



# ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021



THE INTERNATIONAL EPD® SYSTEM



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**U-Flex Structural Ceiling & Partition Systems**

from **UNITED**  
Office Systems Pvt Ltd

Programme	: The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



ENVIRONMENTAL PRODUCT DECLARATION

## BUILDING GREEN, BRICK BY BRICK.

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At Unitile, sustainability is at the heart of everything we do. We prioritize eco-friendly practices throughout our manufacturing processes, from sourcing renewable materials to minimizing waste and reducing our carbon footprint. By integrating innovative technologies and maintaining rigorous environmental standards, we ensure that our products are not only of the highest quality but also contribute positively to the planet. Our dedication to sustainability extends beyond our operations as we continuously seek new ways to improve and lead by example in the industry.



## GENERAL INFORMATION

### PROGRAMME INFORMATION

<b>Programme</b>	The International EPD® System, Indian Regional Hub
<b>Address</b>	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden
<b>Website</b>	<a href="http://www.environdec.com">www.environdec.com</a> , <a href="http://www.envirodecindia.com">www.envirodecindia.com</a>
<b>E-mail</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

#### Accountabilities for PCR, LCA and Independent Third-party Verification

##### Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction products, version 1.3.2

PCR review was conducted by: The Technical Committee of the International EPD System. See [www.environdec.com](http://www.environdec.com) for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat [www.environdec.com/contact](http://www.environdec.com/contact).

##### Life Cycle Assessment (LCA)

LCA Accountability: United Office Systems Pvt. Ltd.

LCA and EPD Developer: Dr. Rajesh Kumar Singh, Thinkstep Sustainability Solutions Pvt. Ltd., a Sphera Company.

##### Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ EPD verification by individual verifier

Third-party verifier: Prabodha Acharya, Independent verifier, Mumbai, India

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.



## COMPANY INFORMATION

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**Owner of the EPD:** United Office Systems Pvt. Ltd. (Unitile India)

**Contact:** Mr. Shabbir Rajkotwala

Address: Unit No.2G, Laxmi Industrial Estate, New Link Road, Andheri (W),  
Mumbai-400053.

Telephone: 022 40387900 /022 26305270

Website: [www.unitileindia.com](http://www.unitileindia.com)

### **Description of the organisation:**

Founded in 1994, Unitile India stands at the forefront of the construction and building materials industry. Renowned for its commitment to innovation and sustainability, Unitile India specializes in providing advanced raised access flooring solutions. Our products are designed to enhance efficiency, ensure durability, and meet the highest standards of environmental responsibility, reflecting our dedication to both cutting-edge design and sustainable practices.

### **Product-related or management system-related certifications:**

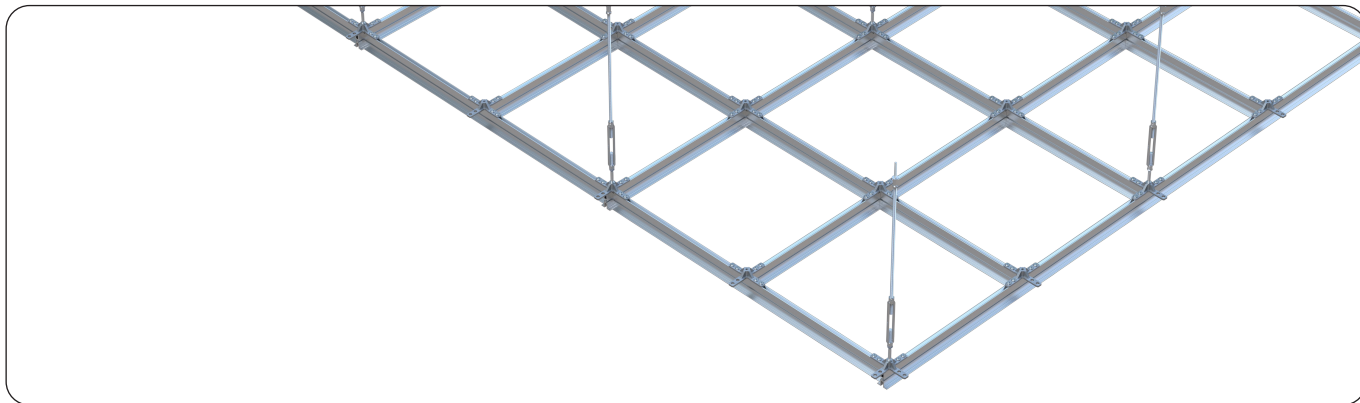
ISO 45001:2018, ISO 9001:2015, ISO 14001:2015, Singapore Green Building Council, Indian Green Building Council.

### **Name and location of production site(s):**

United Office Systems Pvt. Ltd. Survey No.62/1P, 1,2 & 3, Village-Vankas,  
Taluka- Umbergaon, District - Valsad, Umargam, Gujarat 396150.

## PRODUCT SPECIFICATIONS & BENEFITS

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**Product Name:** U-Flex Structural Ceiling & Partition Systems

**Product description:** U-Flex Structural Ceiling & Partition System is an innovative modular solution for data centers, an architectural and industrial solution that allows you to combine the structural grid and ceiling into one unitized space which is easy to install and flexible for future changes. Crafted from special-grade structural aluminum alloy extrusions and aluminum die-casting components, significantly minimizing the risk of corrosion, zinc whiskers, and potential hazards.

The combination of the above parameters for a purpose-built application system ensures improved installation flexibility in the present as well as future needs of your facility leading to reduced operational cost. The U-Flex Structural Ceiling & Partition Systems System could be aesthetically customized with metallic or laminated or similar panels as per customer's choice.

**Product Application:** Specially designed and manufactured for white spaces like data centers, pharmaceuticals and healthcare, infrastructure and industrial applications.

**Technical Specification & Physical Properties:** The structural ceiling offers various layout options to ensure seamless integration 600 x 600 mm | 600 x 1200 mm | 1200 x 1200 mm

**Point Load:**

Grid load performance with building connections 1200x1200mm on mid span: 2.45 kN  
Suspension at connector grid point 1200x1200mm on the center: 4.10 kN.

**UN CPC code:** 421- Structural metal products and parts thereof

**Geographical scope:** The product is manufactured in India while the end of life and use of the product is Global

## LCA INFORMATION

**Functional unit / declared unit:** 1kg of U-Flex Structural Ceiling & Partition System

**Reference service life:** 25 years

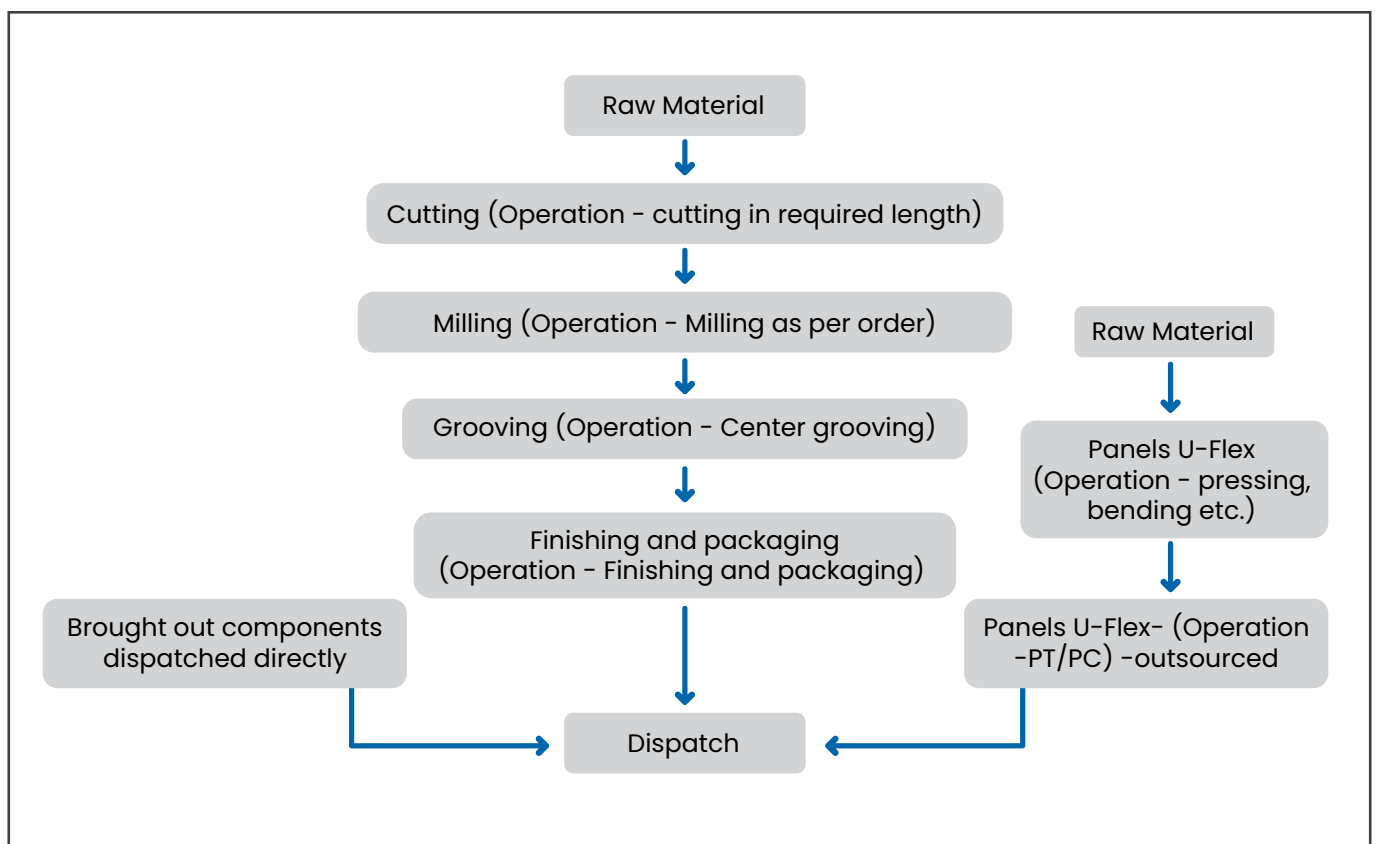
**Time representativeness:** November 2023 – October 2024

**Database(s) and LCA software used:** Sphera LCA FE (Formerly GaBi) software and Sphera's Managed Life Cycle Database 2023.2.

**Description of system boundaries:** Construction service EPD: Cradle to gate with modules, A5, C1-C4, and D.

**Reference package used:** EN 15804 reference package based on EF 3.1.

**System diagram:**



**More Information:**

This EPD's system boundary has been defined as Cradle to Gate with options, Modules, A5, C1 – C4 and D.

**A1: Raw Material Supply**

Production starts with Anodised Aluminum, which is the raw materials. Raw material stage includes raw materials extraction/preparation and pre-treatment processes before production.

**A2: Transportation**

Transport is relevant for the delivery of raw materials and other materials to the plant and the transport of materials within the plant.

**A3: Manufacturing**

Electricity as an energy resource is consumed during the manufacturing stage. The composition considered in the Electricity grid mix dataset is: Electricity from lignite: 11.65%, Electricity from hard coal: 62.18%, Electricity from natural gas: 4.63%, Electricity from hydro: 9.25%, Electricity from wind: 3.33%

The GHG-GWP impact for electricity used for manufacturing is 1.06 kg CO<sub>2</sub> eq./kWh. The end products are then packaged to be sold.

**A5: Construction / Installation**

The packaging waste treatment is included.

**C1-C4: End of Life**

The Transportation of used United Office System Pvt Ltd's U-Flex Structural Ceiling & Partition Systems to the disposal site (C2). Aluminum is a recyclable material thus, the End -of- life credit for recycling is applied over 90% of Aluminum (C3) while 10% of Aluminum is landfilled (C4).<sup>1</sup> The overall credit is balanced in the system. The other used remaining components are landfilled as inert materials in landfills designated for construction products (C4).

**D: Benefits and Loads Beyond the system Boundary**

The benefits from the end of life of the product (aluminum) is accounted for. Along with this, the benefits from the recycling of packaging waste are calculated.

### **Cut-off criteria:**

The environmental impact of the product studied has been assessed by considering all significant processes, materials, and emissions. Excluded flows are assumed to have a negligible impact, contributing less than 5% to the cumulative impact assessment categories. The production of capital equipment, facilities, and infrastructure required for manufacture has not been considered.

### **Data quality and sources:**

Data quality is compliant with ISO 14025:2006. All primary data were collected for the year November 2023–October 2024. All background data come from the Sphera Managed LCA Content 2023.2 databases.

### **Data quality assessment and declaration:**

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP–GHG results for A1–A3
Manufacturing of product	Collected Data	EPD Owner	2023	Primary Data	0.09%
Generation of electricity used in manufacturing	Database	Sphera MLC 2023.2	2023	Primary Data	0.56%
Transport of raw materials to the manufacturing site	Database	Sphera MLC 2023.2	2023	Primary Data	0.06%
<b>Total share of primary data, of GWP–GHG results for A1–A3</b>					<b>0.71%</b>

*Note: The share of primary data is calculated based on GWP–GHG results. It is a simplified indicator for data quality that does not capture all relevant aspects of data quality. The indicator is not comparable across product categories*

### **Allocation:**

No allocation has been applied.

<sup>1</sup> Life cycle inventory (LCI) study (worldsteel.org)



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	IN	IN	IN	-	GLO	-	-	-	-	-	-	-	GLO	GLO	GLO	GLO	GLO
Specific data used	0.71%					-	-	-	-	-	-	-	-	-	-	-	-
Variation-products	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation-sites	Not relevant					-	-	-	-	-	-	-	-	-	-	-	-

X- Module reported. ND- Module not declared.

## CONTENT INFORMATION

Product components	Weight, kg	Post-consumer material, weight %	Biogenic material, weight %
Anodised Aluminum Extruded	1	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight % (versus the product)	Weight biogenic carbon, kg C/kg
PP Packing (strip)	0.63	7.96%	0
Pallet/Wood	0.14	1.77%	0.06
<b>Total</b>	<b>0.767</b>	<b>9.73%</b>	<b>0.06</b>

Products do not contain any substances that can be included in "Candidate List of Substances of Very High Concern for Authorization" and raw materials used are not part of the EU REACH regulation.

# RESULTS OF ENVIRONMENTAL PERFORMANCE INDICATORS

The environmental performance of the functional unit of 1 kg of U-Flex Structural Ceiling & Partition Systems reported below using the parameters and units as specified in PCR 2019:14 v 1.3.2.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The scenarios included are currently in use and are representative of one of the most probable alternatives.

## Mandatory impact category indicators according to EN 15804

Environmental Impacts for 1 kg of U-Flex Structural Ceiling & Partition System								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP fossil	kg CO <sub>2</sub> eq.	2.57E+01	1.63E-02	0.00E+00	5.07E-03	3.73E-02	1.35E-02	-2.00E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	-7.91E-02	9.81E-02	0.00E+00	-3.21E-06	0.00E+00	0.00E+00	-1.43E-02
GWP-luluc	kg CO <sub>2</sub> eq.	1.57E-02	4.83E-06	0.00E+00	9.87E-08	3.91E-05	4.25E-05	-1.23E-03
GWP-total	kg CO <sub>2</sub> eq.	2.59E+01	1.14E-01	0.00E+00	5.06E-03	3.74E-02	1.26E-02	-2.01E+00
ODP	kg CFC 11 eq.	6.15E-11	2.67E-14	0.00E+00	2.14E-16	9.78E-17	3.48E-14	-4.83E-12
AP	mol H <sup>+</sup> eq.	3.18E-01	7.79E-05	0.00E+00	4.32E-05	1.35E-04	9.70E-05	-2.50E-02
EP-freshwater	kg P eq.	1.39E-05	2.51E-06	0.00E+00	1.06E-09	3.44E-08	2.75E-08	-1.07E-06
EP-marine	kg N eq.	3.30E-02	4.84E-05	0.00E+00	2.07E-05	5.76E-05	2.51E-05	-2.56E-03
EP-terrestrial	mol N eq.	3.63E-01	2.38E-04	0.00E+00	2.27E-04	6.31E-04	2.76E-04	-2.81E-02
POCP	kg NMVOC eq.	1.03E-01	9.70E-05	0.00E+00	3.95E-05	1.59E-04	7.56E-05	-7.96E-03
ADP-minerals & metals*	kg Sb eq.	7.50E-07	3.35E-10	0.00E+00	2.79E-11	3.87E-09	6.32E-10	-5.85E-08
ADP-fossil*	MJ	2.73E+02	2.37E-01	0.00E+00	6.97E-02	5.97E-01	1.82E-01	-2.03E+01
WDP*	m <sup>3</sup>	2.55E+00	1.14E-01	0.00E+00	1.09E-05	1.56E-03	1.50E-03	-2.00E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption.							

**\*Disclaimer.** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Additional mandatory and voluntary impact category indicators

Resource Use Impacts for 1 kg of U-Flex Structural Ceiling & Partition Systems								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
GWP-GHG <sup>2</sup>	kg CO <sub>2</sub> eq.	2.58E+01	8.33E-02	0.00E+00	5.05E-03	3.72E-02	1.35E-02	-2.00E+00

**\*Disclaimer.** The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator. We discourage the use of the results of modules A1-A3 without considering the results of module C.

## Resource use indicators

Resource Use Impacts for 1 kg of U-Flex Structural Ceiling & Partition System								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
PERE	MJ	4.47E+01	5.61E-01	0.00E+00	2.43E-04	4.56E-02	2.97E-02	-3.48E+00
PERM	MJ	5.42E-01	-5.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	4.52E+01	1.91E-02	0.00E+00	2.43E-04	4.56E-02	2.97E-02	-3.48E+00
PENRE	MJ	2.68E+02	5.81E+00	0.00E+00	6.97E-02	5.97E-01	1.82E-01	-2.03E+01
PENRM	MJ	5.58E+00	-5.58E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	2.73E+02	2.37E-01	0.00E+00	6.97E-02	5.97E-01	1.82E-01	-2.03E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m3	8.77E-02	1.17E-05	0.00E+00	3.60E-07	6.61E-05	4.60E-05	-6.82E-0
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water.							

<sup>2</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste indicators

Waste Indicators for 1 kg of U-Flex Structural Ceiling & Partition System								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	-4.77E-09	1.29E-11	0.00E+00	-6.92E-15	1.55E-09	3.96E-12	4.13E-10
Non-hazardous waste disposed	kg	4.78E+00	2.09E-01	0.00E+00	1.14E-06	1.55E-02	9.11E-01	-3.94E-01
Radioactive waste disposed	kg	2.68E-03	1.68E-06	0.00E+00	1.35E-08	1.97E-05	2.08E-06	-2.10E-04

## Output flow indicators

Output flow indicators for 1 kg of U-Flex Structural Ceiling & Partition System								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	1.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Additional Indicators for 1 kg of U-Flex Structural Ceiling & Partition System								
Indicator	Unit	A1-A3	A5	C1	C2	C3	C4	D
Particulate matter	Disease incidences	5.09E-06	8.32E-10	0.00E+00	2.96E-10	1.03E-09	1.19E-09	-4.02E-07
Ionising radiation, human health	kBq U235 eq.	2.50E-01	2.02E-04	0.00E+00	1.24E-06	3.15E-03	2.41E-04	-1.96E-02
Ecotoxicity, freshwater	CTUe	2.04E+02	2.63E-01	0.00E+00	2.88E-02	6.69E-02	1.32E-01	-1.58E+01
Human toxicity, cancer	CTUh	3.66E-09	9.72E-12	0.00E+00	4.77E-13	3.55E-12	1.53E-11	-2.77E-10
Human toxicity, non-cancer	CTUh	1.72E-07	8.19E-10	0.00E+00	1.03E-11	7.50E-11	1.61E-09	-1.35E-08
Land Use	Pt	4.60E+01	1.61E-02	0.00E+00	1.44E-04	5.82E-02	4.42E-02	-2.69E+00

## REFERENCES

- EN 15804:2012+A2:2019 E "Sustainability of construction works – Environmental product declarations– Core rules for the product category of construction products."
- General Programme Instructions of the International EPD® System. Version 4.0.
- LCA FE (GaBi) 10.6\_2023: Dokumentation der LCA FE (GaBi)-Datensätze der Datenbank zur Ganzheitlichen Bilanzierung. LBP, Universität Stuttgart und Sphera Solutions Pvt Ltd GmbH
- ISO 14020:2000 Environmental labels and declarations – General principles
- 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
- PCR 2019:14, Product Category Rules (PCR) for 'CONSTRUCTION PRODUCT' Version 1.3.2