



apel

## Environmental Product Declaration

Date of Issue: 02/07/2024

Date of Expiration: 02/07/2029

### PRODUCT CATEGORY RULE

BIFMA PCR for Seating, UNCPC 3811

### FUNCTIONAL UNIT

1 unit of seating to seat one individual, maintained for a 10-year period.



Certified  
Environmental  
Product Declaration  
[www.nsf.org](http://www.nsf.org)

Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org
Manufacturer Name and Address	Bernhardt Design 1839 Morganton Blvd, Lenoir NC, 28645
Declaration Number	EPD10927
Declared Product and Functional Unit	1 unit of seating to seat one individual, maintained for a 10 year period.
Reference PCR and Version Number	BIFMA PCR for Seating: UNCPC 3811
Product's intended Application and Use	Commercial Furniture
Product RSL	10 years
Markets of Applicability	North America
Date of Issue	02/07/2024
Period of Validity	02/07/2024 – 02/07/2029
EPD Type	Product Specific
Intended Audience	Business-to-Business, Business-to-Consumer
Range of Dataset Variability	N/A
EPD Scope	Cradle to Grave
Year of reported manufacturer primary data	2022
LCA Software and Version Number	Sphera LCA for Experts (fka GaBi) 2023.2
LCI Database and Version Number	Sphera Managed LCA Content (fka GaBi) 10.7.1.28
LCIA Methodology and Version Number	TRACI 2.1
The sub-category PCR review was conducted by:	Thomas Gloria, PhD (chair) Jack Geibig, P.E. Michael Overcash, PhD
This declaration was independently verified in accordance with ISO 14025: 2006. The BIFMA PCR for Office Furniture Seating Products: UNCPC 3811 serves as the core PCR. <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External	 Jack Geibig jgeibig@ecoform.com
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	 Jack Geibig jgeibig@ecoform.com
<p>Limitations:</p> <p>Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. Full conformance with the PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible". Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.</p> <p>Additional information on the life cycle assessment can be found by contacting Bernhardt directly.</p>	

## Company Description

Bernhardt Furniture Company was founded in 1889 by John M. Bernhardt. Orphaned at 13, John Bernhardt left for Oregon to become a government surveyor but returned home three years later to pursue a career as a logger and timber cutter. After buying a sawmill, he saw an opportunity to use timber in the manufacture of sturdy oak bedroom furniture. The company he started quickly found a market in such urban centers as Chicago and New York City. As the business grew under the leadership of the Bernhardt family, new product categories, dining room and living room furniture were added and additional facilities were built or purchased from other furniture manufacturers.



In 1983, Bernhardt Furniture added a line of commercial furniture, Bernhardt Design, manufacturing quality conservatively styled casegoods, conference and occasional tables, guest, lounge and wood guest chairs for the corporate and legal markets. Gradually, the product line expanded stylistically, adding more contemporary products and multi-purpose tables and seating and conference chairs. Bernhardt Design markets to the architectural and design communities and is known for its excellence in design, winning many awards through the years. Its products are sold globally through sales representatives and selected dealers. The 20,000 sq. ft. flagship showroom is located on Madison Avenue in New York City.

## Product Description

Apel is a family of benches and ottomans created to maximize spontaneous interactions. The collection can be grouped into 'clusters' that serve as stationary hubs or used individually as mobile 'satellites.' Stylistically versatile and highly customizable, Apel is adaptable to many commercial and residential environments. Apel highlights a matching saddle or loop-master stitch and is offered in two sizes. The smaller version of Apel may be converted into a mobile bench by using concealed casters. The products covered by this EPD are the Apel 5850M, 5850ML, and 5851M series, which all include casters. Results are reported for the Apel 5850M/5850ML series composition. All options within each of these Apel series have impacts within 10% of the reported configuration and are therefore covered by this EPD.

## Additional Environmental Information

Apel ottomans comply with [ANSI/BIFMA e3-2019 Credits 7.6.1, 7.6.2, and 7.6.3 along with CDPH/EHLB Standard Method v1.2-2017](#). Additionally, Apel ottomans are [LEVEL 2 Certified](#) under the ANSI/BIFMA e3-2019 Furniture Sustainability Standard.

Bernhardt Design products are designed and engineered to last for many years. Frequently, whether designed under the Design for the Environment program or a legacy product, the life span of the product is longer than customers require, resulting in the issue of disposal. While disposal in a landfill can occur, Bernhardt Design offers alternatives to discarding products as found at <https://bernhardtdesign.com/environmental/recovery/>.

apel

**Product Composition**

This ottoman consists of an upholstered shell with foam molded over a plywood frame, and casters with a polyester finish. The composition of the ottoman is provided in the table below, with a total product weight of 8.1 kg. The exact composition of the purchased product may be slightly different based on the configuration chosen. However, this EPD will still be applicable to the purchased configuration due to the minimal impact on the results.

Material	Mass %	Weight (kg)	Resource Type
Plywood	56.1%	4.5	Virgin Renewable
Polyurethane Foam	17.4%	1.4	Virgin Non-Renewable
Nylon	9.8%	0.8	Virgin Non-Renewable
Paperboard	8.8%	0.7	Virgin Renewable
Polyethylene Fiber	3.4%	0.3	Virgin Non-Renewable
Stretch Polyester	2.2%	0.2	Virgin Non-Renewable
Polypropylene	1.1%	0.1	Virgin Non-Renewable
ABS	0.6%	<0.05	Virgin Non-Renewable
Mixed Metal	0.6%	<0.05	80% Recycled Content Non-Renewable



Though materials may contain recycled content, minimum contents are not specified for any materials contained in the product. Best available industry data was used to model the upstream production of these materials, which is affected by variability of recycled content in the market and available background datasets.

**Functional Unit**

One unit of seating to seat one individual, maintained for a 10-year period. The product under study has a 10-year service life under ANSI/BIFMA X5.1 and therefore does not require additional units of seating to meet the functional unit.

**LCA Stages**



*Materials Acquisition & Pre-Processing* | Includes raw material extraction, pre-processing of materials, and transport to production.

*Production* | Includes component and final assembly manufacturing operations, both by Bernhardt and upstream suppliers, as well as intermediate transport and packaging requirements.

*Distribution, Storage, and Use* | Includes the production-weighted average distribution to customers. No additional storage is required, and no use phase impacts are incurred.

*End-of-Life* | Includes transport to and disposal of product and packaging based on average US recycling rates for homogenous materials, and an 80/20 landfill/incineration rate for non-homogenous materials.

**LCA Results**

All results are given per functional unit, which is one chair for a period of 10 years.

**TRACI Results**

Impact Category	Unit	Material Acquisition	Production	Distribution, Storage, Use	End-of-Life	Total
Acidification Potential	kg SO <sub>2</sub> -eq	3.96E-02	3.47E-02	5.81E-03	2.59E-02	<b>1.06E-01</b>
Eutrophication Potential	kg N-eq	3.76E-03	4.69E-03	5.15E-04	6.20E-03	<b>1.52E-02</b>
Global Warming Potential, incl biogenic C	kg CO <sub>2</sub> -eq	1.55E+01	1.83E+01	1.26E+00	4.77E+00	<b>3.98E+01</b>
Global Warming Potential, excl biogenic C	kg CO <sub>2</sub> -eq	5.97E+00	1.43E+01	1.26E+00	8.16E+00	<b>2.97E+01</b>
Ozone Depletion Potential	kg CFC-11 eq	7.64E-10	2.90E-12	3.26E-15	9.83E-15	<b>7.67E-10</b>
Smog Formation Potential	kg O <sub>3</sub> -eq	6.48E-01	7.58E-01	1.35E-01	8.74E-02	<b>1.63E+00</b>

**LCI Indicators**

Impact Category	Unit	Material Acquisition	Production	Distribution, Storage, Use	End-of-Life	Total
Primary Energy Demand, renewable	MJ	1.16E+02	1.41E+02	7.07E-01	3.83E-01	<b>2.58E+02</b>
Primary Energy Demand, non-renewable	MJ	3.44E+02	4.23E+02	1.77E+01	3.93E+00	<b>7.89E+02</b>
Net Fresh Water Usage	kg	6.92E+01	1.23E+02	2.42E+00	5.88E+00	<b>2.00E+02</b>

**References**

- Life Cycle Assessment of Bernhardt Furniture Products. WAP Sustainability. October 2021. Amended December 2023.
- BIFMA PCR for Seating, UNCPC 3811. NSF International.
- ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and procedures.
- ISO 14040:2006 Environmental management – Life cycle assessment – Principles and framework.
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines.

