

# teknion



## Zones Modular

### Seating

#### Environmental Product Declaration

Date of Issue: 1/5/2023

Date of Expiration: 1/5/2028

#### PRODUCT CATEGORY RULE



BIFMA PCR for Seating: UNCPC 3811 Version 3

#### FUNCTIONAL UNIT

1 seat for 1 individual, maintained for a 10-year period. Given the number of seats provided and lifetime of the product, 0.33 units of product is required to meet this functional unit. A worst case (maximum impact) configuration was utilized for the purposes of this study and includes a straight bench with a high back, no accessories, and seats 3 people



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

Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 <a href="mailto:sustainability@nsf.org">sustainability@nsf.org</a>
Manufacturer Name and Address	Teknion Ltd. 1150 Flint Road North York, ON M3J 2J5, Canada
Declaration Number	EPD10805
Declared Product and Functional Unit	Zones Modular Seating Functional Unit: 1 seat for 1 individual, maintained for a 10 year period.
Reference PCR and Version Number	BIFMA PCR for Seating: UNCPC 3811 Version 3
Product's intended Application and Use	Commercial Furniture
Intended Audience	Business-to-Business, Business-to-Consumer
Product RSL	10 years
Markets of Applicability	North America
Date of Issue	1/5/2023
Period of Validity	5 years from date of issue
EPD Type	Product Specific
Range of Dataset Variability	N/A
EPD Scope	Cradle to Grave
Year of reported manufacturer primary data	2021
LCA Software and Version Number	GaBi 10.6.2.9
LCI Database and Version Number	GaBi Database 2022.1
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 Version 3 serves as the core PCR. <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External	Tony Favilla afavilla@nsf.org 
This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	Lydia Schreiber WAP Sustainability Consulting
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Jack Geibig - EcoForm jgeibig@ecoform.com 
<p><b>Limitations:</b></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.</p> <p>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>	



## Company Description

Teknion designs, manufactures, and markets workplace interiors. Its products include panel systems, desking systems, private office systems/case goods, seating solutions, architectural products, tables and collaborative spaces, storage products, work better tech products (complements), and textiles. The company's products are used in various applications, including open, collaborative, private, meeting, lounge, learning, next culture, and work couture areas. Teknion was founded in 1981 and is based in Toronto, Canada.

## Product Description

The Zones Modular Seating lounge collection includes fully upholstered straight or curved bench modules, plus accessories. Modular Seating is designed to work with and complement other Zones products, thereby expanding the collection's planning possibilities and applications in architectural spaces. Visually, the collection creates a soft domestic mood with a rich and layered mix-and-match vocabulary.

Zones Modular Seating can be used by itself, or in conjunction with coordinating Ledge Tables, integrated tables, tablets & accessories; providing multiple configurations while addressing the needs of today's work behaviors and planning scenarios.

The results presented in this EPD are representative of the worst-case (maximum impact) configuration of Zones Modular Seating. The Zones Modular Seat for which results are presented is a straight bench with a high back and no accessories that seats 3 people. Additional details of the product configuration used for this EPD can be found below, but other configurations are possible.

	Zones Modular Seating
<b>Product Category</b>	Seating
<b>Number of Occupants</b>	3
<b>Components Included</b>	Straight bench with high back, no accessories
<b>Recycled Content</b>	14.7% pre-consumer, 5.8% post-consumer

## Product Composition

Like many commercial furniture products, Zones Modular Seating is available in a multitude of configurations. For this particular study, a worst-case scenario, as defined by the ANSI/BIFMA e3-2019 Furniture Sustainability Standard program was used. This composition of the configuration is provided in the table below, with a total product weight of 55.8 kg for the 3-seater, or 18.6 kg per seat. The exact configuration purchased may be slightly different, but is expected to have impacts equal to or lower than the worst-case results presented here.

Material	Mass %	Material Type*	Material	Mass %	Material Type*
Wood	28.5%	VR	Polyester Fabric	9.7%	VNR
Steel	25.9%	VNR, R	Zinc	2.1%	VNR, R
Polyurethane (PUR)	18.1%	VNR	Other	1.0%	VNR
Aluminum	14.7%	R			

\*VNR = virgin non-renewable resource, VR = virgin renewable resource, R = recycled resource

## Selection of Impact Parameters

Environmental Impacts were calculated using the GaBi software platform. Impact results have been calculated using TRACI 2.1 characterization factors. Results presented in this report are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins, or risks.

Abbreviation	Parameter	Unit
AP	Acidification potential of soil and water	kg N eq.
EP	Eutrophication potential	kg SO <sub>2</sub> eq.
GWP	Global warming potential	kg CO <sub>2</sub> eq.
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq.
POCP	Photochemical ozone creation potential	kg O <sub>3</sub> eq.

In addition to the environmental parameters above, the following resource use and waste categories are also disclosed.

Abbreviation	Parameter	Unit
PED	Total use of renewable and non-renewable primary energy resources	MJ, net calorific value
FW	Net use of fresh water	kg

## LCA Results

All results are given per functional unit, which is 1 seat for 1 individual for a period of 10 years.

### TRACI Results for Zones Modular Seating

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
AP	kg SO <sub>2</sub> -eq	3.79E-01	9.80E-02	2.53E-01	1.06E-02	1.73E-02
EP	kg N-eq	3.36E-02	8.15E-03	2.18E-02	9.48E-04	2.73E-03
GWP	kg CO <sub>2</sub> -eq	7.23E+01	2.89E+01	2.92E+01	2.29E+00	1.19E+01
ODP	kg CFC-11 eq	2.82E-09	2.29E-12	2.82E-09	4.33E-15	3.98E-14
POCP	kg O <sub>3</sub> -eq	5.42E+00	1.91E+00	3.13E+00	2.46E-01	1.32E-01

### LCI Indicators for Zones Modular Seating

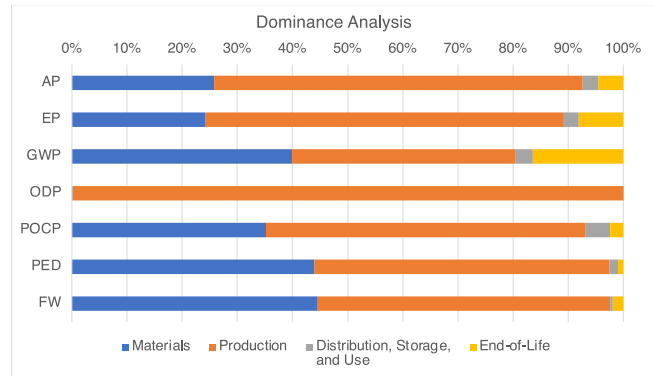
Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
PED	MJ	2.13E+03	9.36E+02	1.14E+03	3.35E+01	6.47E+00
FW	kg	9.95E-01	4.43E-01	5.28E-01	4.51E-03	1.89E-02

## Interpretation

A dominance analysis was performed for all of the products in the LCA to show which of the life cycle stages contributes to the majority of the impacts. Results are shown for the 5 TRACI 2.1 impact categories.

Overall, the dominance analysis shows the vast majority of the impacts are coming from the materials and production stages. This tracks with the majority of durable goods similar to Zones Modular Seating.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of Zones Modular Seating. For most of the LCIA indicators, the materials affecting the results the most are PET fabric, steel, and polyurethane foam. ODP is mostly affected by production of PET fabric.



## Additional Environmental Information

Teknion is a supporter and/or a participant in the following environmental and sustainability related programs.

- ANSI/BIFMA e3-2014e Furniture Sustainability Standard program. Zones Modular Seating is certified to Level 3 and the certification can be found at this [link](#).
- Teknion products comply with SCS's Indoor Advantage Gold program. Zones Modular Seating's certification can be found at this [link](#).
- Teknion has been a member of the USGBC since 2016.

Additionally, Teknion publishes an annual Impact Report which is publicly available at <https://www.teknion.com/about/our-planet>

## References

Life Cycle Assessment of Teknion Products: Background Report for LCA/EPD of Seating Products. WAP Sustainability. September 2022.

BIFMA PCR for Seating: UNCPC 3811 Version 3

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.

