ENVIRONMENTAL PRODUCT DECLARATION

Deskpro *from*
AFC System Pvt Ltd, Greater Noida

PROGRAMME
The International EPD® System

PROGRAMME OPERATOR
EPD India

GEOGRAPHICAL SCOPE
Global

EPD REGISTRATION NUMBER
S-P-09814

PUBLICATION DATE
2023-10-16

VALID UNTIL
2028-10-15



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

General Information

Programme Information

Programme: The International EPD® System
Address: EPD® International AB Box 21060 SE-100 31 Stockholm, Sweden
Website: www.environdec.com
E-mail: info@environdec.com
Programme Operator: The International EPD System, Indian Regional Hub
Website: www.environdecindia.com
Email: aninditabaishya@environdecindia.com

Information about verification and reference PCR:

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

Product category rules (PCR)

Product Category Rules (PCR): PCR2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14 Version 1.2.4) (Adopted from EPD Norway)

PCR review was conducted by

The Technical Committee of the International EPD® System. See www.environdec.com/TC 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.

☐ EPD process verification ☑ EPD verification

Third party verifier

SIPL Pvt Ltd, New Delhi, India
sunil@sipl-sustainability.com

Approved by

The International EPD® System Technical Committee, supported by the Secretariat

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

☐ Yes ☑ No

LCA Study & EPD Design Conducted by

Suraj Shekhar, Sustainability Consultant
KoActs
suraj@koacts.com; www.koacts.com

AFC System Private Limited has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

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

Owner of the EPD: AFC System Pvt. Ltd.
Plot No. 33, Ecotech - 12, industrial Area, Greater Noida, Uttar Pradesh 201310, India

Contact : Shahnawaz Sheikh, Email: shahnawaz@afcindia.in; www.afcindia.in

Description of the organisation: AFC is a 15 years young organisation that conceptualises, designs, manufactures, and delivers modular furniture solutions across the country.
The brand started its operations in 2008 and has been setting milestones with its multiple initiatives. At a time when the concept of green manufacturing and sustainability was just picking up, AFC set up its own manufacturing unit in Noida with pan-India service capability, and regulatory certifications and compliances for green manufacturing in 2010.
By 2019, AFC launched a new manufacturing setup with a 2.5 lakh sq. ft. area with machines imported from Germany and Italy. Here are a few factors that make it a robust organization:
Enormous scale to manufacture upwards of 15,000 workstations and 12,000 seating solutions in a month on average.
An in-house R&D team that comes up with new designs and products to transform businesses with the help of 400+ employees. A diverse product portfolio that consists of workstations, tables, storages, educational furniture, and seating solutions.
Keeping innovation at heart, AFC has always been at the forefront of being a sustainable brand. Its expertise in green and sustainable manufacturing practices, following all the necessary regulatory compliance, is what sets it apart from others in the industry. AFC is also actively participating in environment-centric activities.
Name and location of production site(s): Greater Noida, UP, India

Product information

Product name: **DESKPRO** is an efficient and organized workstation system that blends in seamlessly in any environment. Its flexible elements in the design provide multiple solutions to create spaces which promote communication and teamwork.
Product identification: This study is conducted according to the guidelines of ISO 14040:2006, ISO 14044:2006, ISO 14025:2006 and Product Category Rules (PCR): PCR2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14 Version 1.2.4) (Adopted from EPD Norway)

Product Description: AFC's DeskPro workstation is a well-designed and flexible workspace solution for enhancing productivity and ambiance in office environments. It combines various features and design elements to create an efficient and aesthetically pleasing workspace. DeskPro offers numerous configurations, allowing one to adapt the workspace to specific needs and preferences. This flexibility is valuable for creating an office environment that suits different tasks and working styles. Its ability to adapt to various configurations and design preferences can help create a more productive and visually appealing work environment.
The product is marketed in many countries including India.
Field of application

- Efficient Workstations.
- Workplace solutions for both small and big office spaces.

Life Cycle Assessment

Geographical scope: India

Functional unit / Declared unit: One unit of Deskpro.

Reference service life: 15 years

Time representativeness: Primary data from the manufacturing site, suppliers and the electricity mix collected for the period startting from June 2022 to June 2023.

Database(s) and LCA software used: Ecoinvent v3.9 (allocation, cut-off by classification) database and SimaPro v9.5 software have been used for the LCA calculations. LCA methods used are EN 15804:A2 compliant.

Data quality and data collection

According to Product Category Rules (PCR): PCR2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14 Version 1.2.4) (Adopted from EPD Norway) specific data collected from AFC plant at Greater Noida and its suppliers were used for module A1-A3. Specific data includes actual product weights, amounts of raw materials used, product content, energy consumption, transport figures and water consumption. For B1 to B7 modules, average transportation distance, installation, refurbishing, repair and maintenance details were collected from generic sources and data were obtained from Ecoinvent v3.9. For end of life treatment especially recycling details were taken from ecoinvent v3.9. Avoided products details were assumed to be 50% of total waste material collection.

Allocation

In this study, allocation has not been applied.

Cut-off rules

Life Cycle Inventory data for a minimum of 99 % of total inflows to the life cycle stages have been included and a cut-off rule of 1% regarding energy, mass and environmental relevance was applied. Impacts caused by treatment operations have been calculated lower than 1% environmental relevance.

Content Information

Major input materials and their % weight in production of one Deskpro are given below

Sl No.	Material	Weight %
1	**Particle board**	**45.6**
2	**MDF**	**9.7**
3	**Aluminium**	**13.5**
4	**CR tube**	**13.9**
5	**CRCA sheets**	**12.5**
6	**GI steel sheets**	**3.9**
7	**Packaging**	**0.9**

Product Description



Deskpro is a highly efficient and well-organized workstation system designed to seamlessly fit into any environment. Its flexible design elements offer multiple solutions, creating spaces that encourage communication and teamwork. With its sleek and adaptable structure, Deskpro enables users to easily collaborate and be productive. It seamlessly integrates into various settings, making it an ideal choice for modern workspaces. Deskpro's functional and visually appealing design ensures it meets the diverse needs of professionals, enhancing productivity and improving the overall work experience. The size of one Deskpro is 1600mm X 600 mm. It has estimated service life of 10 years. The product is marketed all over the world. Major market share is in India.

Product Characteristics Test Report

Test Report- Hardline

TÜVRheinland®
Precisely Right.

Prüfbericht-Nr.: *Test Report No.:*	**IN23F05H 001**	**Auftrags-Nr.:** *Order No.:*	146828367 Seite 1 von 3 *Page 1 of 3*
Kunden-Referenz-Nr.: *Client Reference No.:*	TRF dated on 29.08.2023	**Auftragsdatum:** *Order date:*	07.09.2023
Auftraggeber: *Client:*	AFC SYSTEM PRIVATE LIMITED,33, ECOTECH 12, WEST GREATER NOIDA, UTTAR PRADESH - 201310		
Prüfgegenstand: *Test item:*	**Deskpro, desk and tables workstation cluster**		
Bezeichnung / Typ-Nr.: *Identification / Type*	Style No./SKU No. : **Deskpro, desk and tables workstation cluster**		
Auftrags: *Order:*	PO No.: Not Provided		
Prüfgrundlage: *Test specification*	**BIFMA 5.5:2021: Desk and Table Products**		

Wareneingangsdatum: *Date of receipt:*	24-08-2023
Prüfmuster-Nr.: *Test sample No.:*	A003557205-001
Prüfzeitraum: *Testing period:*	25/08/2023 - 05/09/2023
Ort der Prüfung: *Place of testing:*	27/B, 2nd Cross, Electronic City, Phase 1, Bangalore- 560 100,
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (India) Pvt. Ltd
Prüfergebnis*: *Test result*:*	Pass



geprüft von / *tested by:*

Datum / Date	Name / Stellung / Name / Position	Unterschrift / Signature
07.09.2023	Sachin shivraj /Test Engineer	

kontrolliert von / *reviewed by:*

Datum / Date	Name / Stellung / Name / Position	Unterschrift / Signature
07.09.2023	Yogisha Gowda/ Asst Manager	

Sonstiges / *Other:* **Buyer name:**Not provided ,Country of origin:India,Country of destination:Not Provided, Material: **Pre-laminated particle board, CRCA sheets and tubes, aluminium profiles.** ,Color Name: Not Provided ,End use of product: Work station, Decision Rule: The laboratory employs simple acceptance rule in making pass or fail decisions on test results with no guard band

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:* Prüfling komplett und beschädigt / *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.

TÜV Rheinland (India) Pvt. Ltd., 27/B, 2nd Cross, Electronic City, Phase 1, Bangalore- 560 100,
Internet: http://www.tuv.com, CIN: U72501KA1996PTC020653

Overall Dimensions:
Height: 1050mm Width: 24000mm Depth: 1200mm Total Work surface(A): 2.88m2

Category: I(H> 610mm and A>0.46m2)

FL = Functional load; PL = Proof load; EE = Extendible element; C = Concentrated; D = Distributed

Clause	Test Item	Parameter / Observation	Observation	Result
3.2	Manufacturer's Instructions	When a manufacturer provides specific instructions and/or product safety labels, these instructions shall be followed prior to testing unless otherwise specified by the test procedures herein. Mid-test adjustments to the unit, such as retightening fasteners, are not permitted unless otherwise specified by the test procedures herein.	Not provided	NA
3.7	Pretest Inspection	Before beginning the testing, visually inspect the unit thoroughly. Record any defects so that they are not assumed to have been caused by the tests.	No defect is observed	P
5	**Unit Strength Tests**			
5.2	Concentrated Functional Load Test	☒ L > 1829 mm or ganged units > 2.6 m: 2 x CFL x 914mm Time: 60min	No loss of serviceability at 182kg	P
5.8	Benching Systems – Distributed Functional Load and Stability Test	DFL as Table 1 / 60 min. ☒ Primary surface depth ≥ 406 mm, DPL center line is 178 mm from edge ☒ If two-sided unit, DFL to 1 side only for stability test, then DFL to both 2 sides / 60 min.	No tip over at 153kg No loss of serviceability at 153kg	P
5.9	Benching Systems – Distributed Proof Load Test	DPL as Table 1 / 15 min. ☒ Primary surface depth ≥ 406 mm, DPL center line is 178 mm from edge	No loss of serviceability at 232kg	P
6	**Top Load Ease Cycle Test**	H ≤ 965 mm . ☒ Primary surface depth ≥ 457 mm, edge of the loading bag/disk within 25 mm from the edge of the surface at the center of the largest unsupported span. ø406 mm / 91 kg / 10,000 cycles	No Loss of serviceability	P

System boundary and flow chart of Deskpro production



- **Product stage**
    - A1: Raw Material Supply
        - Extraction and processing of raw materials (Mineral gypsum, additives, and others).
        - Generation of electricity and heat from primary energy resources.
    - A2: Transportation
        - External transportation to the core processes and internal transport.
    - A3: Manufacturing
        - Manufacturing of the finished parts of Deskpro.
        - Production of ancillary materials or pre-products.

- **Construction/installation stage**
    - A4: Transportation
        - Transportation of finished product to the customer.
    - A5: Installation
        - Final assembly and installation of Deskpro at final consumer site.

- **Use stage**
    - B1: Use
        - After the assembly of parts into Deskpro, the use stage begins.
    - B2: Maintenance
        - Includes maintenance, e.g., energy and water use in cleaning, and recommended repainting during the service life.
    - B3: Repair
        - Repairs includes, if any, repairs during the service life.
    - B4: Replacement
        - Replacement, if any, recommended during service life.
    - B5: Refurbishment
        - Refurbishment, if relevant.
    - B6: Operational energy use
        - Operational energy use, if relevant during service life.
    - B7: Operational water use
        - Operational water use, if relevant during service life.

- **End of life**
    - C1: Demolition
        - Includes the demolition of furniture.
    - C2: Transportation
        - Includes the transport of the furniture to final waste treatment.
    - C3: Reuse, recovery and/or recycling
        - Includes all activities regarding reuse, recovery and/or recycling after transportation of furniture.
    - C4: Disposal
        - Includes disposal, i.e., waste handling that does not give a useful product. For example, after incineration of Particleboard or Fiberboard, the ashes are sent to the final landfilling sites.

Module D- Recycling percentage for Alumimium and steel was assumed to be 50% of total weight of one Deskpro.

	Product stage		Construction process stage			Use stage							End of life stage				Resource recovery 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	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN
Specific data used	Manufacturing Plant data taken.			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X: Declared, ND: Not declared

Environmental Information

The following table shows the environmental impact of one Deskpro.

Core Environmental impact per one Deskpro, weight 50.9 kg															
Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C 1	C 2	C3	C 4	D
Global Warming Potential - fossil fuels	kg CO2 eq	238.37	9.16	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	7.75	0.00	41.44
Global Warming Potential - Biogenic	kg CO2 eq	65.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.09
Global Warming Potential- LU & LU change	kg CO2 eq	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.02
Global Warming Potential - Total	kg CO2 eq	173.15	9.16	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	7.94	0.00	41.37
Depletion Potential ODP	kg CFC11 eq	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acidification Potential AP	mol H+ eq	1.34	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	-0.16
Eutrophication Potential-freshwater	kg P eq	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02
Eutrophication Potential - marine	kg N eq	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.04
Eutrophication Potential - terrestrial	mol N eq	3.32	0.44	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.00	-0.40
Photochemical ozone creation Potential	kg NMVOC eq	1.01	0.10	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	-0.20
Abiotic depletion potential - non fossil	kg Sb eq	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abiotic depletion potential fossil fuels	MJ	3729.74	62.38	13.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	81.97	0.00	409.14
Water user deprivation potential	m3 W eq. Dep	35346.27	0.12	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	7.75	0.00	331.78
Global Warming Potential - (GWP-GHG)	kg CO2 eq	128.46	9.15	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	7.46	0.00	41.04

Additonal Environmental impact per one Deskpro, weight 50.9 kg															
Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C 1	C 2	C3	C 4	D
Particulate matter emissions (PM)	disease inc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ionising radiation Human Health (IRP)	kBq U-235 eq	3.88	0.27	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.39	0.00	-0.71
Ecotoxicity, freshwater	CTUe	4646.12	10.90	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	387.73	0.00	-136.76
Human toxicity, cancer effect	CTUh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Human toxicity, non-cancer effects	CTUh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land use related impacts	dimensionles	3042.17	0.46	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	49.45	0.00	-74.36

Use of resources

Resource Use per one Deskpro, weight 50.9 kg																
Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C 1	C 2	C3	C 4	D
Use of renewable primary energy carrier	MJ	1146.53	0.17	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	10.60	0.00	16.33
Use of renewable primary energy raw mtls	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total use of renewable primary energy	MJ	1146.53	0.17	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	10.60	0.00	16.33
Use of non-renewable prim energy carrier	MJ	790.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Use of non-ren. prim enrergy as raw mtls	MJ	2433.63	66.33	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32	89.54	0.00	429.91
Total of non-ren. primary energy sources	MJ	3223.63	66.33	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32	89.54	0.00	429.91
Use of Secondary Material	Kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Use of renewable Secondary fuels	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Use of non-renewable secondary fuels	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Use of Freshwater	m3	848.22	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	-7.74

Output flows and wastes

Output flows and waste categories per one Deskpro, weight 50.9 kg															
Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C 1	C 2	C3	C 4	D
Hazardous waste disposed	kg	0.15	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Non-Hazardous waste disposed	kg	37.29	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.88	0.00	-5.07
Radioactive waste disposed	Kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Components for reuse	Kg	193.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for recycling	Kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for energy recovery	Kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exported Electrical Energy	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exported thermal Energy	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



References

General Programme Instructions of the International EPD® System.

1. ISO 14040: 2006 Environmental management -- Life cycle assessment -- Principles and framework
2. ISO 14044: 2006 Environmental management -- Life cycle assessment -- Requirements and guidelines
3. ISO 14025: 2006 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
4. EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations - Core rules for the product category of construction products
5. The International EPD® System / www.environdec.com
6. Product category rules PCR2019:14-c-PCR-021 Furniture (c-PCR to PCR 2019:14 Version 1.2.4) (Adopted from EPD Norway)
7. Ecoinvent 3.9.1 / http://www.ecoinvent.org/
8. SimaPro LCA Software / https://simapro.com/

