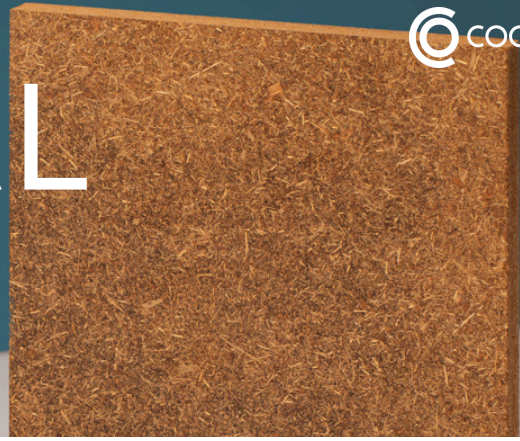


TECHNICAL SHEET



About COCOBOARD®

Cocoboard® is a sustainable, high-performance panel made entirely from coconut husks and a proprietary bio-based adhesive. Developed by NaturLoop, Cocoboard champions environmental innovation by transforming agricultural waste into durable panels with a distinctive natural aesthetic. Designed for both residential and commercial applications, Cocoboard enables creative, toxin-free design with excellent workability, without compromising on strength or indoor air quality.

Applications

Furniture & Storage	Interior Design	Retail & Commercial
Furniture Tabletops Cabinetry (kitchen & storage) Storage units (e.g., wardrobes, shelving systems) Doors	Wall cladding & decorative panels Decorative partitions & room dividers Ceiling panels (false ceilings) Trim & mouldings	Retail displays & fixtures

Technical Specifications

All properties listed below are based on internal testing and industry-standard protocols. Testing was conducted according to relevant European Norm (EN) standards for mechanical performance, emissions, and moisture resistance

Thickness	Unit	12 mm	16 mm	19 mm	EN 324-1
Density	kg/m ³	760-780	680-730	680-730	EN 323
Moisture content	%	5-11	5-11	5-11	EN 322
Final sanding	grain size	120	120	120	-
Bending strength	N/mm ²	17-19	13-16	13-15	EN 310
Modulus of elasticity in bending	N/mm ²	1700-1800	1500-1700	1500-1650	EN 310
Internal bond strength	N/mm ²	0.7-0.8	0.5-0.7	0.5-0.65	EN 319
Swelling in thickness 24h	%	9-11	8-10	8-10	EN 317
Formaldehyde content	mg HCHO/m ² h	< 0,01	< 0,01	< 0,01	EN ISO 12460-3
Formaldehyde emission	ppm	< 0,01 < Class E1	< 0,01 < Class E1	< 0,01 < Class E1	EN 717-1
Fire reaction*	-	C-s1, d0	C-s1, d0	C-s1, d0	EN 13823 - EN 13501
Face screw hold*	N	-	1509 N	-	EN 320

* Values obtained from tests conducted on 16 mm panels.

Machining Guidelines

Cocoboard is supplied unfinished, with a factory-sanded surface (grain size ~120) suitable for a wide range of coating applications.

Surface Preparation

- Light sanding is recommended prior to coating to optimize surface smoothness and adhesion
- Recommended sanding sequence:
 - Start: 180–220 grit
 - Finish: 280–320 grit
- Edges should be sanded and prepared in the same way as surfaces
- Remove all dust using vacuum or compressed air before coating

Coating Compatibility

Cocoboard is compatible with a wide range of commercial coating systems, including:

- Water-based coatings
- Solvent-based coatings
- Industrial systems (e.g., acrylic, polyurethane)

Application Guidelines

- Cocoboard can be finished using standard MDF coating processes with minor adjustments
- Apply primer and topcoat systems according to manufacturer specifications
- Light sanding between layers is recommended to ensure optimal finish quality
- Edge sealing is recommended, especially in humid environments

Moisture & Use Considerations

- Not recommended for direct or prolonged water exposure unless fully sealed, including edges
- Oils and waxes are not recommended for high-humidity environments

Surface Preparation & Coating

Machining Behaviour

Cocoboard can be processed using standard woodworking equipment (CNC, sawing, drilling). Compared to MDF of similar density, Cocoboard exhibits lower cutting resistance but higher tool wear due to its abrasive composition.

Recommendations

- Use polycrystalline diamond (PCD) tooling for optimal tool life
- Carbide (TC) tools can be used but will experience significantly higher wear
- Maintain proper dust extraction due to fine fiber particles
- Optimize feed rates to balance surface quality and tool life

Biological Durability

Higher biological resistance than any other wood-based composites (e.g. marine plywood)

- highly resistant to subterranean and drywood termites
- highly resistant to powder-post beetles
- highly resistant to decay fungi

Packaging

Panel dimensions: 1.22 x 2.44 m

Panel thickness: 12 mm, 16 mm, 19 mm

Environmental Impact and Certifications

NaturLoop has conducted an initial internal Life Cycle Assessment (LCA) to evaluate the environmental footprint of Cocoboard®. This LCA provides valuable insights but is based on pre-industrial data.

NaturLoop will pursue third-party verification and plans to develop a verified Environmental Product Declaration (EPD) in line with European standards.

Other certifications such as Cradle to Cradle Certified®, or equivalent circularity-focused labels are under consideration as we scale production and refine the material flow.

Storage

- Store indoors only in a well-ventilated, clean, and dry area
- Avoid exposure to moisture, dirt, or dust
- Store flat on stickers or a level, hard surface
- Maintain stable humidity and temperature
- Let panels acclimate to site conditions for 48-72 hours before lamination or installation

Handling & Safety

Handling & Transportation

- Use forklifts or plate lifts whenever possible
- If moved manually, transport panels vertically, one at a time, to prevent warping or damage

Safety & Processing

- Sawing or grinding may release dust; use appropriate dust extraction systems
- Wear respiratory and eye protection during cutting or sanding
- Keep away from open flames or sparks
- Cocoboard is chemically stable, contains no added formaldehyde, and is non-toxic

End-of-Life & Circularity

Cocoboard is designed with sustainability in mind, not only during production but also at the end of its lifecycle.

After use, Cocoboard panels can be:

- Reused or repurposed for secondary applications
- Recycled through mechanical or material recovery routes
- Safely incinerated in a waste-to-energy facility, producing CO₂-neutral energy

NaturLoop is currently exploring third-party testing for biodegradability and compostability under industrial and natural conditions. While Cocoboard contains only natural fibers and a bio-based adhesive, formal certification is pending further analysis.

In parallel, we are evaluating take-back systems and circular design pathways with partners to ensure long-term material value and reduce waste.