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upStage

Workspace Solutions

Environmental Product Declaration
Date of Issue: 05/20/2019
Date of Expiration: 07/31/2024

NSF.

**Certified
Environmental
Product Declaration**
www.nsf.org

PRODUCT CATEGORY RULE
BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814

FUNCTIONAL UNIT
1 m² of workspace, maintained for a 10 year period. A representative configuration was utilized for the purposes of this study and includes fabric panels, glass elements, work surfaces, and filing storage.

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Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org
Manufacturer Name and Address	Teknion 1150 Flint Rd, Toronto, ON M3J 2J5
Declaration Number	EPD10246
Declared Product and Functional Unit	1 m^2 of workspace, maintained for a 10 year period.
Reference PCR and Version Number	BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814
Product's intended Application and Use	Commercial Furniture
Product RSL	10 year
Markets of Applicability	North America
Date of Issue	05/20/2019
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	2017
LCA Software and Version Number	GaBi 8.6.0.20
LCI Database and Version Number	GaBi Database Version 8.7, Service Pack 35
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 Workspace Products: UNCPC 3814 serves as the core PCR. ☐ Internal ☒ External	*[signature]* Jenny Oorbeck joorbeck@nsf.org
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:	*[signature]* Jack Geibig jgeibig@ecoform.com

Limitations:

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.

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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

upStage® systems are customizable workspace solutions containing panels in addition with other office components. A typical workspace configuration was used to showcase a representative setup. The full configuration was studied and the results were then scaled appropriately based on the floor area of the final configuration and the functional unit.

The workspace solution studied can contain panels, worksurfaces, storage solutions, and power cables, depending on the final configuration. Additional details of the product configuration used for this EPD can be found below, but other configurations are possible.

	upStage
Product Category	Panels + other office components
Number of Occupants	1
Floor Area	3.34 m^2
Components Included	2 Panels, Worksurface, Filing Storage
Defining Features	Worksurface, integrated panels, storage devices
Recycled Content	21.59% pre-consumer, 7.40% post-consumer

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Product Composition

Like many commercial furniture products, upStage is available in a multitude of configurations. For this particular study, a worst-case scenario, as defined by the ANSI/BIFMA e3-2014e Furniture Sustainability Standard program was used. This composition of the configuration is provided in the table below, with a total product weight of 156.6 kg. The exact configuration purchased may be slightly different, however, because a worst-case scenario was used, this EPD will still be applicable to the purchased configuration.

Material	Mass %	Material	Mass %
Glass	33.59%	Polypropylene	0.97%
LPL	22.56%	Zinc	0.88%
Steel	16.73%	Powder Coat	0.67%
Particleboard	16.70%	ABS Plastic	0.17%
Aluminum	4.20%	Adhesive	0.04%
HPL	2.04%	POM	0.03%
Electrical	1.41%	Vinyl	0.01%

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

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LCA Results

All results are given per functional unit, which is 1 m^2 of workspace for a period of 10 years.

TRACI Results

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
AP	kg SO_2-eq	5.00E-01	4.36E-01	3.88E-02	1.78E-02	7.51E-03
EP	kg N-eq	2.76E-02	2.35E-02	2.20E-03	1.47E-03	4.61E-04
GWP	kg CO2-eq	1.05E+02	5.68E+01	3.59E+01	3.71E+00	8.30E+00
ODP	kg CFC-11 eq	1.16E-10	1.18E-10	-2.41E-12	-1.99E-14	-5.96E-14
POCP	kg O_3-eq	6.87E+00	5.52E+00	7.57E-01	4.06E-01	1.90E-01

LCI Indicators

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
PED	MJ	2.47E+03	2.01E+03	3.79E+02	5.42E+01	1.73E+01
FW	kg	4.49E+05	4.01E+05	4.74E+04	1.55E+02	3.93E+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 material acquisition and pre-processing stage. The only except is Global Warming Potential where the product processes also contribute a considerable share. This tracks with the majority of durable goods similar to upStage workspace solutions.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of upStage. For most of the LCIA indicators, the top material impacts are aluminum and glass, with steel, particle board, and HPL coming in third, depending on the indicator.

Dominance Analysis

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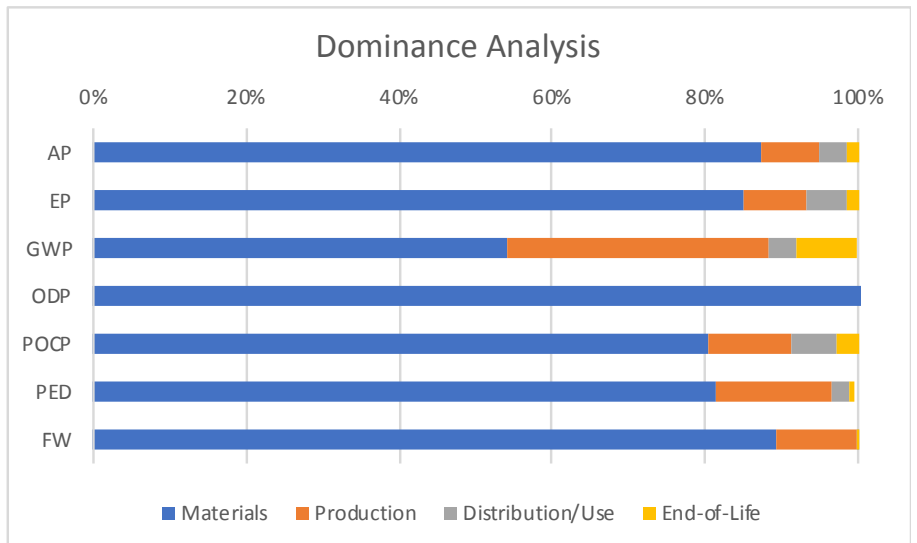
Additional Environmental Information

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

- The International Living Future Institute's Declare program. Products with Declare labels can be found at https://living-future.org/declare/
- ANSI/BIFMA e3-2014e Furniture Sustainability Standard program. upStage is certified to Level 2.
- Teknion products, including upStage, comply with SCS's Indoor Advantage Gold program. upStage's certification can be found at this link.
- Teknion participates in mindful Materials. Teknion products that have been listed on mindful Materials are available 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/search-results/our-planet

References

Life Cycle Assessment of Teknion's upStage Workspace Solutions. WAP Sustainability. February 2019.

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814

ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and procedures.8

ISO 14040:2006 Environmental management - Life cycle assessment – Principles and framework.

ISO 14044:2006 Environmental management - Life cycle assessment – Requirements and guidelines.