MOSO® Bamboo N-finity indoor products

Antoine Duhamel

Mathias Kögel

bamboo: the fastest growing plant in the world

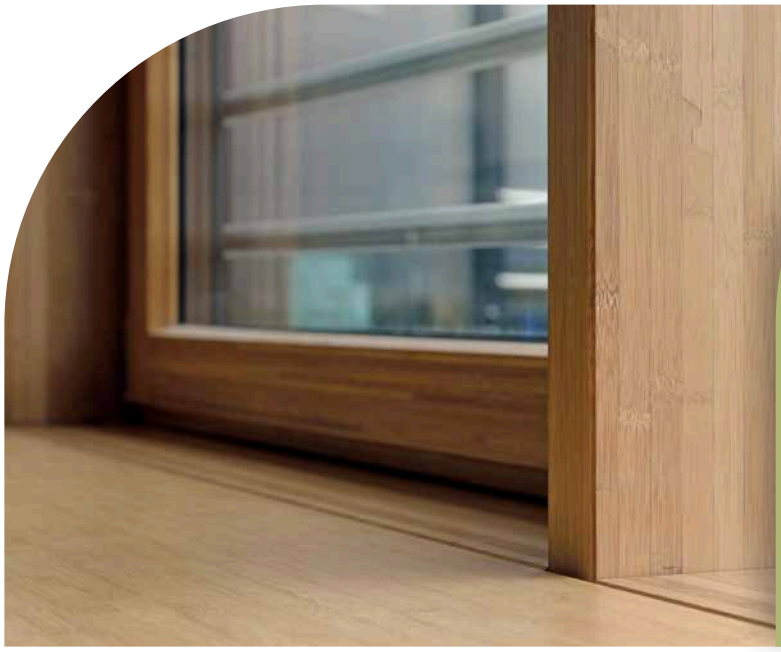
patented finger-jointing method

Mathias Kögel

MOSO®
Bamboo N-finity

Bamboo is very **sustainable**, **ecological** and the **fastest growing** raw material on earth. In addition, this bamboo construction "timber" has very good **mechanical properties**, making it ideal for **structural applications**. Due to its good technical characteristics it is possible to use thinner beams compared to the traditionally used wood species. Examples of applications are: **curtain walls**, **verandas,** and **door- and window frames**. MOSO® Bamboo N-finity construction beams can therefore replace aluminum, hardwood and glulam. Bamboo N-finity:

- Has very good insulating properties in contrast to e.g. aluminum;
- Has a much better ecological footprint compared to aluminum;
- Is less sensitive to moisture than wood;
- Is very hard and can be delivered with narrow tolerances, therefore little loss in production.



„Bamboo is for us a sustainable material, which even in direct comparison to wood has the better properties in terms of sustainability, CO_2 bond, strength and resistance. Bamboo in the laminated version is ideally suited for construction components in curtain walls or element facades. Bamboo facades create a warm, pleasant atmosphere, especially in office areas. In combination with bamboo panels and veneers or even parquet, there are numerous design possibilities in interior design to tie in with this atmosphere."

Martin Atzinger - archibrand®
Munich, Germany

▶ www.archibrand.com

certificatied with **DIBt** General Building Inspectorate Approval

MOSO® Bamboo N-finity Beams for structural and non-structural elements in timber construction are certified with DIBT General Building Inspectorate Approval No. Z-9.1-895. MOSO® Bamboo N-finity is the first bamboo material that is certified with an Approval for structural applications by the German Institute for Construction technique. With the technical characteristics mentioned in the Approval, the Bamboo N-finity Beams can be installed as structural or non-structural elements in buildings that are described in the document:

- Areas where the use of hardwood is permitted in accordance with the standard DIN EN 1995-1-11 in conjunction with the German National Annex DIN EN 1995-1-1/NA2;
- Areas which are assigned to service class GK 0 in accordance with DIN 68800-13, but not unheated attics in accordance with the last indent of DIN 68800-1, Section 5.2.1;
- Without chemical wood preservatives or fire protection agents but including joining materials commonly used in timber construction;
- Only for supporting structures which are statically or quasi-statically loaded (see DIN EN 19904 and DIN EN 1991-1-15 in conjunction with DIN EN 1991-1-1/NA6).

Daniel Osso Photographe

advantages of **MOSO®** **Bamboo** N-finity indoor construction timber

high stability
Due to the composition of individual strips and multiple pressed layers, MOSO® Bamboo N-finity Beams will shrink and swell less than solid wood species, providing more stability. Considerably higher stability than all other woods, making it possible to work very thin - with smaller dimensions than before.

multiple solutions
MOSO® Bamboo N-finity Beams offer multiple solutions for glass facade systems, conservatories, roof trusses and door and window frames, and many more indoor applications.

hard & durable
Brinell hardness ± 4 kg/mm^2. The mechanical properties exceed those of the commonly used hardwoods.

CO_2 neutral
Official LCA and carbon footprint studies (EN 15804) confirm that MOSO® Bamboo N-durance Beams are CO_2 neutral during the product lifespan*. The use of bamboo contributes to a higher score in LEED-, BREEAM and Green Star certified projects.

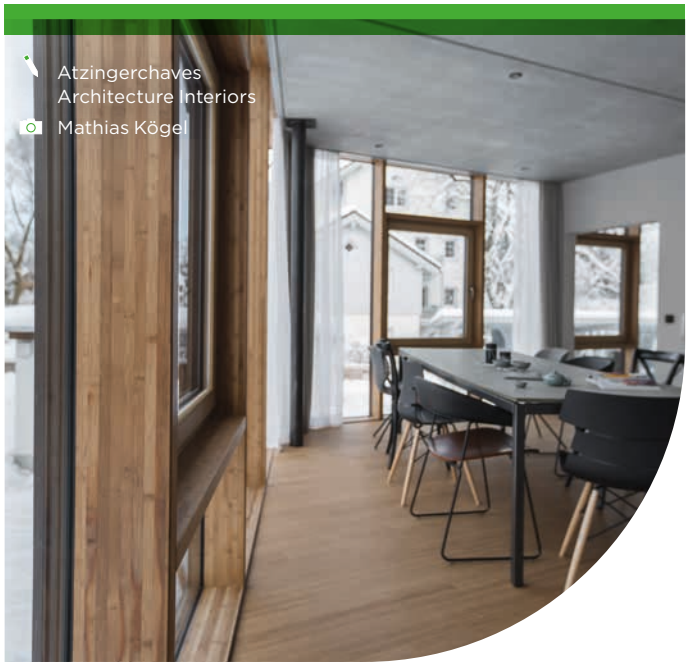
beautiful appearance
Creates a beautiful, natural look. Final appearance can be determined with many different finishes.

renewable raw material
Made from Moso bamboo; one of the fastest growing plant on earth. Ready for harvest after 4-5 years (compared to up to 100 years for hardwood species) - no deforestation. Consisting of approx. 97% natural bamboo.

*) This includes the CO_2 (biogenic carbon - EN 16449) stored in the product.

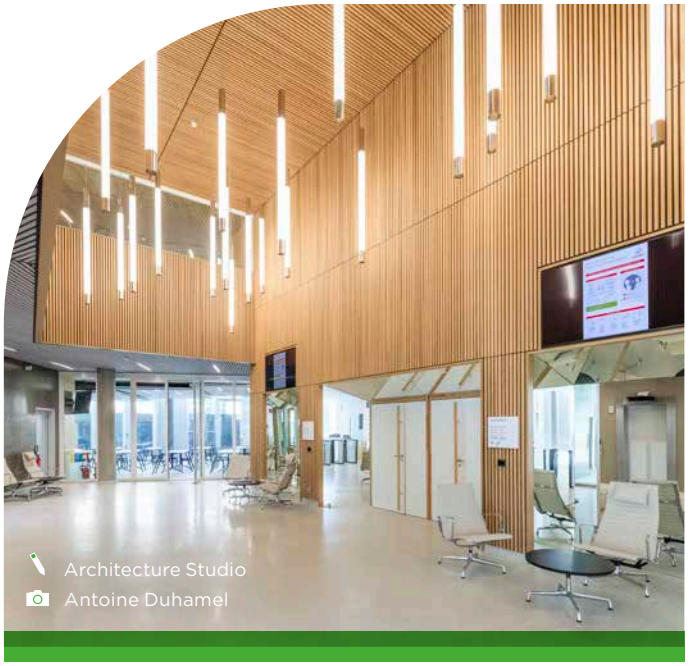
Viguier
Daniel Osso Photographe

Head Office Bridge Pont d'Issy Orange (20 m³) Issy-les-Moulineaux, France



Private House in Immenstadt i. Allgäu
Immenstadt i. Allgäu, Germany

Schindler Headquarter
(24,839 m²) Vélizy-Villacoublay, France

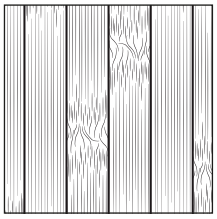


MOSO® Bamboo N-finity Indoor Beams

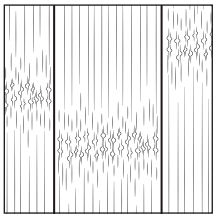
MOSO® Bamboo N-finity Indoor Beams are solid bamboo construction beams developed for structural applications*. The bamboo strips are connected with a special patented hook connection on strip level. Bamboo N-finity has been tested for its mechanical properties (bending, tension, compression, shear) and can be used as a structural beam. The standard range consists of 4 different cross-sections with a length of 5800 mm. The beams are available on request in maximum dimensions of 12.000 x 200 x 120 mm. This product is suitable for interior use in curtain wall systems as well as for window- and door frames.

BL-IL957-580

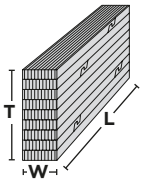
Side Pressed



Plain Pressed



Product Code	Edges	Dimensions L x W x T
BL-IL955-580	Square	5800 x 51 x 161 mm
BL-IL957-580	Square	5800 x 61 x 161 mm
BL-IL456-580	Square	5800 x 86 x 72 mm
BL-IL556-580	Square	5800 x 86 x 82 mm



please note

- Attention: The surface of this product is fine-sawn (unfinished) and can be further processed at any time if a fine, smooth surface is required.
- Other dimensions can be produced custom made: maximum beam size 12,000 x 200 x 120 mm or 12,000 x 120 x 200 mm.

*) The structural performance depends on the specific design of the application. In Europe structural use in buildings always has to be certified by an independent, accredited test institute.

technical characteristics and certifications

- Density: ± 700 kg/m³
- Shrink/Swell: 0.14% per 1% change in Moisture Content
- Moisture content: 10% at 20°C and 65% relative humidity, 8% at 20°C and 50% relative humidity
- Brinell hardness: ± 4 kg/mm² (average value - EN 1534)
- Reaction to fire: Class D-s2-d0 (EN 13501-1)
- Emission class: Class E1 (< 0.124 mg/m3) (EN 717-1)
- Modulus of Elasticity: ± 9721 N/mm² (SP), +/- 8866 N/mm² (PP) (EN 408)
- Bending strength: ± 56.7 N/mm² (SP), +/- 50.8 N/mm² (PP) (EN 408)
- DIBt (Deutsches Institut für Bautechnik) certification: Z-9.1-895
- Use Class: Class 1 (EN 335)
- Glue: D4 Water resistant
- CO_2 neutral: LCA report TU Delft (ISO 14040/44) (www.moso-bamboo.com/lca)
- Environmental Product Declaration - EPD (EN 15804) available at www.moso-bamboo.com/epd
- FSC®: FSC® certified products available on request.
- Contribution LEED BD+C - v4: MR 1, MR 2, MR 3 (FSC®) v2009: MR 6, MR 7 (FSC®)
- Contribution BREEAM: HEA 2, MAT 1, MAT 3 (FSC®)

D-s2-d0 · E1 HCHO · CO_2 NEUTRAL · EPD EN15804 · DIBt Z-9.1-895 · FSC www.fsc.org · The mark of responsible forestry FSC® C002063 · LEED · breeam

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Mastering bamboo

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