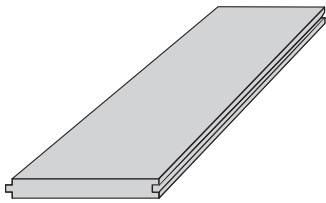


# MOSO® Bamboo UltraDensity®

(Heavy duty flooring for high traffic areas)

MOSO® Bamboo UltraDensity® is a solid bamboo flooring board made from compressed bamboo strips with an Ultra-High Density®. Thanks to its unique production method the material is extremely stable, hard and durable and therefore suitable for the toughest conditions: in very high traffic areas and even in semi-outdoor areas (protected from direct rain or sunshine). The boards are available unfinished, and have to be finished on site. The boards come with tongue and groove and a bevel on all 4 sides. This flooring type has to be fully glued down or installed screwed down on MOSO® Bamboo X-treme® sub joists or alternative joists.



Caramel	Style	Finish	Surface	Edges	Dimensions (mm)
BF-DS1060	UltraDensity®	-	Rough sanded	Macro bevel	1900x160x32
BF-DS2060	UltraDensity®	-	Rough sanded	Macro bevel	1900x160x20
BF-DS2061	UltraDensity®	-	Smooth	Micro bevel	1900x160x18

## Installation summary

### Screw down installation:

- Install a PE (Polyethylene) film as moisture barrier.
- Install a suitable, fixed, stable and durable sub frame, preferably using Bamboo X-treme® sub beams. Distance between the beams: see table 'field of use', available in booklet.
- Always make sure the end of the board is supported by a joist.
- Maximum length/width of the floor 100 m / 15 m.
- Fix the boards on the sub frame screwing into the tongue of the board at a 45° angle. Always predrill before screwing.

### Glue down installation:

- Check room climate conditions (room temp. 18-21°C, air humidity 40-65%).
- Check subfloor: it should be flat/clean/stable and should not exceed the maximum allowed moisture content (for example 1.8% for sand cement).
- The floor should be fully glued.
- MOSO® Bamboo UltraDensity® itself can be installed glued down without expansion gap/joint, but with minimum 10 mm distance from the wall. When the building, where the floor will be installed, requires expansion gaps (for example in concrete subfloors), these expansion gaps needs to be taken over and also be made in the MOSO® Bamboo UltraDensity® floor.
- Elastic adhesive systems like 1-component Polyurethane or silan type of adhesives only can be used, when:
  - Shear strength  $T_s > 1.4 \text{ N/mm}^2$   
(3 days balanced at 23 degrees Celsius/50% Air Humidity)
  - Shear elongation  $\gamma \geq 0.5$   
(3 days balanced at 23 degrees Celsius/50% Air Humidity)
- This floor type can be installed - under certain conditions - on floor heating / cooling.
- After cleaning and drying, apply an appropriate finish (Woca Diamond Oil Active (Woca No1) is advised for heavy traffic areas).
- After installation: make sure proper cleaning and maintenance is done, according to the chosen finish.
- Full version available at ▶ [www.moso-bamboo.com/ultradensity](http://www.moso-bamboo.com/ultradensity)

## Technical characteristics and certifications

- Density (product):  $\pm 1150 \text{ kg/m}^3$
- Composition: 93% bamboo strips (lignin/cellulose) and 7% glue (outdoor resistance).
- Top layer thickness / Wear layer: approx. 7 mm for the 20 mm boards / 11 mm for the 32 mm boards
- Dimensional stability: Results conform to French standard NF B 54008 (ISO 24339).
- Resistance to Indentation - Brinell Hardness:  $\pm 9.5 \text{ kg/mm}^2$  (average value - EN 1534)
- Reaction to fire <sup>1)</sup>: Class Bfl-s1 (EN 13501-1)
- Slip resistance <sup>1)</sup>: USRV 118 (EN 13036-4), R 10 (CEN/TS 16165 Annex B - DIN 51130)
- Thermal conductivity: 0.28 W/mK (EN 12667)
- Thermal resistance: 0.0645 m<sup>2</sup>K/W (18 mm), 0.0716 m<sup>2</sup>K/W (20 mm) (EN 12667)
- Formaldehyde emission: Class E0 ( $< 0.025 \text{ mg/m}^3$ ) <sup>2)</sup>, Class E1 ( $< 0.100 \text{ mg/m}^3$ , EN 717-1), Class E1 (E05) ( $< 0.050 \text{ mg/m}^3$ , EN 16516)
- Emission of VOC: A+ (ISO 16000-9)
- Modulus of Elasticity: 12090 N/mm<sup>2</sup> (mean value - EN 408)
- Bending strength: 99.6 N/mm<sup>2</sup> (characteristic value - EN 408)
- Bending strength: 95.5 N/mm<sup>2</sup> (EN 310)
- Biological durability: Class 2 (EN 350 / CEN/TS 15083-1)
- Use class: Class 3.1 (EN 335 / EN 460)
- UPEC classification according to French standard: Class U<sub>4</sub>P<sub>2</sub>E<sub>2</sub>C<sub>2</sub> <sup>1)</sup>
- CO<sub>2</sub> neutral: LCA report TU Delft (ISO 14040/44) ([www.moso-bamboo.com/lca](http://www.moso-bamboo.com/lca))
- Environmental Product Declaration - EPD (EN 15804) ([www.moso-bamboo.com/epd](http://www.moso-bamboo.com/epd))
- FSC®: Products available with FSC® certification on request.
- Contribution LEED BD+C - v4: MR 1, MR 2, MR 3 (FSC®), EQ 2 v2009: MR 6, MR 7 (FSC®), IEQ 4.4
- Contribution BREEAM: HEA2, MAT 1, MAT 3 (FSC®), MAT 5
- Guarantee: 30 years

<sup>1)</sup> Only when finished with Woca Diamond Oil Active (WocaN®) oil.

<sup>2)</sup> E0 class is an unofficial formaldehyde emission class, but it is commonly used to indicate that the product is produced with No Added Formaldehyde (NAF) glues. E0 products automatically qualify for the official E1 class according EN 717-1.



breeam

Also available with FSC® certification.



The mark of responsible forestry  
FSC® C002063