

MOSO[®]

Bamboo Outdoor

*Stable, sustainable
and certified products*

m_oso[®]



Bamboo locks
enormous amounts
of CO₂

Bamboo: the fastest
growing plant
in the world

MOSO® Bamboo Outdoor

MOSO® Bamboo Outdoor Decking comes in two colours: the **dark brown Bamboo X-treme®** and brown **caramel Bamboo N-durance®**. Both can be used to create a **beautiful deck, balcony, swimming pool area** or other **outdoor space** and are truly **ecological** and **durable** alternatives for increasingly scarce tropical hardwood and non-renewable materials. The **MOSO® Bamboo Outdoor Collection** consists of a wide range of products including **cladding, fencing, and beams**.

Beautiful 6



Durable 10



Stable 14



Versatile 16



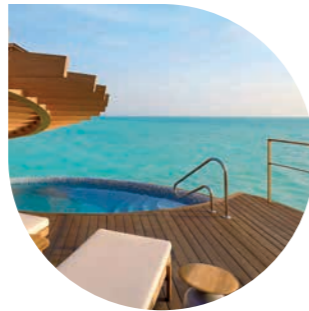
Unique 23



Complete 24



Sustainable 26



Proven 31



Moso International Headquarters, Netherlands

Landmark Vastgoed Management BV

Hans Gorter

40603 kg CO₂



Beautiful

Enrich any garden, balcony or roof area with MOSO® Bamboo X-treme® and Bamboo N-durance®: the natural, fast growing alternatives to hardwood. Similar to hardwood, the look can be determined depending on the finish.





Private villa in the French Riviera, France

6 Maisani Bois  Eric Portugalli



Imagine Africa Luxury Tented Camp, South Africa

 Tim Baynam - Wildlife Safety Solutions  29910 kg CO₂





Higher Roch Tower, France

Brenac & Gonzalez et Associés

MOSO

130995 kg CO₂



Wellness Residence Alpenrose, Austria

Haladesign Landschaftsplanung

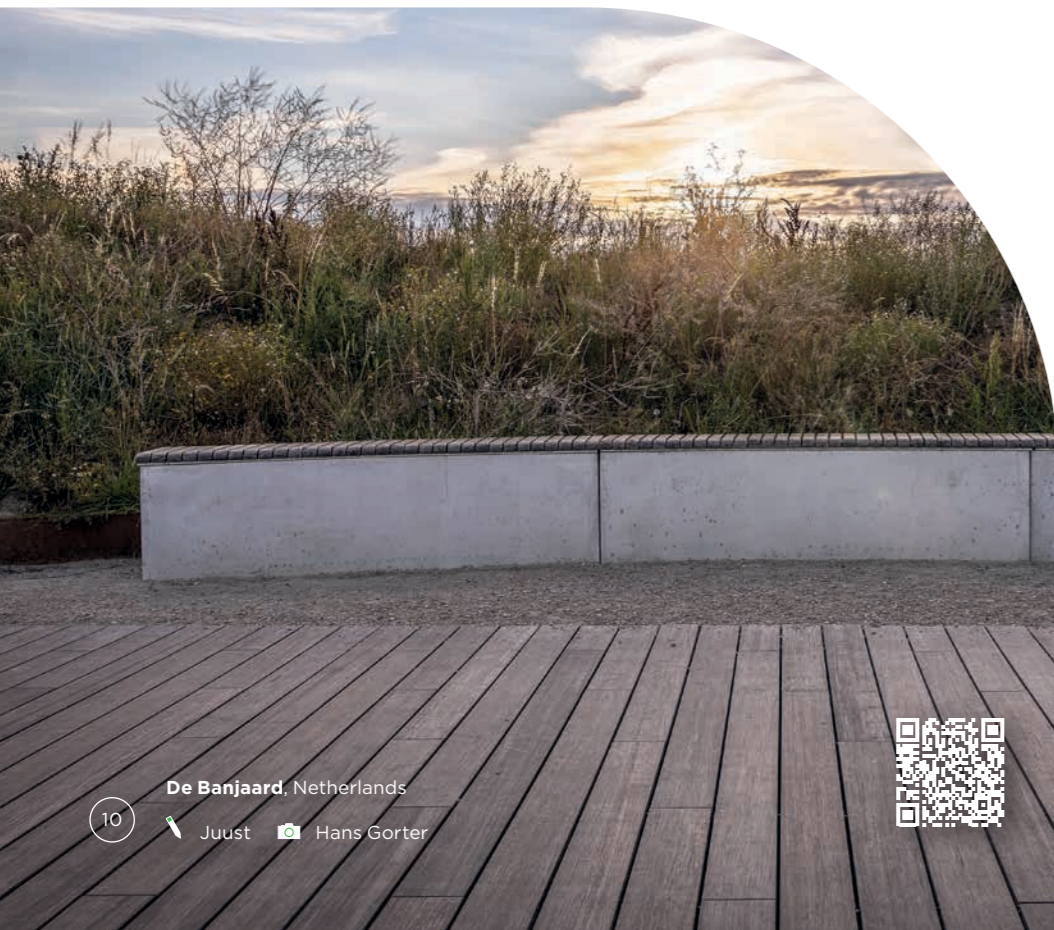
Qin (Andy Andresen)



Durable

MOSO® Bamboo Outdoor products are engineered to last a lifetime. Thanks to a special Thermo-Density® (Bamboo X-treme®) or Outdoor-Density® (Bamboo N-durance®) production process, they are very durable. The proof is in the more than 7 million m² already installed in different climates all around the world.

► www.moso-bamboo.com/durable



Tough conditions

High traffic, around swimming pools, near coastlines and in extreme climates.



Stable

MOSO® Bamboo X-treme® and Bamboo N-durance® Decking are very stable, enabling the use of hidden MOSO® Fasteners to fix the boards. It is even possible to create special patterns, including the luxurious chevron installation. The superior stability has another major advantage: it allows an end-match system to create any length without big gaps.



Private Residence Casablanca, Morocco

14
Tarik Hart



Private pool in Vouzela, Portugal

Alvaro Jose Pereira



Versatile

MOSO® Bamboo X-treme® and Bamboo N-durance® Outdoor Decking boards are available in different widths and thicknesses and, depending on the finish and surface treatment, a unique look can be created. The boards are available with different surfaces: flat, grooved, curved, brushed, non-slip: just choose the one you like the best! In addition to MOSO® Bamboo Outdoor Decking, we offer cladding and fencing boards. Bamboo X-treme® and N-durance® Outdoor Beams can also be used for custom made stairs, furniture and shutters.



Gallia Palace Beach Golf & Spa Resort, Italy

📷 Gianluca Ricci



Speehuis, Netherlands

📷 SPEE Architects 📷 Ossip van Duivenbode 🌿 Awood





Luxurious garden, Netherlands

TIM Exclusive Gardens Oliv



RUD Ketten Solaris sun lounger

RUD Ketten



Oxygen La Défense Paris, France

Stéphane Malka David Ducastel - Phléas Fotos



Well made

Moso bamboo is one of the fastest growing plants on earth. The bamboo stems grow from an underground root system and after 4-5 years a stem can be harvested, while the others continue to grow. Each year new shoots sprout from the root system.

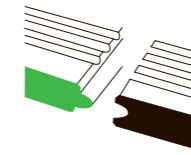
This means the bamboo can be used without harming the forest. After harvesting, the Moso bamboo stems are split and the outer and inner skins are removed. By modifying the bamboo strands with a special Thermo-Density® (X-treme®) or Outdoor-Density® (N-durance®) process, the dimensional stability of bamboo is improved by about 50%. The heat-treatment (X-treme®) or steam-pressure treatment (N-durance®) provides the highest durability class possible. The material is stronger and harder than almost any other hardwood.



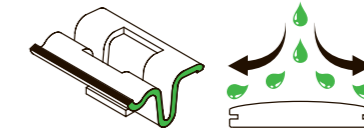
Unique benefits



Hard & durable
Biological durability Class 1 (EN 350 / CEN/TS 15083-2), simulated graveyard test / Class 1 (EN 350 / CEN/TS 15083-1). Exceptionally hard: Brinell ± 9.5 kg/mm².



High stability
Far more stable than bangkirai (yellow balau) and other tropical hardwoods - enabling an end-matched connection (impossible with any other hardwood).



Easy to install
Very easy to install and uninstall thanks to the fixed board length (1850 mm) and fixing with MOSO® Fasteners. Decking with the curved surface can be installed without a slope. Thanks to this curved surface, fast drainage from the boards is guaranteed.



Economical
Simple and fast installation: up to 30% savings in costs! Reduced waste of material during installation because of end-match system.



Beautiful appearance
A beautiful, natural hardwood look. A warm ambience is added to any project with Bamboo X-treme® and Bamboo N-durance®.



Endless resource
Made from bamboo, the fastest growing plant on earth. Each stem can be harvested after 4-5 years, and the plant continues to grow.



Stored Carbon
Due to the fast growth - and related high yields - Moso bamboo locks far more CO₂ in durable products compared to wood species. It is possible to measure (or calculate) the amount of carbon stored in your project, so feel free to contact our bamboo experts to get more information.



Fire resistant
Achieves fire resistance Class Bfl-s1 (decking) and B-s1-d0 (cladding, fencing, beams) (EN 13501-1) without use of fire retardants. Achieves flame spread index Class A following ASTM E84. Can be easily applied in public projects without additional protective measures.

Complete

In addition to decking, MOSO® provides bamboo sub frame joists, fascia boards, edge profiles and maintenance products. With MOSO® Fasteners, no screws are visible on the boards which contributes to the beautiful appearance. Make use of the complete range to ensure the quality of the deck.



Easy

Check out the Bamboo X-treme® and Bamboo N-durance® installation and maintenance movies at:

- ▶ www.moso-bamboo.com/youtube/x-treme
- ▶ www.moso-bamboo.com/youtube/n-durance



MOSO® Bamboo N-durance®

When looking for the most beautiful decking boards to fit into a modern outdoor space or stylish garden, Bamboo N-durance® is the right product. The brown caramel colour suits every design and creates a warm ambience. The flat, curved or grooved side of the boards are suitable for various applications and, above all, ensure a luxurious appearance.



Protected with superficial preservative against surface fungi. *) Ends of the boards are protected with Sikkens Kodrin WV 456 sealer. ** Sikkens Cetol WF 771 Savanna colour.

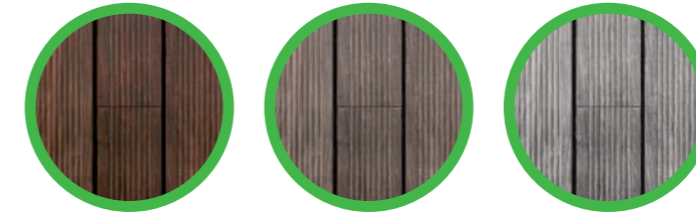
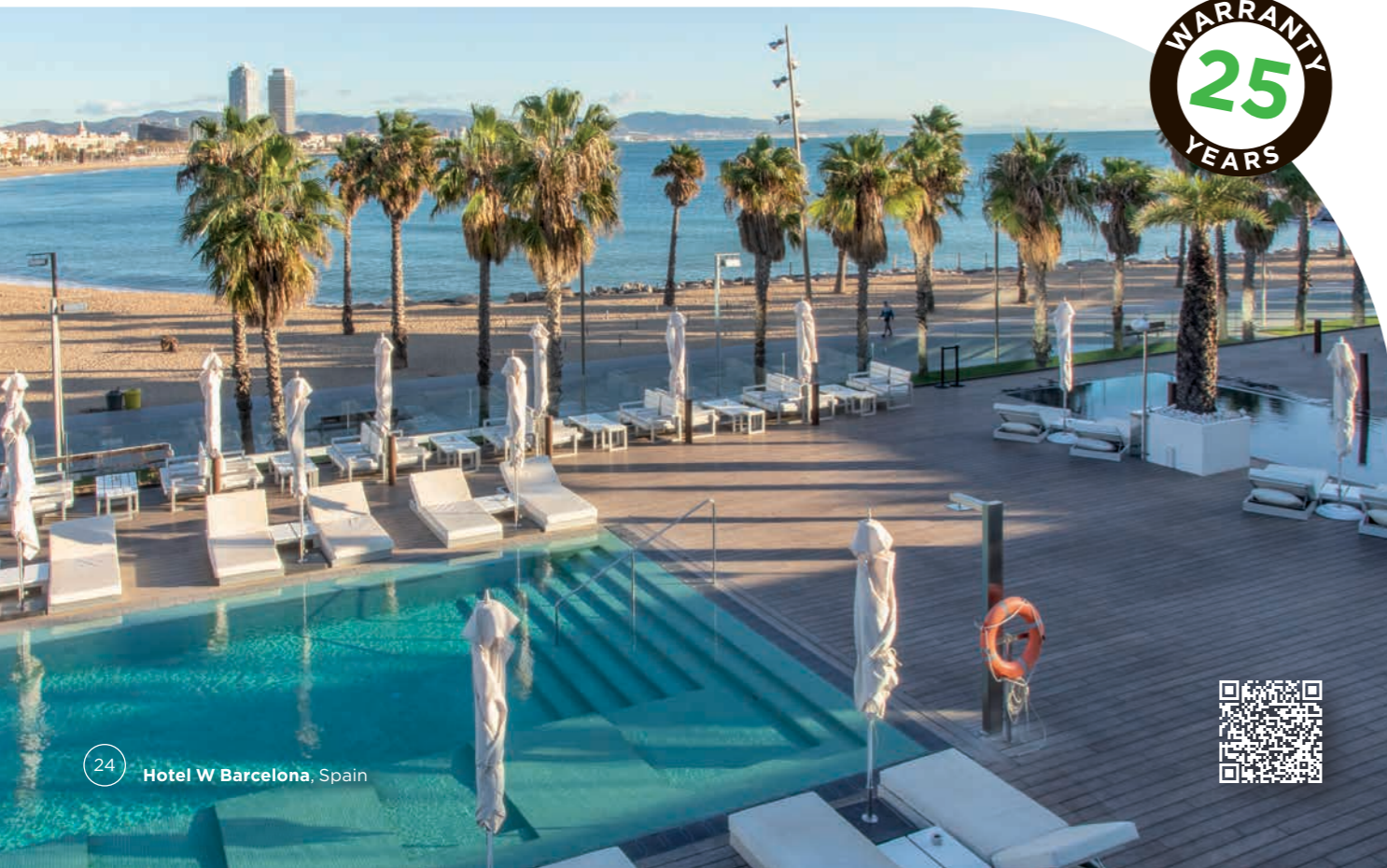
Product / Surface	Oiled Woca*	Sikkens Cetol Ipe*	Unfinished	Dimensions (mm)
Board Standard Groove/Flat	BO-DTC171G	BO-DTC171G-01/02**		1850x137x20
Board Curved	BO-DTC191G-C	BO-DTC191G-C-01		1850x155x20
Sub frame joist Outdoor-Density*			BO-SB355	2440x60x40
Fascia board, 1 edge groove	BO-DTC171G1	BO-DTC171G1-01		1850x137x20
Edge profile, 2 edge grooves	BO-DTCBN171G	BO-DTCBN171G-01		1850x65x30/20

Product	Code
Fastener Asymmetric with screw (20 mm)	CLIP-SCREWBX08
Fastener Start/End Top with screw (20 mm)	CLIP-SCREWBX802
Screw for aluminium sub frame joist	SCREW-09



MOSO® Bamboo X-treme®

The extreme stability of the Bamboo X-treme® material ensures a very durable bamboo deck, with a natural beauty similar to hardwoods. The boards have a brown to dark brown colour when installed and, like any hardwood species when exposed to the weather, Bamboo X-treme® will turn grey over time.

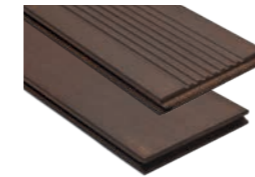


New, unweathered decking.

After 3 months of weathering.

After 18 months of weathering.

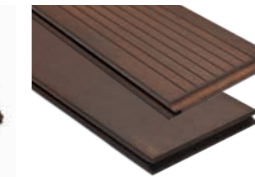
Board Standard Groove / Flat (reversible)



Board Curved



Board V-Groove / Brushed (reversible)



Sub frame joist



Board 2 Non-slip lines



Edge profile



*) Ends of the boards are protected with Sikkens Kodrin WV 456 sealer.

Product / Surface	Oiled Woca*	Sikkens Cetol*	Unfinished	Dimensions (mm)
Board Standard Groove/Flat	BO-DTHT171G	BO-DTHT171G-01	BO-DTHT170G	1850x137x20
Board Standard Groove/Flat	BO-DTHT181G	BO-DTHT181G-01	BO-DTHT180G	1850x137x18
Board 2 Non-slip lines	BO-DTHT171G-AS2	BO-DTHT171G-01-AS2		1850x137x20
Board Standard Groove/Flat	BO-DTHT371	BO-DTHT371-01	BO-DTHT370	1850x137x30
Board Standard Groove/Flat	BO-DTHT191G	BO-DTHT191G-01	BO-DTHT190G	1850x155x20
Board Curved	BO-DTHT191G-C	BO-DTHT191G-C-01		1850x155x20
Board Curved/Brushed	BO-DTHT191G-C-R			1850x155x20
Board V-Groove/Brushed	BO-DTHT191GV-R	BO-DTHT191GV-R-01		1850x155x20
Board Standard Groove/Flat	BO-DTHT211G	BO-DTHT211G-01	BO-DTHT210G	1850x178x20
Board Curved/Brushed	BO-DTHT211G-C-R			1850x178x20
Board V-Groove/Brushed	BO-DTHT231GV-R	BO-DTHT231GV-R-01		1850x208x20
Board Chevron Flat	BO-DTHT163G-CHV	BO-DTHT163G-CHV-01		566(703)x137x20
Sub frame joist			BO-SB155	2440x60x40
Fascia board Standard Groove/Flat	BO-DTHT171G1	BO-DTHT171G1-01	BO-DTHT170G1	1850x137x20
Edge profile, 2 edge grooves	BO-DTHTBN171G	BO-DTHTBN171G-01		1850x65x30/20

Product	Code
Fastener Asymmetric with screw (20 mm)	CLIP-SCREWBX08
Fastener Asymmetric with screw (18 mm)	CLIP-SCREWBX09
Fastener Start/End Top with screw (20 mm)	CLIP-SCREWBX802
Screw for aluminium sub frame joist	SCREW-09
Chevron installation tool	CHEVRON-TOOL01

CLIP-SCREWBX08/BX09 CLIP-SCREWBX802 SCREW-09 CHEVRON-TOOL01



Sustainable

MOSO® Bamboo Products offer clear sustainability advantages that meet the highest technical requirements and quality standards. The inclusion of MOSO® Bamboo Products contributes to a higher LEED, BREEAM, Green Star, HQE and DGNB certification score for green building projects. That's one of the reasons MOSO® Bamboo Products can be found in many sustainable reference projects all over the world. Furthermore, all standard, solid MOSO® Bamboo Products are FSC® certified.

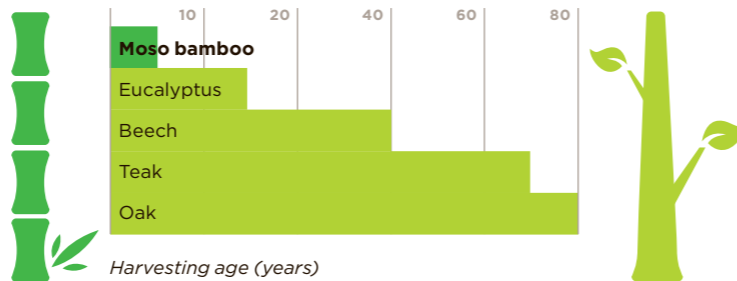


The mark of responsible forestry
FSC® C002063

Unsurpassed growing speed

Bamboo: the fastest growing plant in the world

Because of the fast growth, Moso bamboo is managed as an agricultural crop: the annual harvest of the 4-5 year old stems - compared to 60-80 years for tropical hardwood! - provides a steady annual income to farmers and stimulates the bamboo plant to reproduce even faster. Therefore, by default no deforestation occurs with production of MOSO® Bamboo Products, while large amounts of CO₂ are captured in the bamboo forests and products www.inbar.int/understanding-bamboos-climate-change-potential

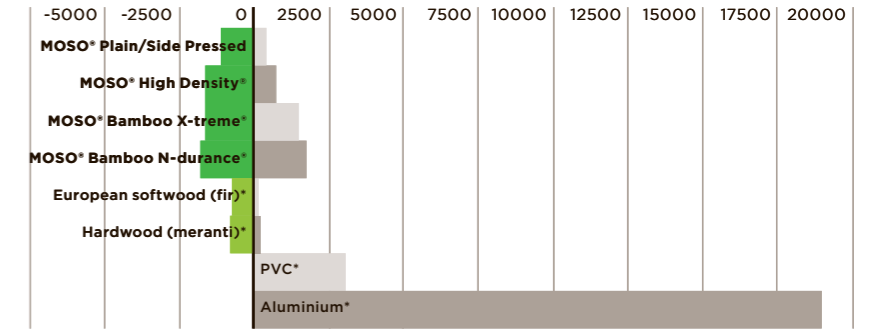


Construction stored carbon

MOSO® Bamboo Products act as a carbon store

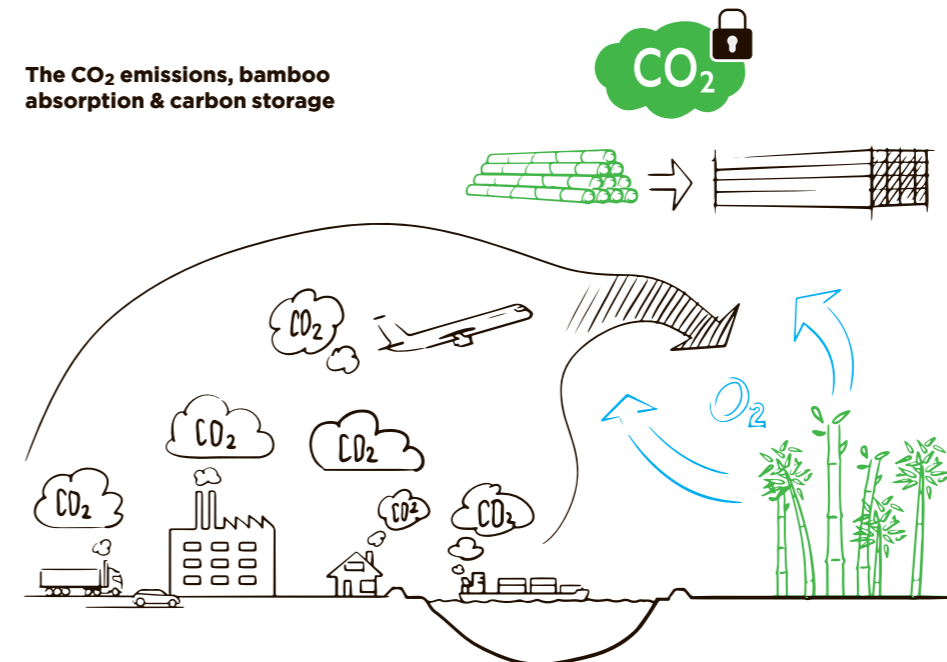
All plants, algae and certain organisms, including Moso Bamboo, undergo a process known as photosynthesis in which carbon is stored in the material throughout its useful life. The locked amount of CO₂ can be calculated rather simply by looking at the density of the material and taking into account the biobased content (biogenic carbon - EN 16449). Since bamboo is so dense, it stores high amounts of carbon throughout the product life cycle. Although this carbon storage is a huge benefit for biobased materials, this carbon storage is not (yet) taken into account in whole life carbon assessments as it is assumed that within 100 years the biobased material will be discarded (decay) or incinerated. However, based on circular economy principles and applied in the built environment in long-lasting applications this carbon storage - also known as Construction Stored Carbon (CSC) - may be perceived as semi-permanent and under certain conditions is even eligible for voluntary carbon credit systems.

CO₂ storage vs. CO₂ emissions during production and transport



in kg CO₂ eq/m³ material
(*) Data abiotic materials from Idemat database TU Delft (industry averages).

The CO₂ emissions, bamboo absorption & carbon storage



The Red Sea - The St. Regis Red Sea Resort, Saudi Arabia
Kengo Kuma 2130240 kg CO₂
Red Sea Global - The St. Regis Red Sea Resort

MOSO® Bamboo References

► www.moso-bamboo.com/references

MOSO®
Bamboo
Outdoor

Private residence
Saint-Martin Island



MOSO®
Bamboo
Flooring

Hotel Jakarta Amsterdam
The Netherlands



MOSO®
Bamboo
Panels,
Veneer &
Beams

CityLife Shopping District
Italy



MOSO®
Bamboo
Custom
Made

Madrid International Airport
Spain



Gra-Car restaurant
Certosa di Pavia, Italy



Hard Rock Hotel Los Cabos
Los Cabos, Mexico



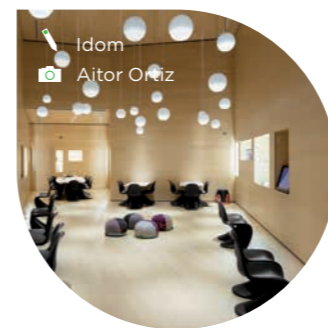
Pharos
The Netherlands



SNCF - Railway Station
Bordeaux France



Guggenheim Museum
Spain



Lexus Lounge
Belgium



Kempegowda International Airport Terminal 2 India



Schiphol Airport
The Netherlands



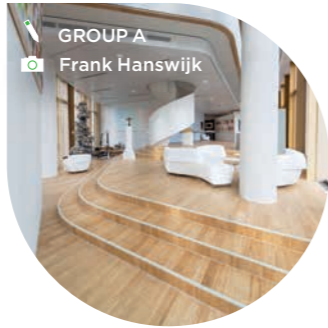
Private Residence
Buenos Aires, Argentina



Private Residences De Krijgsman The Netherlands



AkzoNobel Center & Art Space The Netherlands



Hotel ME Barcelona by Melia Spain



Shopping Gent Zuid
Belgium



Commercial Center Mitikah
Mexico



Stable Doitrand Equestre
France



Be inspired by hundreds of bamboo applications and countless projects made with a wide range of MOSO® bamboo products:

► www.moso-bamboo.com/references



MOSO® Mastering Bamboo

Endless possibilities with MOSO® Bamboo Products:

MOSO® develops and creates bamboo products for indoor and outdoor applications that meet the highest technical requirements and quality standards, enhance the beauty of applications and are made from the sustainable, renewable resource: Moso bamboo.

With more than 25 years' experience in the relatively young bamboo industry, MOSO® is recognised as the **global A-brand** in bamboo because of its focus on product **quality, innovation** and **sustainability**. With an international team and partners in more than 60 countries, MOSO® is continuously looking for new applications and solutions that can be made with the fastest growing plant of the world.

Besides MOSO® Bamboo Outdoor products, MOSO® offers a very broad assortment of **Bamboo Flooring, Panels, Beams** and **Veneer** in various sizes, thicknesses, colours and textures. These products are used worldwide in various applications ranging from wall covering, ceilings, window frames and doors to stairs, furniture and kitchens, providing an ideal combination with the MOSO® Outdoor assortment.

Furthermore, because of its expertise, MOSO® is able to develop **unique, customised bamboo solutions** for industrial clients, meeting exceptionally stringent requirements. Through its experience, innovative attitude and worldwide network, MOSO® is recognised as the global A-brand in bamboo products with European quality, warranty, certifications & service. The proof is the impressive list of references and clients such as Madrid Airport, Kempegowda International Airport, BMW, AkzoNobel, Texaco, Guggenheim Museum, SNCF, Rabobank, United Nations (FAO), and CitizenM Hotels. For an overview of project references and clients please visit the website:

www.moso-bamboo.com/references



Godai Pavilion, Spain

Baldó Arquitectura Luis Asin



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Mastering
bamboo

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