Statement of Verification

BREG EN EPD No: 000783 Issue: 02

This is to verify that the Environmental Product Declaration provided by:

Teknion Furniture Systems (M) Sdn Bhd

are in accordance with the requirements of:

EN 15804:2012+A2:2019

and

BRE Global Scheme Document SD207

This declaration is for:
Universal Pedestal with dimensions of W390 x D520 x H600 mm and a weight of 21 kg. Service life 10 years.

Company Address

Teknion Furniture Systems (M) Sdn Bhd
Lot 761, Jalan Haji Sirat,
Off Jalan Meru,
42100 Klang,
Selangor



teknion

Signed for BRE Global Limited	Emma Baker Operator	
12 November 2026 Date of this Issue	21 April 2026 Date of First Issue	20 April 2031 Expiry Date

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BRE Global Ltd., Garston, Watford WD25 9XX
T: +44 (0)333 321 8811 F: +44 (0)1923 664603 E: Enquiries@breglobal.com

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Environmental Product Declaration

EPD Number: 000783

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2025 Product Category Rules for Type III environmental product declaration of construction products to EN 15804+A2 PN 514 Rev 3.2
Commissioner of LCA study	**LCA consultant/Tool**
Teknion Furniture Systems (M) Sdn Bhd Lot 761, Jalan Haji Sirat, Off Jalan Meru, 42100 Klang, Selangor	LCA consultant: Grace Ong LCA Tool: BRE LINA A2
Functional Unit	**Applicability/Coverage**
Universal Pedestal with dimensions of W390 x D520 x H600 mm and a weight of 21 kg. Service life 10 years.	Product specific
EPD Type	**Background database**
Cradle to Grave	Ecoinvent 3.8

Demonstration of Verification
CEN standard EN 15804 serves as the core PCR [a]
Independent verification of the declaration and data according to EN ISO 14025:2010 ☐Internal ☒ External
(Where appropriate [b]) Third party verifier: Kim Allbury
a: Product category rules b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)

Comparability
Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance

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Information modules covered

Product			Construction		Use stage							End-of-life					Benefits and loads beyond the system boundary
					Related to the building fabric					Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal		Reuse, Recovery and/or Recycling potential
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑		☑

Note: Ticks indicate the Information Modules declared.

Manufacturing site(s)

Teknion Malaysia
Teknion Furniture Systems (M) Sdn Bhd
Lot 761, Jalan Haji Sirat, Off Jalan Meru,
42100 Klang, Selangor

Teknion India
Teknion Furniture Systems (India) Pvt. Ltd.
Ground Floor, Godrej Centre Indiranagar
Old Madras Road, Bengaluru 560038 India

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Construction Product:

Product Description

The universal pedestal provides storage in freestanding or storage beneath the worksurface, serving as a primary storage solution for both office and home building. The analysis focuses on a universal pedestal with 5 casters and Box/Box/File (BBF) drawer configuration:

Universal Pedestal	
Product Code	KLWKLSUBBF (Malaysia), ILWKLSU BBF (India)
Dimensions	W390mm x D520mm x H600mm
Product Weight	21kg

** Product code can be found in brochure and price guide, please reach out to Teknion technical team for more information.

Technical Information

Key technical properties and certifications are shown in the table below. The Reference Service Life (RSL) for the product included in the EPD is 10 years.

Technical Properties (Tests)	**All Configuration**
	Value
BS 16121: 2023, Level 2 Non-Domestic Storage Furniture - Requirements for Safety, Strength, Durability and Stability (Test level 2)	Pass
ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) Indoor Advantage™ Gold - Registration # SCS-IAQ-09033	Pass

Notes: The above listed technical properties are from the Certificate of Compliance (CoC), and it's an internal document which will be available upon request. Please contact the technical team for more information.

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Main Product Contents

The universal pedestal is available in two sizes with identical heights and widths but varying depths (450mm and 520mm). A representative configuration, Box/Box/File(BBF) was chosen for this study, the details of which are provided in the table below:

Product weight: 21kg.
Dimension: W390mm x D520mm x H600mm

Material/Chemical Input	%
Steel	95.45%
Plastic (PP, PA6)	3.03%
Zinc	0.38%
Other	1.14%
Packaging material	**Weight (kg)**
Cardboard	1.35
Plastic	0.30

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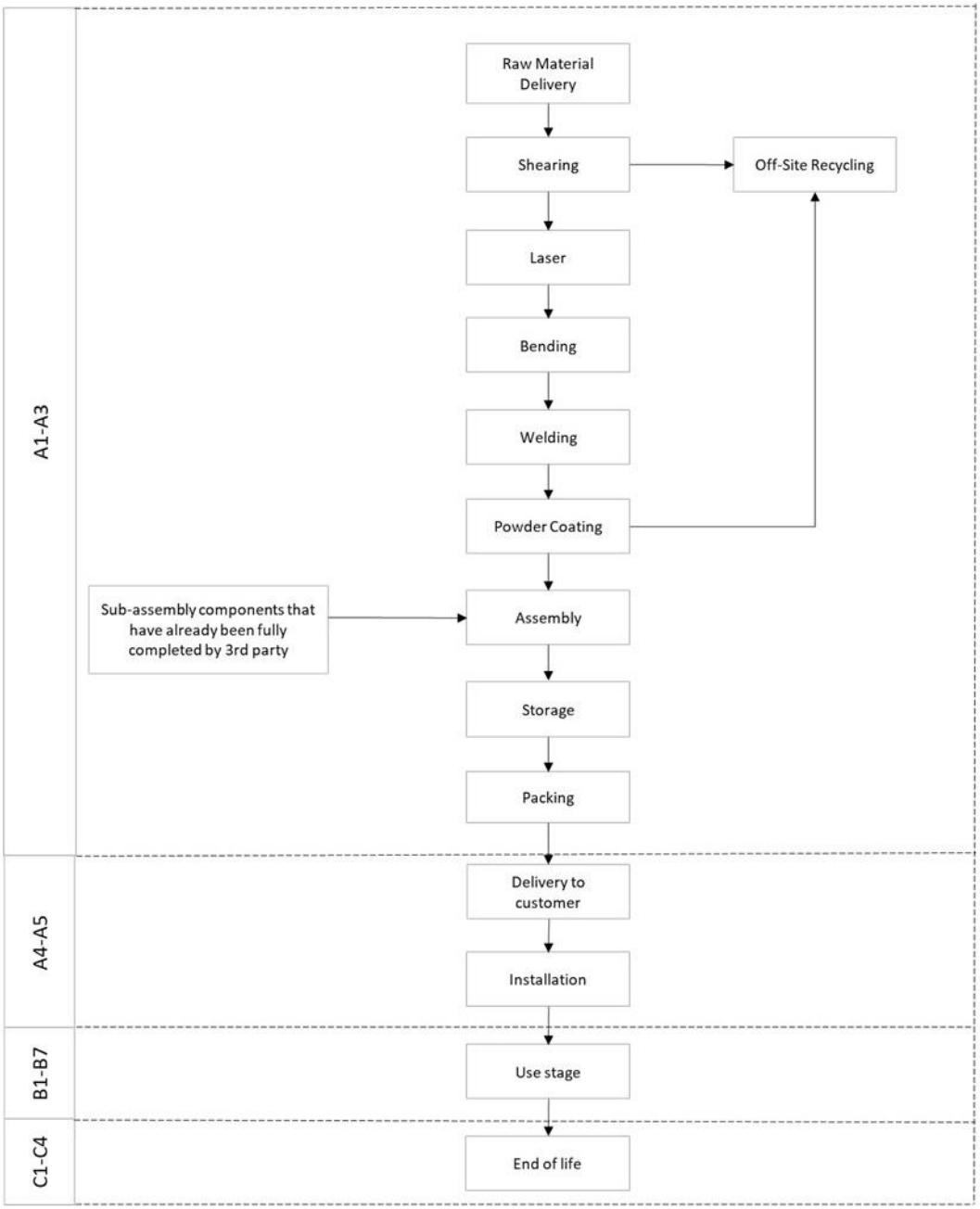
Manufacturing Process

Metal parts undergo several processes, including cutting, punching, deburring, bending, welding, grinding, and buffing, followed by powder coating. The metal parts and plastic components are assembled and packed ready for delivery. This manufacturing workflow is standardized across all configurations, ensuring uniform quality and consistency.

Process flow diagram



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Construction Installation

The product is installed manually using basic hand tools, requiring minimal energy input.

Use Information

No specific maintenance is required, and universal pedestal are expected to outlast their intended lifespan, provided they are maintained according to the recommended care procedures.

End of Life

At the end of the product's life, the pedestal is dismantled, and materials are separated. Energy consumption is minimal due to manual dismantling with no involvement of machinery or power. It is assumed that 100% of the product is recovered at the demolition and sent to the waste processing facility for waste treatment.

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Life Cycle Assessment Calculation Rules

Functional unit description

Universal Pedestal with dimensions of W390 x D520 x H600 mm and a weight of 21 kg. Service life 10 years.

System boundary

This is a Cradle-to-Grave EPD, reporting the upstream processing stages A1 to A3, construction and Installation (A4-A5), use stages (B1 to B7), end-of-life stages (C1 to C4) and Module D in accordance with EN15804:2012+A2:2019 and BRE 2025 Product Category Rules (PN 514 Rev 3.2). Study period use for the LCA analysis is 10 years.

Data sources, quality and allocation

For the Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD), Teknion utilised specific primary data extracted from its production operations at Teknion Malaysia and India factory, modelled using the LINA A2 LCA and the Ecoinvent 3.8 database. In accordance with the requirements of EN15804:2012 + A2:2019, the most current available data has been used. Manufacturer-specific data has been used for the LCA analysis.

The data represents one unit of the Universal Pedestal, based on production period between 01/12/2023 and 30/11/2024 from Teknion Malaysia and India's factory. A production quantity of one unit was used, as the data was sourced directly from the ERP system.

The primary production figures are taken from the manufacturers ERP system, and the secondary datasets are derived from Ecoinvent v3.8, and the LCA tool used was BRE LINA A2. This LCA analyses the environmental impact of the Universal Pedestal, evaluating a unit with dimensions of W390 x D520 x H600 mm and a weight of 21 kg, service life 10 years. For the production process, the facility uses the national grid consumption mix for the production.

In addition to the pedestal, other products are manufactured in both factories. Therefore, the allocation of electricity, fuel, water consumption, and discharge are required. There are multiple configurations and combinations of products produced on the production line (in terms of size, accessories, etc.). Therefore, allocating energy consumption, water, other waste, and wastewater based on mass would assign higher values to certain products. Instead, using the sales revenue of the product line relative to the total revenue is more accurate. Therefore, energy, water, other waste, and wastewater leaving the factory has been allocated based on the % revenue of the product line over the total revenue. Actual usage figures were employed for raw materials, packaging, and production waste are taken from ERP system.

Upon data review, it was noted that the mass balance is within the acceptable range, and no data uplift has been performed. In addition, no proxy dataset was used for the LCA modelling.

Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e. raw material production) from the Ecoinvent 3.8 database. All Ecoinvent datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804+A2:2019. BRE LINA+A2 uses the characterisation factors that are specified in annex C of the 15804 A2 standard.

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ISO14044 guidance. Quality Level	Geographical representativeness	Technical representativeness	Time representativeness
Very Good	Data from area under study.	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e., identical technology).	There is approximately less than 3 years between the Ecoinvent LCI reference year, and the time period for which the LCA was undertaken.

The data quality assessment presented above has been carried out in accordance with Table E.1 in the Annex section of the BRE PCR EN 15804+A2 V3.2. Manufacturer country specific datasets have been selected from the Ecoinvent LCI for this LCA, utilizing the allocation, cut-off, EN15804 system model to maintain methodological consistency across all generic upstream and downstream processes. Teknion Malaysia and India uses national grid electricity and natural gas for production, therefore, location based modelling has been followed the LCA analysis following the BRE PCR. The GWP carbon footprint values for 1 kWh is 0.840 kgCO2eq for Malaysian grid electricity, 0.256 kgCO2eq for natural gas (RoW), and 1.30 kgCO2eq for the Indian Southern grid.

The quality level of time representativeness is also Very Good as the background LCI datasets are based on Ecoinvent v3.8 which was compiled in 2021. Therefore, there is less than 5 years between the Ecoinvent LCI reference year and the time period for which the LCA was undertaken.

Cut-off criteria

In both manufacturing site, all raw materials and energy inputs to the manufacturing process have been included, except the ancillary materials and direct emissions to air, water, and soil, which are not measured at the manufacturing facility. In Teknion Malaysia and India LCA inventory process, all data related to raw materials, packaging materials, and consumable items are included in the modelling.

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LCA Results – manufacturing location: Malaysia

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	5.23E+01	5.21E+01	1.24E-01	4.26E-02	2.77E-06	2.39E-01	2.43E-02
	Transport	A2	5.09E-01	5.08E-01	2.70E-04	2.07E-04	1.12E-07	2.10E-03	3.82E-05
	Manufacturing	A3	1.76E+00	2.19E+00	-4.48E-01	9.22E-03	1.95E-07	1.11E-02	8.63E-04
	Total (Consumption grid)	A1-3	5.45E+01	5.48E+01	-3.23E-01	5.20E-02	3.08E-06	2.52E-01	2.52E-02
Construction process stage	Transport	A4	3.65E-01	3.65E-01	1.93E-04	1.49E-04	8.04E-08	1.51E-03	2.74E-05
	Construction	A5	9.85E-01	9.84E-01	3.22E-05	7.85E-06	1.06E-08	4.06E-04	1.89E-06
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.65E-01	3.65E-01	1.93E-04	1.49E-04	8.04E-08	1.51E-03	2.74E-05
	Waste processing	C3	2.61E+00	2.61E+00	5.87E-04	1.40E-04	2.48E-07	1.20E-02	4.31E-05
	Disposal	C4	5.37E-03	5.36E-03	5.31E-06	5.06E-06	2.17E-09	5.04E-05	4.91E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.13E+01	-2.14E+01	5.74E-02	-6.53E-03	-8.70E-07	-7.88E-02	-8.55E-03

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
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; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			EP-marine	EP-terrestrial	POCP	ADP-mineral& metals	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	5.43E-02	5.19E-01	2.31E-01	7.12E-04	6.13E+02	2.54E+01	4.19E-06
	Transport	A2	6.20E-04	6.77E-03	2.06E-03	1.73E-06	7.49E+00	3.40E-02	4.33E-08
	Manufacturing	A3	4.70E-03	3.19E-02	1.08E-02	1.08E-05	4.33E+01	1.51E+00	1.61E-07
	Total (Consumption grid)	A1-3	5.96E-02	5.57E-01	2.43E-01	7.24E-04	6.63E+02	2.69E+01	4.40E-06
Construction process stage	Transport	A4	4.45E-04	4.86E-03	1.48E-03	1.24E-06	5.38E+00	2.44E-02	3.10E-08
	Construction	A5	1.76E-04	1.87E-03	5.93E-04	6.38E-08	7.06E-01	4.45E-03	6.99E-09
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	4.45E-04	4.86E-03	1.48E-03	1.24E-06	5.38E+00	2.44E-02	3.10E-08
	Waste processing	C3	5.32E-03	5.79E-02	1.59E-02	8.15E-07	1.56E+01	6.60E-02	3.13E-07
	Disposal	C4	1.75E-05	1.92E-04	5.58E-05	1.22E-08	1.50E-01	6.87E-03	1.02E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.84E-02	-1.95E-01	-1.06E-01	-1.60E-05	-2.20E+02	-1.74E+00	-1.42E-06

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	3.32E+00	1.61E+03	3.82E-07	1.66E-06	1.86E+02
	Transport	A2	3.42E-02	6.51E+00	1.91E-10	6.25E-09	5.09E+00
	Manufacturing	A3	2.34E-01	3.61E+01	1.02E-09	2.29E-08	5.81E+01
	Total (Consumption grid)	A1-3	3.58E+00	1.65E+03	3.84E-07	1.69E-06	2.50E+02
Construction process stage	Transport	A4	2.45E-02	4.68E+00	1.37E-10	4.49E-09	3.65E+00
	Construction	A5	2.94E-03	1.01E+00	6.19E-11	2.19E-09	1.33E-01
Use Stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.45E-02	4.68E+00	1.37E-10	4.49E-09	3.65E+00
	Waste processing	C3	7.12E-02	1.30E+01	6.44E-10	9.27E-09	2.03E+00
	Disposal	C4	6.65E-04	9.46E-02	2.40E-12	6.22E-11	3.14E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.25E-01	-6.31E+02	-1.12E-07	-4.32E-07	-4.37E+01

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, primary energy

			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	5.25E+01	0.00E+00	5.25E+01	5.82E+02	2.33E+01	6.05E+02
	Transport	A2	1.04E-01	0.00E+00	1.04E-01	7.23E+00	0.00E+00	7.23E+00
	Manufacturing	A3	-4.48E+00	1.73E+01	1.28E+01	2.95E+01	1.28E+01	4.23E+01
	Total (Consumption grid)	A1-3	4.81E+01	1.73E+01	6.54E+01	6.19E+02	3.61E+01	6.55E+02
Construction process stage	Transport	A4	7.43E-02	0.00E+00	7.43E-02	5.19E+00	0.00E+00	5.19E+00
	Construction	A5	-1.91E+01	1.91E+01	3.33E-02	-1.08E+01	1.17E+01	9.21E-01
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	7.43E-02	0.00E+00	7.43E-02	5.19E+00	0.00E+00	5.19E+00
	Waste processing	C3	8.56E-02	0.00E+00	8.56E-02	1.50E+01	0.00E+00	1.50E+01
	Disposal	C4	1.28E-03	0.00E+00	1.28E-03	1.47E-01	0.00E+00	1.47E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.67E+00	0.00E+00	-5.67E+00	-2.18E+02	0.00E+00	-2.18E+02

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	8.31E+00	0.00E+00	0.00E+00	6.26E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.35E-04
	Manufacturing	A3	1.34E+00	0.00E+00	0.00E+00	3.58E-02
	Total (Consumption grid)	A1-3	9.64E+00	0.00E+00	0.00E+00	6.63E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	5.99E-04
	Construction	A5	0.00E+00	0.00E+00	0.00E+00	1.06E-04
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	5.99E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	1.60E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.61E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-4.23E-02

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	1.91E+01	9.46E+01	1.39E-03
	Transport	A2	8.11E-03	1.44E-01	4.97E-05
	Manufacturing	A3	9.91E-02	3.02E+00	8.81E-05
	Total (Consumption grid)	A1-3	1.92E+01	9.77E+01	1.53E-03
Construction process stage	Transport	A4	5.82E-03	1.03E-01	3.57E-05
	Construction	A5	9.49E-03	3.85E-01	5.60E-06
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.82E-03	1.03E-01	3.57E-05
	Waste processing	C3	2.01E-02	1.41E-01	1.05E-04
	Disposal	C4	1.56E-04	2.20E-03	9.82E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.96E+00	-4.15E+01	-2.69E-04

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	2.64E+00	4.51E-08	0.00E+00
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

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LCA Results – manufacturing location: India

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	5.23E+01	5.21E+01	1.24E-01	4.26E-02	2.77E-06	2.39E-01	2.43E-02
	Transport	A2	2.16E-01	2.15E-01	1.14E-04	8.78E-05	4.75E-08	8.91E-04	1.62E-05
	Manufacturing	A3	2.98E+00	3.41E+00	-4.52E-01	8.60E-03	2.01E-07	1.70E-02	1.62E-03
	Total (Consumption grid)	A1-3	5.55E+01	5.57E+01	-3.28E-01	5.13E-02	3.02E-06	2.57E-01	2.59E-02
Construction process stage	Transport	A4	3.65E-01	3.65E-01	1.93E-04	1.49E-04	8.04E-08	1.51E-03	2.74E-05
	Construction	A5	9.85E-01	9.84E-01	3.22E-05	7.85E-06	1.06E-08	4.06E-04	1.89E-06
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.65E-01	3.65E-01	1.93E-04	1.49E-04	8.04E-08	1.51E-03	2.74E-05
	Waste processing	C3	2.61E+00	2.61E+00	5.87E-04	1.40E-04	2.48E-07	1.20E-02	4.31E-05
	Disposal	C4	5.37E-03	5.36E-03	5.31E-06	5.06E-06	2.17E-09	5.04E-05	4.91E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.13E+01	-2.14E+01	5.74E-02	-6.53E-03	-8.70E-07	-7.88E-02	-8.55E-03

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
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; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			EP-marine	EP-terrestrial	POCP	ADP-mineral& metals	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	5.43E-02	5.19E-01	2.31E-01	7.12E-04	6.13E+02	2.54E+01	4.19E-06
	Transport	A2	2.63E-04	2.87E-03	8.74E-04	7.34E-07	3.17E+00	1.44E-02	1.83E-08
	Manufacturing	A3	6.19E-03	4.47E-02	1.41E-02	1.18E-05	5.82E+01	8.94E-01	1.79E-07
	Total (Consumption grid)	A1-3	6.07E-02	5.66E-01	2.46E-01	7.24E-04	6.74E+02	2.63E+01	4.39E-06
Construction process stage	Transport	A4	4.45E-04	4.86E-03	1.48E-03	1.24E-06	5.38E+00	2.44E-02	3.10E-08
	Construction	A5	1.76E-04	1.87E-03	5.93E-04	6.38E-08	7.06E-01	4.45E-03	6.99E-09
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	4.45E-04	4.86E-03	1.48E-03	1.24E-06	5.38E+00	2.44E-02	3.10E-08
	Waste processing	C3	5.32E-03	5.79E-02	1.59E-02	8.15E-07	1.56E+01	6.60E-02	3.13E-07
	Disposal	C4	1.75E-05	1.92E-04	5.58E-05	1.22E-08	1.50E-01	6.87E-03	1.02E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.84E-02	-1.95E-01	-1.06E-01	-1.60E-05	-2.20E+02	-1.74E+00	-1.42E-06

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	3.32E+00	1.61E+03	3.82E-07	1.66E-06	1.86E+02
	Transport	A2	1.45E-02	2.76E+00	8.11E-11	2.65E-09	2.16E+00
	Manufacturing	A3	2.80E-01	7.60E+01	1.34E-09	3.98E-08	6.04E+01
	Total (Consumption grid)	A1-3	3.61E+00	1.69E+03	3.84E-07	1.70E-06	2.49E+02
Construction process stage	Transport	A4	2.45E-02	4.68E+00	1.37E-10	4.49E-09	3.65E+00
	Construction	A5	2.94E-03	1.01E+00	6.19E-11	2.19E-09	1.33E-01
Use Stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.45E-02	4.68E+00	1.37E-10	4.49E-09	3.65E+00
	Waste processing	C3	7.12E-02	1.30E+01	6.44E-10	9.27E-09	2.03E+00
	Disposal	C4	6.65E-04	9.46E-02	2.40E-12	6.22E-11	3.14E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.25E-01	-6.31E+02	-1.12E-07	-4.32E-07	-4.37E+01

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, primary energy

			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	5.25E+01	0.00E+00	5.25E+01	5.82E+02	2.33E+01	6.05E+02
	Transport	A2	4.39E-02	0.00E+00	4.39E-02	3.06E+00	0.00E+00	3.06E+00
	Manufacturing	A3	-3.78E+00	1.73E+01	1.35E+01	4.42E+01	1.28E+01	5.70E+01
	Total (Consumption grid)	A1-3	4.88E+01	1.73E+01	6.61E+01	6.29E+02	3.61E+01	6.66E+02
Construction process stage	Transport	A4	7.43E-02	0.00E+00	7.43E-02	5.19E+00	0.00E+00	5.19E+00
	Construction	A5	-1.91E+01	1.91E+01	3.33E-02	-1.08E+01	1.17E+01	9.21E-01
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	7.43E-02	0.00E+00	7.43E-02	5.19E+00	0.00E+00	5.19E+00
	Waste processing	C3	8.56E-02	0.00E+00	8.56E-02	1.50E+01	0.00E+00	1.50E+01
	Disposal	C4	1.28E-03	0.00E+00	1.28E-03	1.47E-01	0.00E+00	1.47E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.67E+00	0.00E+00	-5.67E+00	-2.18E+02	0.00E+00	-2.18E+02

PERE = Use of renewable primary energy excluding renewable primary energy 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 resource

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	8.31E+00	0.00E+00	0.00E+00	6.26E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	3.54E-04
	Manufacturing	A3	1.34E+00	0.00E+00	0.00E+00	2.16E-02
	Total (Consumption grid)	A1-3	9.64E+00	0.00E+00	0.00E+00	6.48E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	5.99E-04
	Construction	A5	0.00E+00	0.00E+00	0.00E+00	1.06E-04
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	5.99E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	1.60E-03
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.61E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-4.23E-02

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	1.91E+01	9.46E+01	1.39E-03
	Transport	A2	3.43E-03	6.10E-02	2.11E-05
	Manufacturing	A3	1.92E-01	6.53E+00	1.01E-04
	Total (Consumption grid)	A1-3	1.92E+01	1.01E+02	1.51E-03
Construction process stage	Transport	A4	5.82E-03	1.03E-01	3.57E-05
	Construction	A5	9.49E-03	3.85E-01	5.60E-06
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.82E-03	1.03E-01	3.57E-05
	Waste processing	C3	2.01E-02	1.41E-01	1.05E-04
	Disposal	C4	1.56E-04	2.20E-03	9.82E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.96E+00	-4.15E+01	-2.69E-04

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed

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LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total (Consumption grid)	A1-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	2.64E+00	4.51E-08	0.00E+00
Use stage	Use stage	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

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Information on biogenic carbon content

Information on biogenic carbon content		
Biogenic Carbon Content	Units	Results
Product	kg C	0.00E+00
Packaging	kg C	6.30E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
A4 – Transport to the building site	Products manufactured in Malaysia are distributed both domestically and internationally across Asia, Australia, and the Middle East. Meanwhile, Indian-manufactured products are distributed primarily within their domestic market. In this LCA analysis, 100km by road has been modelled for module A4 as a typical distance from the Teknion site to the construction unit. However, end-users of the EPD can use this information to calculate the impacts of a bespoke transport distance for module A4 if required.		
Transport 1	Road transport –16-32 metric ton lorry	km	100
	Fuel consumption	l/km	0.227
	Capacity utilisation (incl. empty returns)	%	26
A5 – Installation in the building	The product is installed manually using basic hand tools, requiring minimal energy input. Therefore, no product waste is generated during installation, and only packaging waste is produced.		
Installation waste	Installation wastage rate	%	0
	Packaging waste – Cardboard waste to recycling	kg	1.35
	Packaging waste – Plastic waste to incineration	kg	0.30
B1 – Use stage	Once installed, no emission to air, water, and soil throughout the service life of the product.		
B2 - Maintenance	Once installed, the product is ready for use. Throughout its 10-years reference service life, this product requires no maintenance, repair, replacement, or refurbishment during its 10-year reference service life. It is a non-powered system, therefore, no operational energy, and operational water are required.		
B3 - Repair			
B4 - Replacement			
B5 - Refurbishment			
B6 - Operational energy use			
B7 - Operational water use			

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Scenarios and additional technical information			
Scenario	Parameter	Units	Results
Reference service life	10 Years		
Study period used	10 Years		
Design Application Parameters	Use as indicated in product brochure, user instruction and warranty		
C1 – Deconstruction	At the end of the product's life, the pedestal is dismantled, and materials are separated. Energy consumption is minimal due to manual dismantling with no involvement of machinery or power. It is assumed that 100% of the product is recovered at the demolition and sent to the waste processing facility for waste treatment.		
C2 – Transportation	In this analysis, 100km by road has been modelled for module C2 as a typical distance from the demolition site to the pre-processing unit. However, end-users of the EPD can use this information to calculate the impacts of a bespoke transport distance for module C2 if required		
	Road transport by Lorry 16-32 metric ton	km	100
C3 – waste processing	The universal pedestal is made up of 95% steel and the remaining percentage made up of mixed plastic, zinc and powder coating. According to the BRE PCR EN15804+A2, the following end of life scenarios will be applied to the materials: • Metal components such as steel and zinc will be 95% recycled and reused while 5% may end up in landfill. Steel recycling will involve a process of collecting, separating, compacting, shredding, heating, refining, and solidifying. The powder coating cannot be separated out from the final waste so it is assumed that this will end up in landfill. • Mixed plastic components will be incinerated for energy recovery (e.g. heat, electricity.) • Zinc cannot be separated from the final waste because of the less quantity, which is less than 5% of the overall composition, therefore in this analysis its assumed as the zinc waste quantity has been treated as a steel waste (same assumption has been followed in the Module D calculation).		
	Steel waste to recycle - 95%	kg	19.35
	Plastic waste to incinerate- 100%	kg	0.64
C4 – Disposal	Some materials cannot be recycled during waste processing process and may end up in landfill.		
	Steel waste to landfill (with powder coating waste) – 5%	kg	1.02

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Scenarios and additional technical information			
Scenario	Parameter	Units	Results
Module D	The universal pedestal is made up of post-consumer and virgin materials. When calculating the benefits of recycling steel and zinc, the pre-existing recycled content has been removed, and the benefits have been calculated only for virgin steel. The pre-existing recycled content in the Ecoinvent 3.8 Steel dataset is 36.4%; therefore, the benefits have been calculated by excluding the recycled content. That is, the benefits are calculated based solely on the virgin steel content. The Zinc waste pre-existing content is negligible. Pre - existing recycled content (Post consumer waste) = 7.014 kg Benefits due to recycling of virgin steel = 12.33 kg Yield is assumed to be 100% during the recycling process. The incineration benefits have been calculated for plastic waste. The incinerated energy and heat will replace the European average mix. Benefits due to incineration of plastic mixture = 0.64 kg		

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Interpretation of results

The analysis reveals that the manufacturing phase (Modules A1–A3, in line with EN 15804:2012+A2:2019) is the dominant driver of environmental impacts and primary energy demand. The chart below indicates that low alloyed steel production (Module A1) is the main contributor, accounting for nearly 80% of the overall impact—making it the most significant source of carbon emissions in the product's life cycle. Processes like mixed plastic to incineration, other raw material processing, manufacturing energy usage, transportation to the site have much lower comparative impacts. As a result, raw material processing—specifically steel production—emerges as the most critical stage for carbon reduction initiatives.

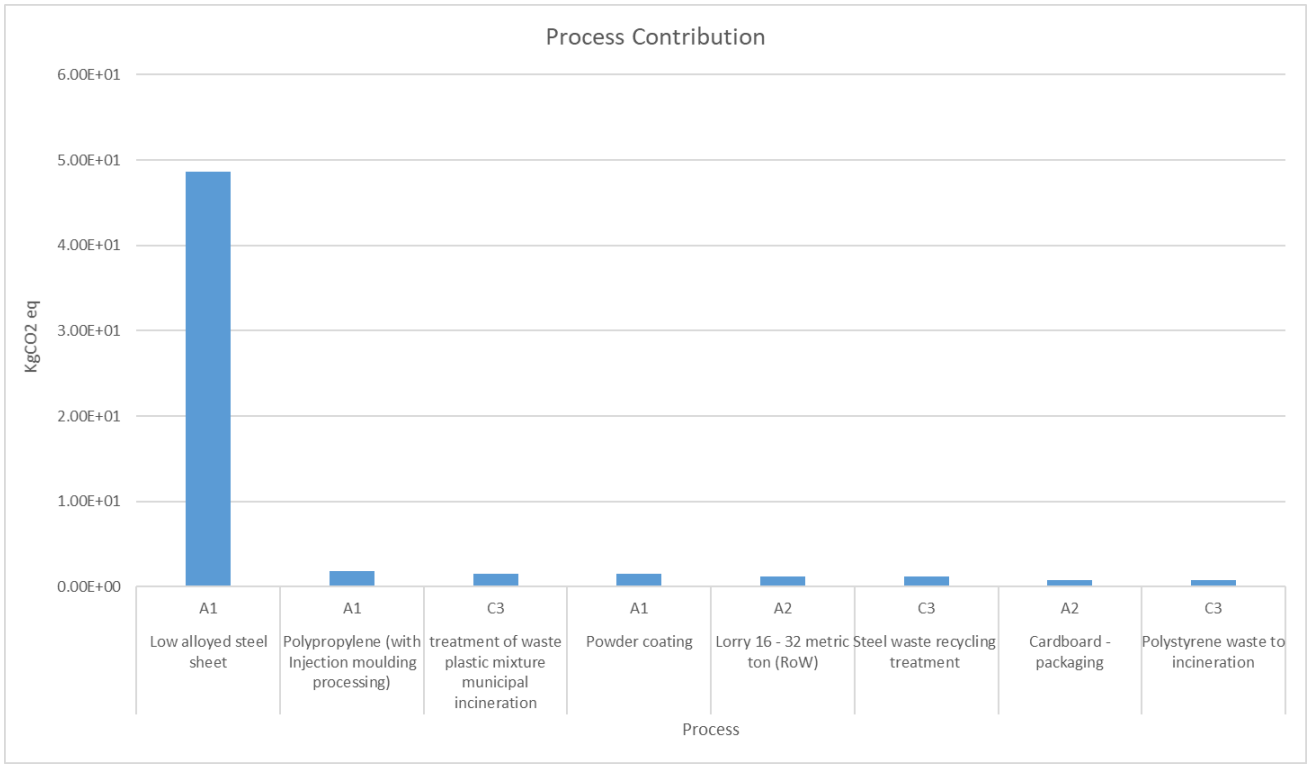

Chart 1: Process contribution of GWP in Malaysia plant

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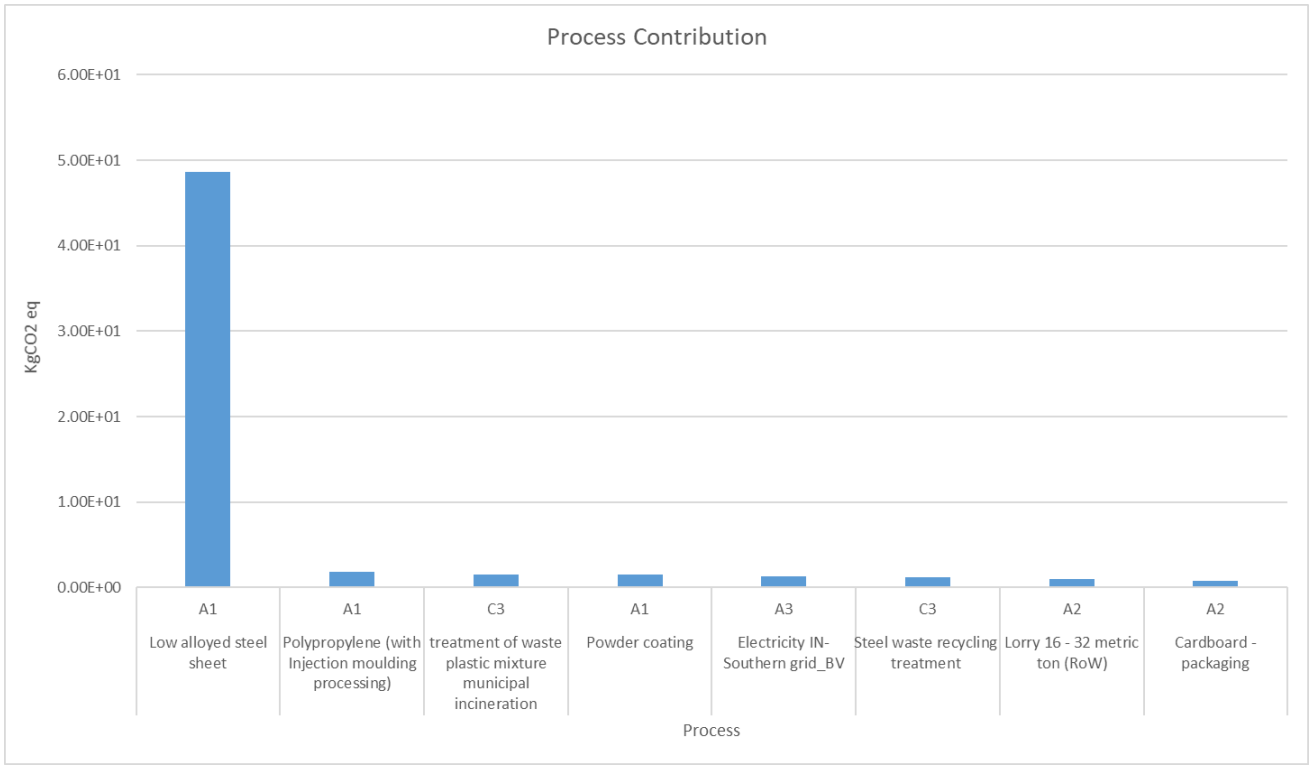

Chart 2: Process contribution of GWP in India plant

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Indoor Advantage™ Gold - certifies products for low emissions and good indoor air quality

BRE Environmental Profiles 2025 Product Category Rules for Type III environmental product declaration of construction products to EN 15804+A2 PN 514 Rev 3.2

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