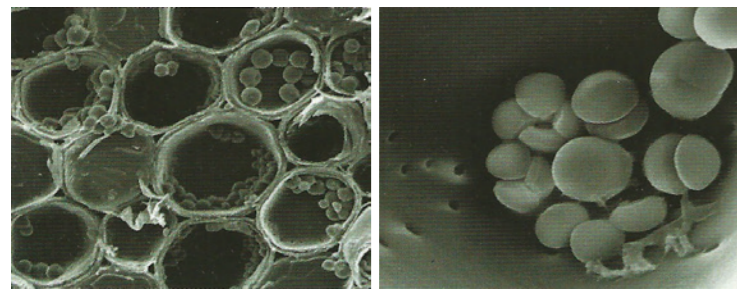
Records	Wood Species	Moisture Content %	Density g/cm <sup>3</sup>	Water Swelling Rate (24H)	Brinell Hardness
1	<b>BambuDeck</b>	4,7 ★★★★★	1,23 ★★★★★	0,35 ★★★★★	70,4 ★★★★★
2	Teak	9 ★★★	0,7 ★★★	0,4 ★★★	55,8 ★★★
3	Merbau	14 ★	0,8 ★★★	0,41	61,7 ★★★★
4	Western Red Cedar	12 ★★	0,35 ★	0,6	44,1 ★★
5	Eucalyptus	17 ★	0,57 ★★	0,6	47,1 ★★★
6	Carbonized Scots Pine	12	0,43 ★	1 ★★	44,3 ★★
7	Scots Pine	12 ★★	0,46 ★★	1,3 ★	43,1 ★

## Performance Comparison

Classification / Performance	BambuDeck	Natural Anti-Corrosive Wood	Treated Anti-Corrosive Wood	Carbonized Wood	PVC Wood Composite (WPC)
Method	Hot pressing via physical methods	Natural corrosion	Requires pre-preservation treatment	High-heat treated	High-density PE and wood fiber composite
Surface Appearance	Unique grained bamboo derivatives	Retains natural color and grain	Greenish tint	Dark brown tones khverengi	Dull and faded colors
Abrasion & Corrosion Resistance	Excellent	Good+	Fair-	Fair	Fair
Environmental Performance	Excellent	Excellent	Poor	Fair	Fair
Anti-Termite Properties	Excellent	Poor	Fair-	Fair-	Fair
Durability & Stability	Stable	Good+	Easily shaped	Fair	Easily deformed at high temperatures
Market Price	Above average	Highest	Low	Medium	Medium-Low

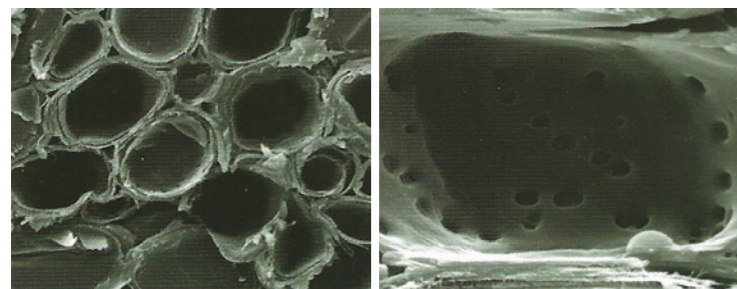
# Technical Analysis

Bambudeck is manufactured using a patented carbonized anti-corrosion technology within the bamboo industry. This process separates harmful substances such as sugars and mold from the material, resulting in a product characterized by high physical performance, long-term environmental protection, an extended life cycle, and long maintenance intervals, all while remaining easy to install.



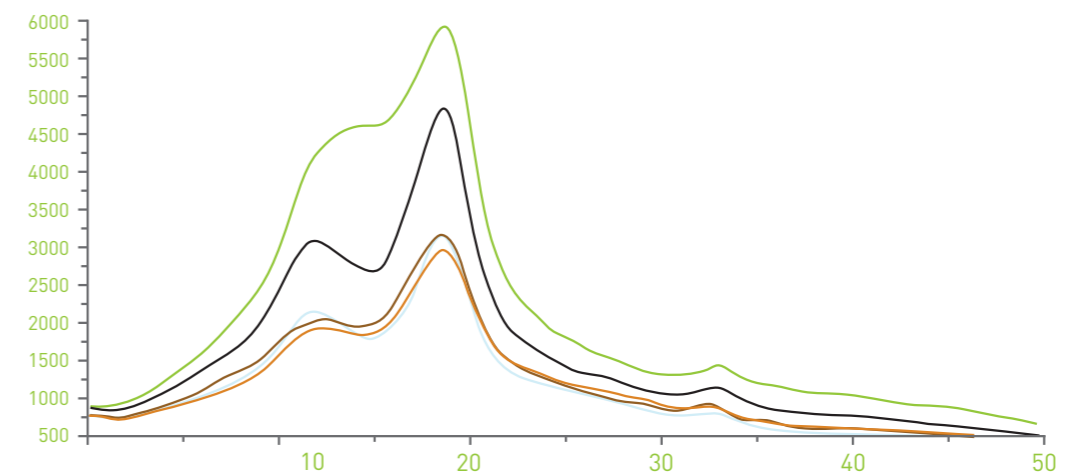
Bamboo cells under electron microscope (800x, 10,000x)

Before Treatment: Organic substances like sugar within the bamboo cells can attract insects and pests, potentially leading to mold growth)



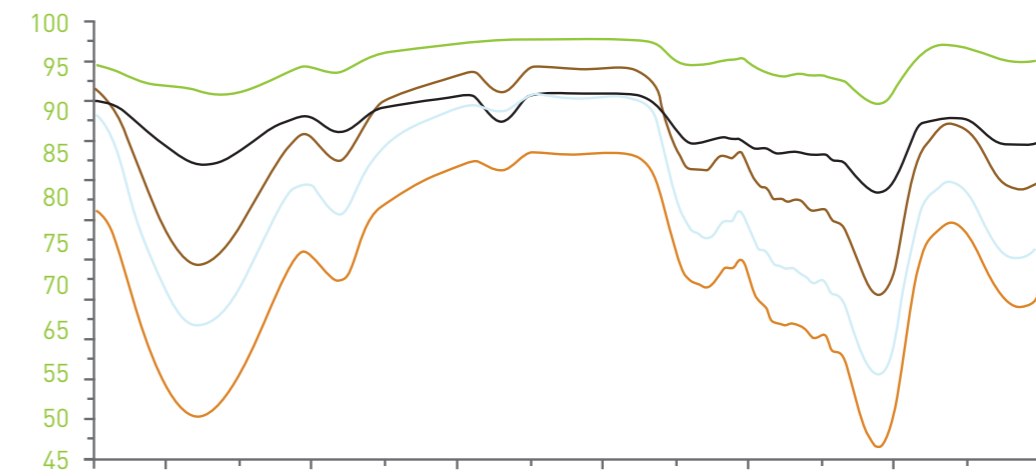
Bamboo cells under electron microscope (800x, 10,000x)

After Treatment: Organic materials, including sugars within the bamboo cells, are completely eliminated)



X-Ray Diffraction (XRD) Model

After thermal treatment, the stability and crystallinity of bamboo materials are clearly and significantly enhanced.



IR Spectral Imaging Under Different Thermal Treatments

Following thermal treatment, the absorption performance is reduced due to the decrease in active water-absorbing groups. Consequently, dimensional stability is significantly improved and increased.

# Technical Analysis

## 10 Advantages



High  
Anti-Corrosion



High  
Density



High  
Abrasion  
Resistance



High  
Hardness



High  
Durability



High  
Compressive  
Strength



High  
Bending  
Strength



Long Life Cycle



Insect & Pest  
Resistance



Fire Resistance



# Bambudeck Installation

The material properties of bamboo outdoor decking are specifically engineered for open-air conditions. The planks are made from highly compressed bamboo with a density of 1200 kg/m<sup>3</sup>, which significantly restricts moisture penetration. Thanks to a specialized treatment during the production process, the decking offers high resistance to moisture, fungi, and insects—essential qualities for outdoor use. The planks are pre-oiled during production and are available in two colors. The grooved (reeded) surfaces provide an anti-slip feature to the decking.



# Bambudeck Installation



- **Density:** 1200 kg / m<sup>3</sup>
- **Hardness:** Approx. 9.5 Brinell (9.5N / mm<sup>2</sup>)
- **Durability Class:** Class 1 (EN350 / EN113)
- **Surface Finish:** Oiled; available in grooved or smooth profiles
- **Pre-treatment:** Fungi and mold resistance Class 0 (EN152)
- **Fire Protection Class:** Bfl-S1 (EN 13501-1)
- **Installation:** Fixed with mounting clips and screws



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