

ENVIRONMENTAL PRODUCT DECLARATION

BONDI CHAIR

DESIGNED BY FRÄG WOODALL



Please Wait to be Seated is committed to sustainability in the design and manufacture of products. This commitment has allowed us to differentiate our approach and processes in several development areas.

Please Wait to be Seated has chosen to provide Environmental Product Declarations for its products, to show the environmental impact through their Life Cycle.

For more details, please visit:
www.pleasewaittobeseated.com

Shown in the picture: Bondi Chair in Natural Ash wood

Disclaimer: This EPD was not written to support comparative assertions. EPDs are based on PCRs and different calculation models that are checked with our designers and manufacturers. The EPDs show the life cycle assessment and impact of products from different materials. The user should be aware of the certainty in the final results due to the quality of the source of the data in the study and software tool used to conduct the calculations.

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Please Wait to be Seated A/S
Bondi Chair EPD (Environmental Product Declaration)

This declaration is an environmental product declaration (EPD) which rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. EPDs are registered documents that communicate transparent and comparable information about the life-cycle environmental impact of products in a credible way. LCAs do not address the site-specific environmental impacts of raw materials involved in the product, nor are they meant to assess human health toxicity. EPDs can complement but not replace tools and certifications that are designed to address these impacts.

PRODUCT DEFINITION & PRODUCT DESCRIPTION

The BONDİ chair is inspired by Woodall's earliest memories of watching artisans at work, fascinated by the way they joined and fitted timber. The seat is neat, precise and no-frills, with a crisp, beach-friendly curve. A touch eccentric yet witty, fresh and confident, this is a hard-working, cheerful and characterful chair that would sit just as comfortably in a busy restaurant or café as in a kitchen or dining space at home.

Designer: Fräg Woodall

COLOUR & MATERIAL

Natural matt lacquered ash or painted in Ash Grey, Fig Purple, Indian Red, Turmeric Yellow or Black.

MEASUREMENTS

H: 77 cm
Seat H: 44,5 cm
Seat W: 40 cm
Seat D: 48 cm

ATTRIBUTE	VALUE
Product Category	Seat
Product Dimensions	H: 77 cm x SH: 44,5 cm x SW: 40 cm x D: 48 cm
Product Mass	4.50 kg (9.92 lbs.)
Post-consumer recycled content	70%

Table 1: Reference product attributes

FUNCTIONAL UNIT

The functional unit is one unit of seating to seat one individual, maintained for a period of 15 years.
As Moment has an expected service life of over 10 years, one product is needed to fulfill the functional unit.

MATERIAL COMPOSITION

The material composition of the declared Please Wait to be Seated Bondi Chair is given in Table 2.

MATERIAL	KG, PER CHAIR	LBS, PER CHAIR
Ash Wood	2,82	6,20
Plywood	0,740	1,63
Steel	0,050	0,11
Glue (value in KG)	0,020	0,04
Laquer-paint solved	0,0002	0,0044

Table 2: Reference product materials composition

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IMPACT ASSESMENT CATEGORIES

Main emission sources (pr material group) calculated in KG is given in Table 3.

MATERIAL	TOTAL IMPACT, KG CO2 EMISSION
Wood (Solid Wood & Plywood)	3,81 KG Co2-e
Packaging	2,00 KG Co2-e
Surface Finish & Chemicals	1,06 KG Co2-e
Metal	0,17 KG Co2-e

Table 3: Main emission sources (pr material group)

LIFE CYCLE STAGES

The life cycle stages are summarized in the flow diagram shown in the figure below.
A cradle-to-gate analysis was conducted for this EPD.



- Materials acquisition and pre-processing starts when the material is extracted from nature and ends when the material reaches the production facility or service delivery stage.
- The production stage is a cradle-to-gate stage which is an assessment of a partial product life cycle from resource extraction (cradle) to the factory gate, before it is transported to the consumer. This process starts with the product components entering the production facility and ends with the final product until the delivery stage included.
- Product distribution and storage are included in the next stage, along with product usage and maintenance. This use stage begins when the consumer receive the product and it includes repair in the next 2 years of usage, after the purchase.
- The end-of-life stage starts when the product is ready for disposal, which includes the return to nature, or transformed to be a recycled or reused one.

IMPACT ASSESMENT - CLIMATE BAR

The Målbar tool calculates the total climate footprint emitted from the product. This is calculated according to the EU Product Environmental Footprint (EU PEF) rules and presented according to EN 14067 (Carbon footprints of products). The Carbon Footprint is the total quantity of greenhouse gas (GHG) emissions associated with the full lifecycle of the product.

In this case, that includes the impacts associated with raw materials and emissions from manufacturing (materials and resources), transport, in use (cleaning) impacts and impacts at end of life (reuse, recycling, incineration, landfill etc.). The tool calculations are very accurate and will also reflect the geographical location but they are based on average material and process data.

Details about Målbar: <https://www.maalbar.dk/>

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IMPACT ASSESMENT - CLIMATE BAR DATA

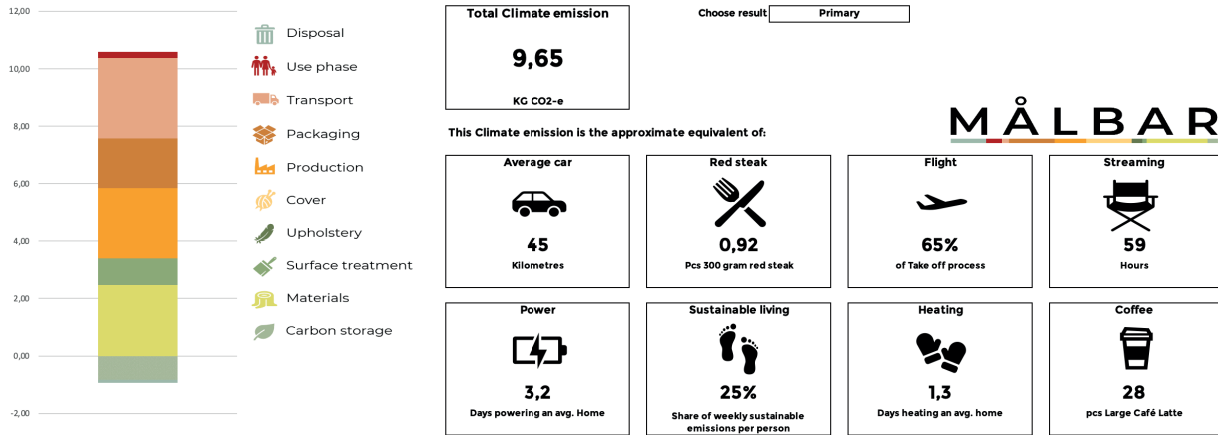


Table 4: Total Climate Emission

Main emission sources (pr material group)

Group	Total impact
Solid Wood	2,70 kg CO2-e
Plastic	0,00 kg CO2-e
Cover	0,00 kg CO2-e
Standard Components	0,00 kg CO2-e
Electronics	0,00 kg CO2-e
Metal	0,17 kg CO2-e
Packaging	2,00 kg CO2-e
Upholstery	0,00 kg CO2-e
Wood Based Board	1,11 kg CO2-e
Surface Finish & Chemicals	1,06 kg CO2-e
Glass / Stone / Ceramics	0,00 kg CO2-e

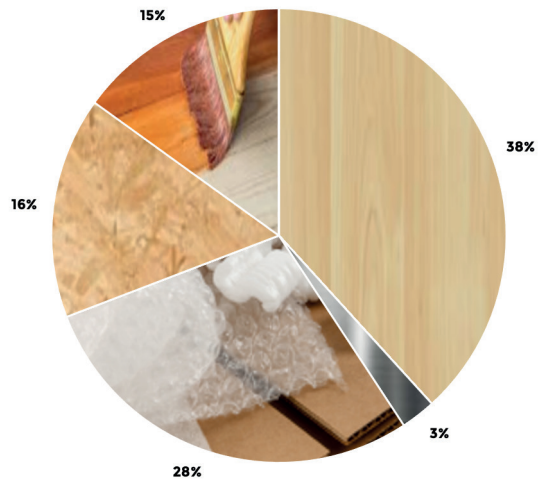


Table 5: Main emission sources (pr material group)

Main emission sources (pr element)

Element	Material	Total impact
Metal 6	Alu. sheet, punched	10,95 kg CO2-e
Metal 3	Steel, tubes/profiles	8,96 kg CO2-e
Main packaging	Cardboard box, no print	6,79 kg CO2-e
Electronic component1	Power supply with cables + connectors	4,82 kg CO2-e
Metal 2	Steel bracket/bent steel sheet	4,03 kg CO2-e
Electronic component2	LED light bulb kg	3,34 kg CO2-e
Transport leg 1	Container-Transport	3,08 kg CO2-e
Surface finish,Chemicals2	Or kg lacquer/paint solvent	2,77 kg CO2-e
Surface finish,Chemicals3	Or kg lacquer/paint water	2,49 kg CO2-e
Metal 1	Steel screws/bolts	1,22 kg CO2-e
Surface finish,Chemicals1	Lacquer/paint solvent on metal/plastic,	1,01 kg CO2-e

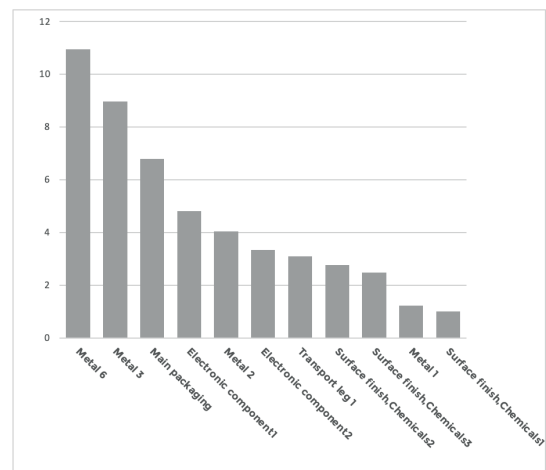


Table 6: Main emission sources

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REFERENCES

EU PEF (2012) European Commission: Institute for Environment and Sustainability H08 Sustainability Assessment Unit, Product Environmental Footprint (PEF) Guide.

ISO. (2006) ISO 14044: Environmental management - Life Cycle assessment - Requirements and guidelines.

CONTACT INFORMATION

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