

teknion



Tone

Task Chair

Environmental Product Declaration

Date of Issue: 2/27/2023

Date of Expiration: 2/27/2028

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 seats provided and lifetime of the product, 1 unit 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 Tone task chair configurations with product codes beginning with NTTM with fabric options. The Tone task chair for which results are presented has a plastic base with casters, 4D adjustable arms, lumbar support, and mesh back fabric.



**Certified
Environmental
Product Declaration**
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Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org	
Manufacturer Name and Address	Teknion Ltd. 1150 Flint Road North York, ON M3J 2J5, Canada	
Declaration Number	EPD10813	
Declared Product and Functional Unit	Tone task chair (Product codes starting with NTTM with fabric upholstery) 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	
Intended Audience	Business-to-Business, Business-to-Consumer	
Product's intended Application and Use	Commercial Furniture	
Product RSL	10 years	
Markets of Applicability	North America	
Date of Issue	2/27/2023	
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>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.</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 Tone chair has been thoughtfully designed to gently blend in with its surroundings, complementing the selected color palette and supporting the individual’s use with simple, sensible comfort. The simple back shape and design make for efficient use of materials. Tone is simple, not simplistic, cutting through the noise and the bells and whistles.

The results presented in this EPD are representative of the worst-case (maximum impact) configuration of Tone task chair configurations that have product codes starting with NTTM with fabric options. The Tone task chair for which results are presented has a plastic base with casters, 4D adjustable arms, lumbar support, and mesh back fabric. Additional details of the product configuration used for this EPD can be found below, but other configurations are possible.

	Tone
Product Category	Seating
Number of Occupants	1
Components Included	Plastic base with casters, 4D adjustable arms, lumbar support, and mesh back fabric
Recycled Content	6.2% pre-consumer, 12.5% post-consumer

Product Composition

Like many commercial furniture products, Tone is available in a multitude of configurations. For this particular study, a maximum impact scenario described above, as defined by the ANSI/BIFMA e3-2019 Furniture Sustainability Standard program, was used to represent Tone task chairs with product codes beginning NTTM with fabric upholstery. This composition of the configuration is provided in the table below, with a total product weight of 17.9 kg. The exact configuration purchased may be slightly different but is expected to have impacts within 10% of this representative configuration.

Material	Mass %	Material Type*	Material	Mass %	Material Type*
Polyamide 6 (PA6)	55.8%	VNR, R	Thermoplastic Polyester Elastomer	2.7%	VNR
Steel	23.6%	VNR, R	Polyester Fabric	1.9%	VNR
Polyurethane (PU)	7.0%	VNR	Polyoxymethylene (POM)	0.6%	VNR, R
Aluminum	4.8%	R	Other	<1%	VNR, R
Polypropylene (PP)	3.4%	VNR			

*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 ₂ eq.
GWP	Global warming potential	kg CO ₂ eq.
ODP	Depletion of stratospheric ozone layer	kg CFC 11 eq.
POCP	Photochemical ozone creation potential	kg O ₃ 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 Tone

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
AP	kg SO ₂ -eq	3.38E-01	2.00E-01	1.23E-01	8.20E-03	7.29E-03
EP	kg N-eq	3.20E-02	1.47E-02	1.34E-02	7.30E-04	3.23E-03
GWP	kg CO ₂ -eq	1.08E+02	8.00E+01	1.89E+01	1.76E+00	7.62E+00
ODP	kg CFC-11 eq	5.19E-10	1.08E-12	5.18E-10	3.34E-15	2.77E-14
POCP	kg O ₃ -eq	5.12E+00	3.01E+00	1.85E+00	1.90E-01	7.35E-02

LCI Indicators for Tone

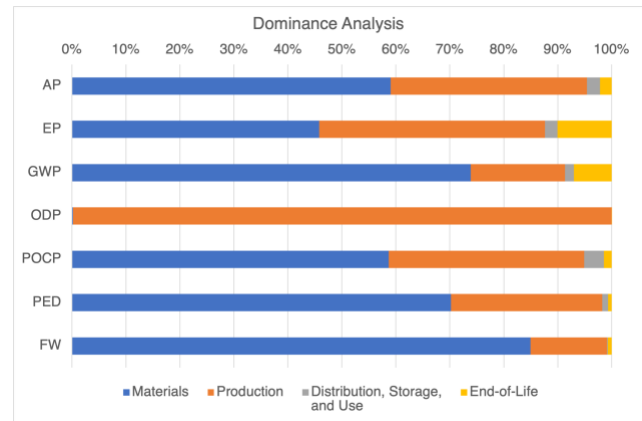
Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
PED	MJ	2.31E+03	1.62E+03	6.46E+02	2.58E+01	1.54E+01
FW	Kg	2.03E+03	1.72E+03	2.86E+02	3.47E+00	1.50E+01

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 Tone.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of Tone. For most of the LCIA indicators, the materials affecting the results the most are polyamide 6 with glass fill, steel, and polyurethane foam, with the exception of ODP which 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.

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

Additionally, Teknion publishes a bi-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. Amended February 2023.

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.