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District

Workspace Solutions

Environmental Product Declaration

Date of Issue: 03/22/2019
Date of Expiration: 03/22/2024

NSF

Certified Environmental Product Declaration
www.nsf.org

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

FUNCTIONAL UNIT
1 m^2 of workspace, maintained for a 10 year period. A representative configuration was utilized for the purposes of this study and includes panels, a laminate worksurface, laminate and glass elements, and wood pedestals.

Program Operator	NSF Certification, LLC 789 N. Dixboro, Ann Arbor, MI 48105 sustainability@nsf.org
Manufacturer Name and Address	Teknion 100 Roytec Rd, Woodbridge, ON L4L 8A9, Canada
Declaration Number	EPD10187
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	03/22/2019
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**	 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:	 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.

Company Description

Teknion Corporation 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 Corporation was founded in 1981 and is based in Toronto, Canada.

Product Description

District® 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, and storage solutions, depending on the final configuration. Additional details of the product configuration used for this EPD can be found below, but other configurations are possible.

	District
Product Category	Panels + other office components
Number of Occupants	1
Floor Area	10.9 m^2
Components Included	Panels, Worksurface, Filing Storage,
Defining Features	Worksurface, integrated panels, storage devices, glass and laminate elements
Recycled Content	59.7% pre-consumer, 13.4% post-consumer

Product Composition

Like many commercial furniture products, District 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. 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 %
Particle Board	52.0%	Backer	0.4%
Steel	33.5%	LPL	0.3%
Glass	6.7%	Plastic - PP	0.3%
Aluminum	2.5%	Zinc	0.0%
Veneer	0.7%	Cardboard	0.0%
Powder Coat	0.5%	Electrical	2.7%
HPL	0.4%		

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 m2 of workspace for a period of 10 years.

TRACI Results

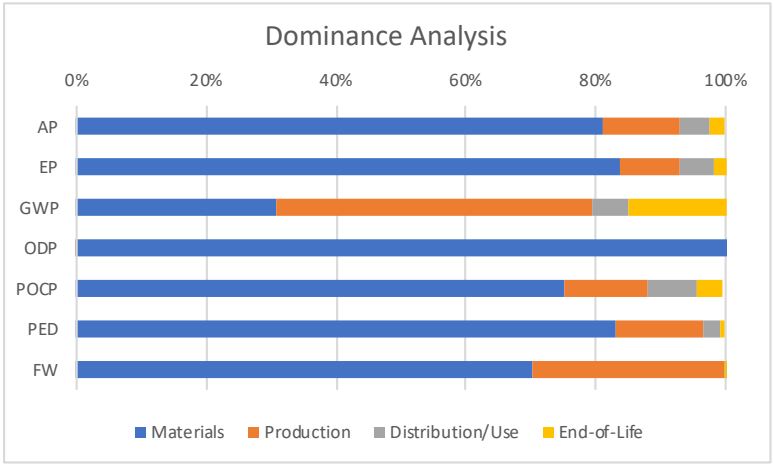
Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
AP	kg SO_2-eq	1.54E-01	1.25E-01	1.80E-02	7.04E-03	3.60E-03
EP	kg N-eq	1.09E-02	9.14E-03	9.91E-04	5.83E-04	2.20E-04
GWP	kg CO2-eq	2.65E+01	8.15E+00	1.29E+01	1.47E+00	4.00E+00
POCP	kg O_3-eq	2.63E-11	2.68E-11	-4.92E-13	-7.90E-15	-2.87E-14
ODP	kg CFC-11 eq	2.17E+00	1.63E+00	2.81E-01	1.61E-01	9.11E-02

LCI Indicators

Impact Category	Unit	Total	Material Acquisition	Production	Distribution, Storage, and Use	End-of-Life
PED	MJ	8.92E+02	7.40E+02	1.22E+02	2.15E+01	8.22E+00
FW	kg	1.11E+05	7.79E+04	3.29E+04	6.14E+01	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 material acquisition and pre-processing stage. This tracks with the majority of durable goods similar to District workspace solutions. The exception is global warming potential. Due to the large amount of biological material utilization and the carbon sequestration of the wood, the relative size of the materials portion of GWP is much smaller compared to all other indicators.

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

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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. District is certified to Level 2.
- Teknion products, including District, comply with SCS's Indoor Advantage Gold program. District'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 Products. 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.