

# teknion



## Upstage

### Workspace Solutions

#### Environmental Product Declaration

Date of Issue: 11/27/2024

Date of Expiration: 11/27/2029

#### PRODUCT CATEGORY RULE

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814 v1 (2023)

Product Sub-Category: Panels + other office components

#### FUNCTIONAL UNIT

1 m<sup>2</sup> of physical floor space for a period of 10 years (0.299 units of Upstage). This study covers a representative configuration based on the sales of variations and includes the fabric panels, glass elements, work surfaces, and filing storage. This product does not contain components that consume energy during use.



*This EPD was not written to support comparative assertions. EPDs based on different PCRs or different calculation models may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results due to and not limited to the practitioner's assumptions, the source of the data used in the study, and the software tool used to conduct the study.*

*Compared with the image above, the modeled configuration includes only 1 workstation. The modeled configuration does not have credenza storage. The modeled configuration does include a single pedestal box/file cabinet, a secondary 21"x72" worksurface, and glass screen on both worksurfaces.*

|  |   |
|--|---|
| Program Operator   | NSF Certification, LLC<br>789 N. Dixboro, Ann Arbor, MI 48105<br>sustainability@nsf.org                                   |
| Manufacturer Name and Address  | Teknion<br>1150 Flint Rd, North York, ON M3J 2J5, Canada  |
| Declaration Number   | EPD10246  |
| Declared Product and Functional Unit   | 1 m <sup>2</sup> of physical floor space for a period of 10 years (0.299 units of Upstage)                                |
| Reference PCR and Version Number   | BIFMA PCR for Office Furniture Workspace Products: UNCPC 3814 v1 (2023)   |
| Product's intended Application and Use   | Commercial Furniture  |
| Product RSL  | 10 years  |
| Markets of Applicability   | North America   |
| Date of Issue  | 11/27/2024  |
| 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   | 2023  |
| LCA Software and Version Number  | Sphera LCA for Experts (fka GaBi) 10.8  |
| LCI Database and Version Number  | Managed Life Cycle Content Version 2024.1 (formerly GaBi)   |
| LCIA Methodology and Version Number  | TRACI 2.1, IPCC AR6 GWP100  |
| The sub-category PCR review was conducted by:  | Thomas Gloria, PhD (chair)<br>Jack Geibig, P.E.<br>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.<br><input type="checkbox"/> Internal <input checked="" type="checkbox"/> External  | <br>Jack Geibig<br>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:   | <br>Jack Geibig<br>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> <p>The PCR this EPD was based on was written to determine the potential environmental impacts of a furniture workspace product from cradle-to-grave. It was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.</p> |   |



Compared with the image above, the modeled configuration includes only 1 workstation. The modeled configuration does not have credenza storage or laminate privacy screen. The modeled configuration does include a single pedestal box/file cabinet, a secondary 21"x72" worksurface, and glass screen on both worksurfaces.

## 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

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. The specific configuration modeled includes product codes HTDC211672YC (complete simple stage worksurface with accessory beam and center power/data), HTEBF8T072SM (base feed), HTEG (rectangle grommet), HTNGM1360 (glass screen), HTNX2172 (glass screen), HTSMFNX (pedestal box/file), HTWDML (fixed y leg, left), HTWDMR (fixed y leg, right), HTWP3070ANRC (worksurface), HTWQF (stage to worksurface support, fixed), and UNRC48 (worksurface reinforcement channel). Additional details of the product configuration used for this EPD is below, but other configurations are possible. This product is determined to be a representative product based on sales of the variations. While the exact configuration purchased may be slightly different, it is expected to have impacts within 10% of this representative configuration.

|                            | Upstage  |
|----------------------------|--|
| <b>Product Category</b>    | Panels + other office components                               |
| <b>Number of Occupants</b> | 1  |
| <b>Floor Area</b>          | 3.34 m <sup>2</sup>  |
| <b>Components Included</b> | 2 Panels, Worksurface, Filing Storage                          |
| <b>Defining Features</b>   | Worksurface (fixed height), integrated panels, storage devices |
| <b>Energy Usage</b>        | 0 kWh/hr   |
| <b>Recycled Content</b>    | 77.9% pre-consumer, 07.8% post-consumer                        |

## Product Composition

Like many commercial furniture products, Upstage is available in a multitude of configurations. For this particular study, a representative configuration was used. This composition of the configuration is provided in the table below. While the exact configuration purchased may be slightly different, it is expected to have impacts within 10% of this representative configuration.

The total product weight is 156 kg, with total product area of 3.34 m<sup>2</sup> and a reference service life of 10 years. To meet the functional unit, 0.299 units of Upstage are required, with a reference flow of 46.7 kg.

| Material       | Mass % | Material         | Mass % |
|----------------|--------|------------------|--------|
| Glass          | 33.7%  | Electrical       | 1.4%   |
| LPL            | 22.6%  | PP               | 1.0%   |
| Particle Board | 16.7%  | Steel - Imported | <1%    |
| Steel          | 15.8%  | Powder Coat      | <1%    |
| Aluminum       | 5.1%   | Adhesive         | <1%    |
| HPL            | 2.0%   |                  |        |

## Selection of Impact Parameters

Environmental Impacts were calculated using the LCA for Experts software platform. Impact results have been calculated using TRACI 2.1 and IPCC AR6 GWP100 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 SO <sub>2</sub> eq |
| EP             | Eutrophication potential                            | kg N eq               |
| GWP incl bio c | Global warming potential, including biogenic carbon | kg CO <sub>2</sub> eq |
| GWP excl bio c | Global warming potential, excluding biogenic carbon | kg CO <sub>2</sub> eq |
| ODP            | Depletion of stratospheric ozone layer              | kg CFC 11 eq          |
| SFP            | 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                      |
| RPRE         | Renewable primary resources used as an energy carrier             | MJ, net calorific value |
| RPRM         | Renewable primary resources used as a material                    | MJ, net calorific value |
| NRPRE        | Non-renewable primary resources used as an energy carrier         | MJ, net calorific value |
| NRPRM        | Non-renewable primary resources used as a material                | MJ, net calorific value |
| RE           | Recovered energy from disposal of waste in previous systems       | MJ, net calorific value |

## LCA Results

All results are given per functional unit, which is 1 m<sup>2</sup> of physical floor space for a period of 10 years. Upstage has an area of 3.34 m<sup>2</sup>. The product meets testing criteria per ANSI/BIFMA X5.6 and has a reference service life of 10 years. To fulfil the functional unit, 0.299 units of product are required.

## TRACI Results

| Impact Category | Unit                  | Total           | Material Acquisition | Production | Distribution, Storage, and Use | End-of-Life |
|-----------------|-----------------------|-----------------|----------------------|------------|--------------------------------|-------------|
| AP              | kg SO <sub>2</sub> eq | <b>4.23E-01</b> | 3.62E-01             | 3.09E-02   | 1.85E-02                       | 1.14E-02    |
| EP              | kg N eq               | <b>2.47E-02</b> | 1.83E-02             | 3.22E-03   | 1.64E-03                       | 1.46E-03    |
| GWP incl bio c  | kg CO <sub>2</sub> eq | <b>7.03E+01</b> | 4.82E+01             | 9.84E+00   | 3.99E+00                       | 8.32E+00    |
| GWP excl bio c  | kg CO <sub>2</sub> eq | <b>1.01E+02</b> | 8.03E+01             | 1.44E+01   | 3.99E+00                       | 2.28E+00    |
| ODP             | kg CFC 11 eq          | <b>3.88E-08</b> | 3.88E-08             | 6.27E-13   | 1.18E-14                       | 5.31E-14    |
| SFP             | kg O <sub>3</sub> eq  | <b>5.87E+00</b> | 4.65E+00             | 6.00E-01   | 4.26E-01                       | 1.95E-01    |

## LCI Indicators

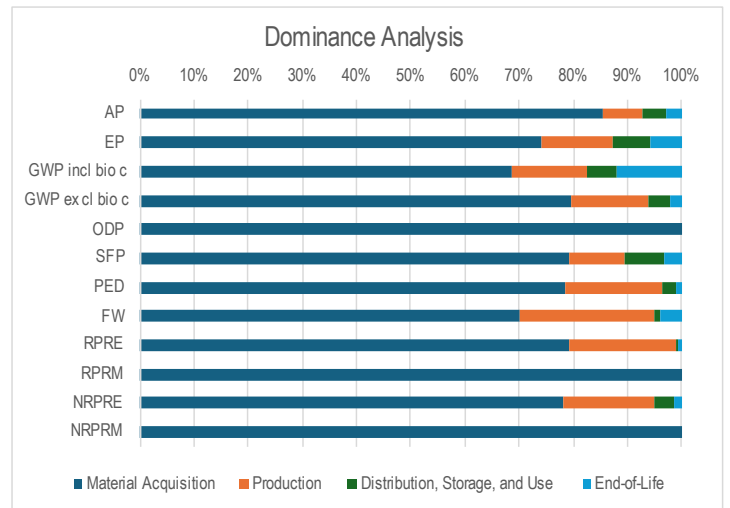
| Impact Category | Unit | Total           | Material Acquisition | Production | Distribution, Storage, and Use | End-of-Life |
|-----------------|------|-----------------|----------------------|------------|--------------------------------|-------------|
| PED             | MJ   | <b>2.15E+03</b> | 1.69E+03             | 3.79E+02   | 5.51E+01                       | 2.39E+01    |
| FW              | kg   | <b>5.97E-01</b> | 4.18E-01             | 1.47E-01   | 7.75E-03                       | 2.30E-02    |
| RPRE            | MJ   | <b>6.34E+02</b> | 5.03E+02             | 1.25E+02   | 2.33E+00                       | 3.20E+00    |
| RPRM            | MJ   | <b>2.93E+02</b> | 2.93E+02             | 0.00E+00   | 0.00E+00                       | 0.00E+00    |
| NRPRE           | MJ   | <b>1.51E+03</b> | 1.18E+03             | 2.54E+02   | 5.27E+01                       | 2.07E+01    |
| NRPRM           | MJ   | <b>2.37E+01</b> | 2.37E+01             | 0.00E+00   | 0.00E+00                       | 0.00E+00    |
| RE              | MJ   | <b>0.00E+00</b> | 0.00E+00             | 0.00E+00   | 0.00E+00                       | 0.00E+00    |

## Interpretation

A dominance analysis was performed for the product show which of the life cycle stages contributes to the majority of the impacts. Results are shown for the 4 TRACI 2.1 impact categories and IPCC AR6 GWP100.

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 Upstage. RE is equal to zero and is excluded from the dominance analysis graph at the right.

An additional dominance analysis was performed to determine the relative impacts of the materials used in the production of Leverage. For most of the LCIA indicators, the top material impacts are glass, steel, LPL, and aluminum, depending on the indicator.







## 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 e3-2019 Furniture Sustainability Standard program. Upstage is certified to Level 3.
- Teknion products, including Upstage, comply with SCS's Indoor Advantage Gold program. Upstage'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://teknion-limited.shorthandstories.com/impact-report-3-0/index.html>

## References

Life Cycle Assessment of Teknion's Workspace and Table Products. WAP Sustainability. July 2024.

BIFMA PCR for Office Furniture Workspace Products, UNCPC 3814 v1. Extended July 2023.

Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. IPCC. 2021.

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.