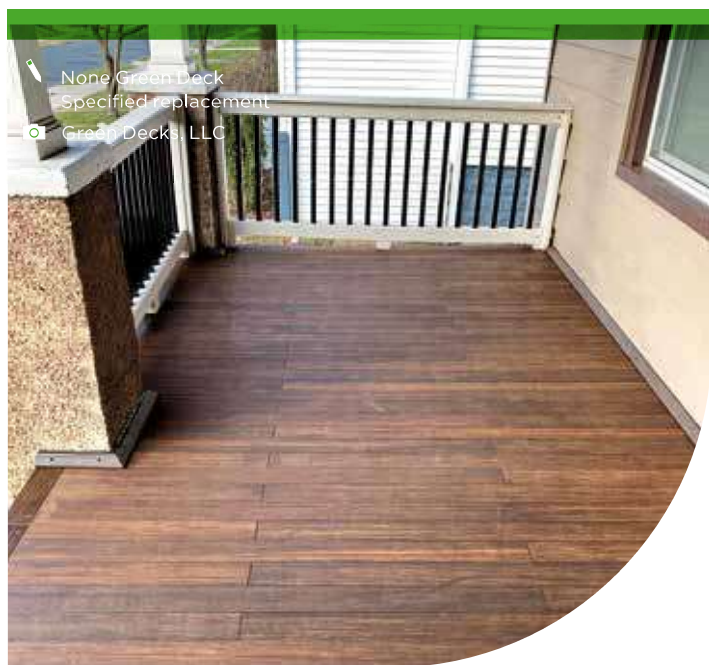




Private Residence United States of America



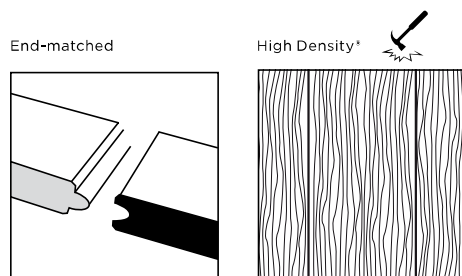
Private Residence
(250 sqft) Collingswood, New Jersey, United States of America

Private Residence
United States of America



MOSO® Bamboo X-treme® 1x4 T&G

MOSO® Bamboo X-treme® 1x4 T&G is a solid, Thermo-Density® board, made from compressed bamboo strips. A special, heat-treatment process at 392°F (200°C) provides MOSO® Bamboo X-treme® the highest durability class possible in the appropriate European standard (see technical characteristics below) and increases the hardness and stability. These floor boards are very suitable for covered outdoor areas. They come unfinished and thanks to the tongue and groove system the installation is fast and easy. MOSO® Bamboo X-treme® 1x4 T&G can be used for porch flooring, covered ceilings and soffits.



*) Also on ends.

Unfinished	Grooved	Edges*	Surface	End-matched	Size	Dimensions (")	Dimensions (mm)
BO-POR-18-96-UF	Yes	Macro Bevel	Smooth	Yes	1 x 4 x 6	3/4 x 3 7/8 x 72	18 x 96 x 1830

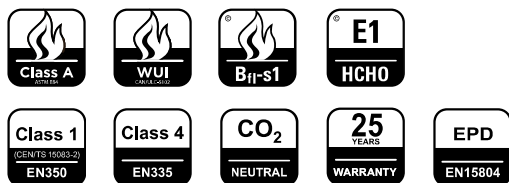
installation summary

- Install a suitable, fixed, stable and durable joist system.
- The recommended maximum span for 18 mm is 12" on center – but your local building codes may be less.
- Each porch board must be installed flush and tight against the joist system with a fastener insert through the tongue and into the joist.
- Fasteners should be attached at 45 degrees from vertical into the groove on the tongue and into the porch board and joist below. Fasteners should be no larger than 18 gauge flooring cleats.
- The first board and final boards should be face screwed to the joist system using stainless steel screws, predrilled and countersunk.
- Use a 1-2% slope and ensure good ventilation.
- Unfinished Bamboo X-treme® decking can be left to weather naturally or can be finished 3-4 months after installation.
- When not applying outdoor oil regularly, the deck will acquire a grey color tone and the typical bamboo grain structure will become less visible.
- Maintenance and cleaning: Routinely remove debris from your porch flooring such as leaves, grass clippings by sweeping (with a stiff bristle brush) or blowing them off. Power washing of the material is not recommended use only a regular hose and a stiff bristle brush to remove stuck on debris.
- For further info: please see the maintenance instructions.
- Store in a cool and dry place away from direct sunlight, and protected from weather influences, dirt and dust.
- Full version available at ► www.moso-bamboo.com/x-treme/porch-flooring

technical characteristics and certifications

- Density: +/- 71.79 lbs/ft³
- Dimensional stability:
length: + 0,1%; width + 0,9% (24 hours in water 68°F)
- Resistance to Indentation - Brinell Hardness: ≥ 1,350 psi (EN 1534)
- Reaction to fire: Class Bfl-s1 (EN 13501-1)
- Flame spread index: Flame spread 25, Smoke developed 45
Class A (ASTM E84) / CAN/UJC S102 (WUI approved)
- Slip resistance - new material: USRV 55 (Dry), USRV 29 (Wet), USRV 91 (Dry),
USRV 42 (Wet) (Pendulum friction test - CEN/TS 16165 Annex C - CEN/TS 15676) /
R 10 (Shod ramp test - CEN/TS 16165 Annex B - DIN 51130) / Class C (Barefoot ramp test -
CEN/TS 16165 Annex A - DIN 51097)
- Slip resistance - weathered material: USRV 100 (Dry) (CEN/TS 16165 Annex C) /
R 11 (CEN/TS 16165 Annex B - DIN 51130)
- Thermal emittance: 0,81 (ASTM C1371)¹⁾
- Solar Reflectance (SR): 0,32 (ASTM C1549)¹⁾
- Solar Reflectance Index (SRI): Low 27, Medium 30, High 33 (ASTM E1980)¹⁾
- Modulus of Elasticity: 13565 MPa (EN 408, equivalent ASTM D 198)
- Bending strength: 54,4 MPa (EN 408, equivalent ASTM D 198)
- Biological durability: Class 1 (EN 350 / CEN/TS 15083-2), simulated graveyard test /
Class 1 (EN 350 / CEN/TS 15083-1)
- Effectiveness against Blue Stain: Class 0 (EN 152)
- Use Class: Class 4 (EN 335)
- CO₂ neutral: LCA report TU Delft (ISO 14040/44) (www.moso-bamboo.com/lca)
- Environmental Product Declaration - EPD (EN 15804) (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, SS 7
v2009: MR 6, MR 7 (FSC®), IEQ 4.3, IEQ 4.4
- Contribution BREEAM: MAT 1, MAT 3 (FSC®), MAT 5 (HD)
- Warranty: 25 years

¹⁾ Tested on 3 years weathered MOSO® Bamboo X-treme®.



Only available on special request.



The mark of responsible forestry
FSC® C002063



breem

MOSO® Bamboo X-treme® 1x4 T&G

installation instructions

before installation

- Local building codes must always be consulted when building an exterior deck. Most counties require building permits.
- Water logging under the flooring must be avoided by preparing a water permeable ground structure. This can be achieved by sand layers and gravel dispersion above.
- Install the floor boards with a slope of 1-2% to enable water to run off the surface.
- There must be adequate air circulation underneath the floor to prevent cupping and warping of the boards.
- When the surface underneath the flooring is not fast drying, there should be at least 4" distance between the floor and the surface underneath the floor.
- In applications where the floor is being built closer to wet ground, a vapor barrier is recommended to prevent water from absorbing into the underside of the material.

safety

Drilling, sawing, sanding, and machining MOSO® Bamboo X-treme® generates dust. Avoid inhaling dust by wearing a dust mask. Contact MOSO® for MSDS information.

required tools

- Powernail 50P 18 GA, cleat nailer
- Rubber mallet (comes with the nailer)
- 1 3/4" 18 GA. flooring cleats (DO NOT USE 16 GA.) available from Powernail (L175185) and Grip-Rite (GRFLN175)
- Drill
- Drill bits
- Safety glasses
- Bamboo X-treme® can be crosscut with a quality chop saw, using a (40 tooth) carbide-tipped blade. Ripping can be done on a standard table saw, using a properly aligned quality fence with a carbide-tipped blade.
- Bamboo X-treme® can be routed or planed with high-speed steel or carbide cutters. When required, only sand in the direction of the grain - i.e. belt sander. Never use an orbital sander.

the installation

spacing

- Spacing between the house and product is recommended. An 1/4" gap is recommended. When fastening the material to the joists it is not necessary to pound the boards together but rather snug the board to the previous one while checking for run out as you move across the floor. The flooring should be installed directly to the joists and not to plywood
- Because of the stability of the boards and the shape of the end-match system no expansion gap is needed on the ends of the boards.
- Every cut end has to be treated with board end sealer, to prevent water penetration.

joist span

- The recommended maximum span is 12" on center - but your local building codes may be less.
- End joints should meet on top of the joists and be properly supported.
- For best appearance and strength, end joints should be staggered to prevent direct alignment of the ends.
- In case the end joints don't meet perfectly atop the joist, sistering blocks can be installed on the joists, to allow for room for the cleat.
- When the floor installation is on an angle, the joist spacing must maintain the 12" centers and cover four joists. Determine the final joist spacing only after talking with local building code officials. MOSO will not be responsible for an insufficient load bearing structural design.

installation with hidden fasteners

- We recommend using the Powernailer 50P 18-gauge cleat nailer which is widely available as the choice of flooring professionals. Use only 18 gauge cleats as noted above.
- Each floor board must be installed flush and tight against the joist system with a fastener insert through the tongue and into the joist. Ensure joists are properly aligned on the top; use shims to if necessary.
- Fasteners should be attached at 45 degrees from vertical into the end-match system and into the board and joist below. Test the gun using a scrap piece of flooring to ensure that the bottom plate/foot of the nailer is properly positioned to so the fastener is installed in the correct place and angle.
- Installers should adjust the pressure to ensure the fastener is placed just below the surface (generally 80 to 90 psi no greater). A setting tool or punch is handy to drive fasteners below the surface if needed.
- Always apply firm pressure to the nailer by holding it in contact with the material, centered over the joist and stabilizing it at a 90-degree angle to the flooring. The nailer will insert the cleat at a 45-degree angle seating the flooring directly to the joist. Be careful when attaching fasteners close to edge to avoid splitting the end-match system.
- The first board and final boards should be face screwed to the joist system using stainless steel screws, predrilled and countersunk. For concealing the screws use a common plugging system available in the market.

screw down installation

- Pre-drill the screw holes 3/4" from the side of the board. Be sure to predrill with a large enough drill (80% of screw diameter) to avoid cracking of the floor.
- We recommend using a countersink bit with a positive stop.
- Screws should be 305 grade stainless steel (salt water contact may require 316 grade stainless steel, please consult local building codes).
- Always screw both sides (left and right in the width direction) of the board.
- Use at least stainless steel quality decking screws.

cleaning and maintenance

- The MOSO® Bamboo X-treme® Board is a natural product, some variation in color, grain and appearance is normal. Color can change fast from dark brown to brown or grey, depending on the climatic conditions and maintenance schedule.
- Annual cleaning of your MOSO® Bamboo X-treme® Decking is recommended. Clean the deck using warm water, mild deck cleaner (Messmer Deck Cleaner and Messmer Brightener) and stiff bristle brush.
- After cleaning and drying, apply a coat of exterior finish (Messmer's MOSO® Bamboo Finish Oil).
- We recommend to repeat this (cleaning + applying a coat of exterior finish) at least once per year.
- See additional maintenance instructions at www.moso-bamboo.com/youtube/minutes (episode 22).

storage and handling

MOSO® Bamboo X-treme® should be kept out of direct sunlight and should not be exposed to inclement weather before installation.

additional note

While all due care is taken to ensure the accuracy of the installation instructions, individual circumstances (location, sub floor and installation procedures) may vary and are beyond the manufacturer's control. In case of doubt, please consult your local dealer/distributor. Always follow the local building code.

These instructions are subject to change. For the latest version visit www.moso-bamboo.com/x-treme/decking

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