



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

UNO Chair HA Arms
Suscom Industries Limited



EPD HUB, HUB-5714

Published on 13.03.2026, last updated on 13.03.2026, valid until 12.03.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA

SUSCOM

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Suscom Industries Limited
Address	Unit 8, Leopold Street, , WN5 8DH, Wigan, , GB
Contact details	sales@suscom-ind.co.uk
Website	www.suscom.co.uk

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Manufactured product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	TINO TARTAGLIONE
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Elma Avdyli as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	UNO Chair HA Arms
Additional labels	
Product reference	CHR-UNO
Place(s) of raw material origin	United Kingdom, Italy, Denmark, Canada and China
Place of production	Wigan, United Kingdom
Place(s) of installation and use	United Kingdom
Period for data	2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	14

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 Chair
Declared unit mass	12.8 kg
Mass of packaging	0.001 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	28
GWP-total, A1-A3 (kgCO ₂ e)	28.3
Secondary material, inputs (%)	23.3
Secondary material, outputs (%)	18
Total energy use, A1-A3 (kWh)	79.9
Net freshwater use, A1-A3 (m ³)	0.19

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Suscom Industries Limited is a leading furniture and component manufacturer, provides complete solutions to the office, medical, and furniture industries, supporting every stage of the design, manufacturing, and supply process.

PRODUCT DESCRIPTION

This EPD represents a Office Chair. The Chair is made from various material although the main source of material is plastic.

The chair has been designed with disassembly in mind to be able to recycled the product at end of life. Uno was function driven design, with sustainability at its core although being cost effective without compromise.

We manufacture even the small sub-components to be as sustainable as possible without supply chain risks and with a view to reduce out carbon footprint.

UNO has a synchronous weight balancing movement to adapt to the users weight, adjustable lumbar with tension adjustment, adaptive seat slide and new Ergonomic arms. The ergonomic arms allow an arc adjustment to be more ergonomically friendly to users as to comply with EN standards this would have to be done with 4 directional arms which are very confusing and complicated to end users. UNO has passed EN1335 Parts 1 and 2 along with being a quick fit chair to help minimise work needed to be done to the chair through assembly and also help reduce sizes if it was to be send out in a K/D format.

UNO is available in a variety of colours of sustainable fabric options.

Further information can be found at:

www.suscom.co.uk

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	14.15	United Kingdom, Canada and China
Minerals	19.27	United Kingdom and China
Fossil materials	66.58	United Kingdom, Italy, Denmark and China
Bio-based materials	0	

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Chair
Mass per declared unit	12.8 kg
Functional unit	-
Reference service life	

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

Manufacturing is done in the UK. Manufacturing includes plastic injection molding, upholstery and assembly. The manufacturing process generates 0% waste as the waste is close loop reused withing the same manufacturing cycles. We have taken careful consideration when selecting materials to make the UNO chair and packaging as we wanted it to be as sustainable as possible. The energy and related waste have been calculated and considered along with all transport from suppliers. The Energy used was Electricity, medium voltage, residual mix from the UK.

The finished chair is packaged with a plastic LDPE bag to minimise packaging.

THE EPD DOES NOT COVER TRANSPORT AND INSTALLATION MODULES (A4-A5)

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The chair is easy to disassemble manually, so no energy is considered for module C1 for disassembly. The chair being designed for disassembly for all materials, this is why all materials follow their own path at end end of life.

Assumption on waste are the following: -

Steel – 85% is considered for recycling and 15% is considered for landfill (source: <https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf>)

Aluminium - 90% is considered for recycling and 10% is considered for

landfill (source: European Aluminium, 2022, <https://european-aluminium.eu/blog/enabling-the-circular-economy-with-aluminium/#:~:text=Aluminium%20recycling%20rates%20are%20already,boost%20the%20recycling%20of%20aluminium%2C.>)

PP- 23% is considered for recycling, 50% is considered for incineration and 27% for landfill (Source: Plastics Europe (2020)

<https://plasticseurope.org/knowledge-hub/plastics-the-facts-2020>

PU Foam- 7.5% is considered for recycling, 65.5% is considered for incineration and 27% for landfill (Source: Plastics Europe (2020)

<https://plasticseurope.org/knowledge-hub/plastics-the-facts-2020/>; C2

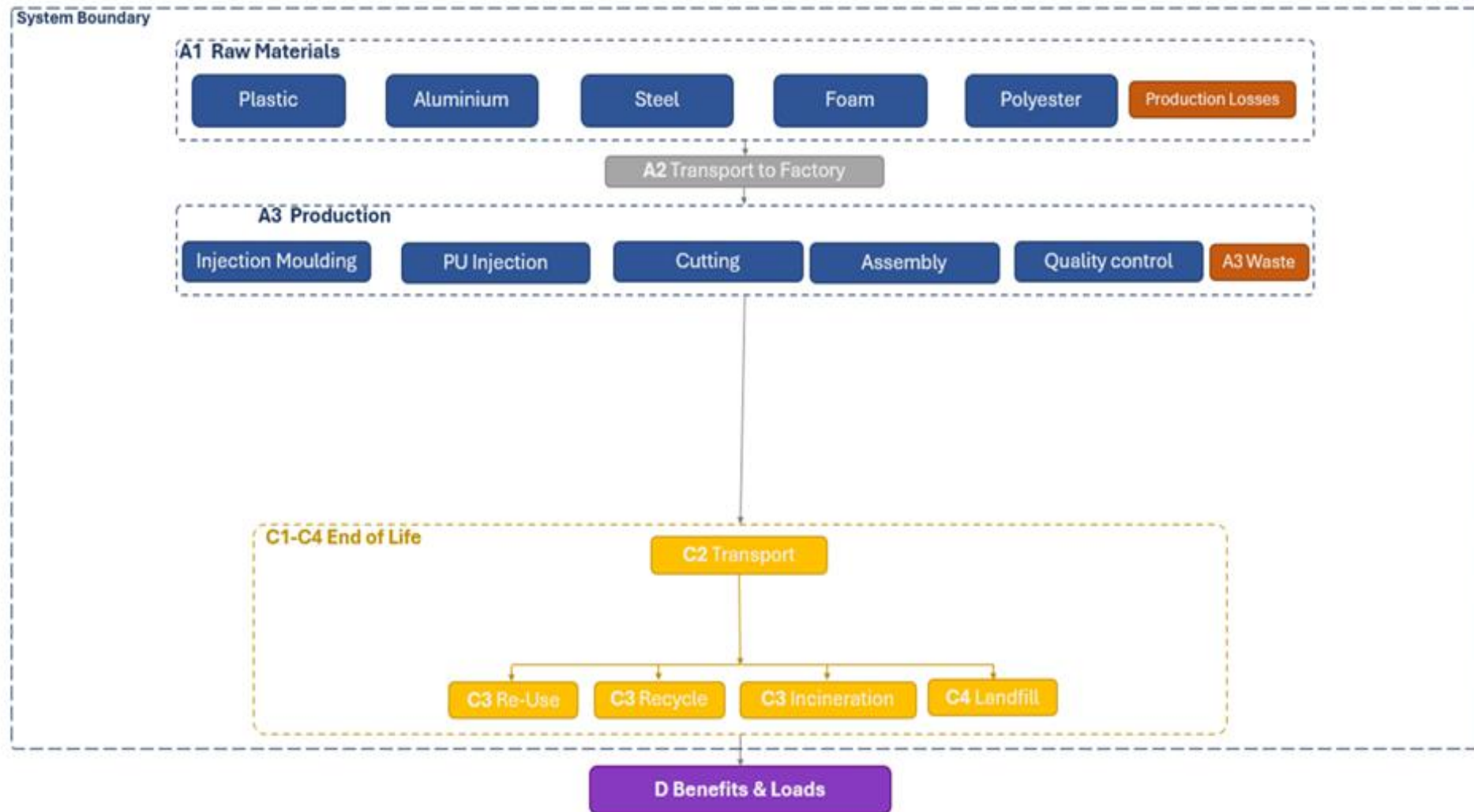
transport: 50 km assumed (source: Gervasio, H. & Dimova, S., JRC Technical report: Model for Life Cycle Assessment (LCA) of buildings, 2018))

Other Plastics 100% is considered for incineration (Source: Plastics Europe (2020) <https://plasticseurope.org/knowledge-hub/plastics-the-facts-2020>)

Plastic Packaging 40% is considered for recycling, 37% is considered for incineration and 23% for landfill (Source: EUROSTAT, https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519242/default/table?lang=en)

It is assumed that the waste is collected separately and transported to a dedicated waste treatment plants. The distance recycling plan is assumed to be 250km, for incineration 150km and for landfill 50km. The transportation mode is assumed to be truck (C2) based on references mentioned above. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery. Landfilled waste is included in module C4. Due to the material and energy recovery potential of parts in the end of life product, recycled raw materials lead to avoided virgin material production (steel, aluminium etc), while the energy recovered from incineration replaces electricity and heat production (D). The benefits and loads of incineration and recycling are included in module D.

SYSTEM DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

All industrial processes from raw material acquisition and pre-processing, production, product distribution, use of the product and end-of-life management are included. Due to lack of data some constituents under might be excluded. They do not exceed 1% of the product mass, and refer to some substances which are present in the product only in very small amounts as they have no significant impact on the emissions.

The production of capital equipment, construction activities, and infrastructure, personnel-related activities, energy and water use related to company management and sales activities are excluded.

Specifically to the technical polymers such as PA6+GF there are also additives to these however suppliers will not give breakdowns and these represent less than 1% of the material composition. As the carbon declaration we have relates to their full ingredients they have been accounted for.

Nitrogen is used to fill the cylinder on the chair however there is no way to quantify as its based on a pressure rather than weight. Also the density is

lighter than normal air so we believe it to much less than a decimal point of a gram. We have not accounted for this as we do not believe it to have a big carbon impact.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

Since a third-party verified carbon footprint report was available for material Beetle B2G3512BK400 and Beetle B2G3012BK400, its reported GWP value was used to adjust the quantity of the generic Nylon 6 production and Glass fibre production dataset in order to better represent the material's actual impact.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

All estimations and assumptions regarding the cut-off criteria and the allocation are declared in the part “Cut-off Criteria except the estimations/assumptions below:

- Module A1: Where shrinkage rates apply these are factored in the weights in A3
- Module A1: In production due to variation on material densities there is a +/- of 3% with weight. All weights are assumed at +3% to give worse case environmental impact
- Module A1: Where we have given carbon declaration, units have been amended to adjust to suit the given supplier data and files attached to support this data and calculation
- Module A2 and C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation emission in total results is small, the variety in load is assumed to be negligible. Empty returns are considered in the ecoinvent database.
- Module C2: Transportation distance to waste handling facility is estimated as 250km for recycling, 150km for incineration and 50 km for landfill and the

transportation method is assumed as lorry.

- Module C3, C4, D: Part of the product is sent for recycling, another part is assumed for incineration and the rest is sent to landfill. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery. The recycled end-of-life materials are assumed to serve as secondary raw materials in manufacturing, while incinerated materials displace the need for electricity and heat production.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2’.

- 1) Life cycle inventory (LCI) study 2020 release date
<https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf>

- 2) European Aluminium, 2022, <https://european-aluminium.eu/blog/enabling-the-circular-economy-with-aluminium/#:~:text=Aluminium%20recycling%20rates%20are%20already,boost%20the%20recycling%20of%20aluminium%2C>.
- 3)Plastics Europe (2020) <https://plasticseurope.org/knowledge-hub/plastics-the-facts-2020/>;
- 4)Gervasio, H. & Dimova, S., JRC Technical report: Model for Life Cycle Assessment (LCA) of buildings, 2018))
- 5) EUROSTAT,
https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519242/default/table?lang=en)

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2.46E+01	4.28E-01	3.27E+00	2.83E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.26E-01	2.27E+01	1.13E-01	-9.99E+00
GWP – fossil	kg CO ₂ e	2.43E+01	4.28E-01	3.24E+00	2.80E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.26E-01	2.27E+01	1.13E-01	-9.98E+00
GWP – biogenic	kg CO ₂ e	3.23E-01	8.32E-05	2.58E-02	3.49E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.07E-05	-1.70E-03	-6.02E-05	0.00E+00
GWP – LULUC	kg CO ₂ e	1.31E-02	2.09E-04	2.98E-04	1.36E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.94E-05	2.66E-04	9.49E-06	-1.76E-02
Ozone depletion pot.	kg CFC ₋₁₁ e	9.76E-06	6.27E-09	1.34E-07	9.90E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.43E-09	8.91E-09	3.33E-10	-1.36E-07
Acidification potential	mol H ⁺ e	1.06E-01	6.44E-03	9.10E-03	1.21E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.65E-04	6.41E-03	9.76E-05	-5.62E-02
EP-freshwater ²⁾	kg Pe	4.73E-03	2.43E-05	6.92E-04	5.45E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.74E-05	1.01E-04	1.56E-06	-5.03E-03
EP-marine	kg Ne	2.29E-02	1.67E-03	2.24E-03	2.69E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.52E-04	4.38E-03	4.14E-03	-8.70E-03
EP-terrestrial	mol Ne	2.32E-01	1.85E-02	2.27E-02	2.73E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.74E-03	3.10E-02	3.97E-04	-9.21E-02
POCP (“smog”) ³⁾	kg NMVOCe	8.06E-02	5.41E-03	7.25E-03	9.33E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.13E-03	7.74E-03	1.57E-04	-3.57E-02
ADP-minerals & metals ⁴⁾	kg Sbe	3.05E-04	8.49E-07	9.47E-06	3.16E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.39E-07	4.42E-06	2.81E-08	-5.37E-05
ADP-fossil resources	MJ	3.41E+02	5.77E+00	5.93E+01	4.06E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.27E+00	5.33E+00	2.92E-01	-1.45E+02
Water use ⁵⁾	m ³ e depr.	7.14E+00	2.35E-02	5.31E-01	7.69E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.61E-02	1.37E+00	3.34E-03	-1.46E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1.31E-06	2.92E-08	5.50E-08	1.39E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.22E-08	5.60E-08	2.08E-09	-6.45E-07
Ionizing radiation ⁶⁾	kBq 11235e	1.50E+00	4.08E-03	1.22E+00	2.73E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.95E-03	1.42E-02	3.46E-04	-8.55E-01
Ecotoxicity (freshwater)	CTUe	2.32E+03	6.57E-01	6.32E+01	2.38E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.60E-01	4.11E+01	6.40E+01	-1.61E+02
Human toxicity, cancer	CTUh	1.18E-05	7.98E-11	1.01E-07	1.19E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.74E-11	1.94E-09	7.22E-12	-2.64E-09
Human tox. non-cancer	CTUh	3.14E-06	2.79E-09	3.24E-08	3.18E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.11E-09	6.51E-08	1.37E-09	-8.23E-08
SQP ⁷⁾	-	4.16E+01	3.60E+00	5.34E+00	5.05E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.19E+00	2.75E+00	6.44E-01	-4.96E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	1.69E+01	6.52E-02	3.80E+00	2.08E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.57E-02	2.97E-01	5.19E-03	-5.75E+01
Renew. PER as material	MJ	4.86E-01	0.00E+00	0.00E+00	4.86E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-4.86E-01	0.00E+00	0.00E+00
Total use of renew. PER	MJ	1.74E+01	6.52E-02	3.80E+00	2.13E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.57E-02	-1.90E-01	5.19E-03	-5.75E+01
Non-re. PER as energy	MJ	2.03E+02	5.77E+00	5.75E+01	2.67E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.27E+00	-3.61E+02	-3.57E+01	-1.51E+02
Non-re. PER as material	MJ	1.62E+02	0.00E+00	4.25E-02	1.62E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-1.41E+02	-2.05E+01	2.18E+01
Total use of non-re. PER	MJ	3.65E+02	5.77E+00	5.75E+01	4.29E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.27E+00	-5.03E+02	-5.62E+01	-1.30E+02
Secondary materials	kg	2.99E+00	2.58E-03	1.12E-02	3.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.40E-03	6.80E-03	9.92E-05	2.43E+00
Renew. secondary fuels	MJ	1.46E-02	2.10E-05	5.82E-05	1.47E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.78E-05	1.59E-04	1.86E-06	-3.79E-04
Non-ren. secondary fuels	MJ	7.22E-02	0.00E+00	0.00E+00	7.22E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	1.81E-01	6.65E-04	1.23E-02	1.94E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.80E-04	2.27E-02	-3.53E-03	-3.61E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2.51E+00	8.89E-03	1.58E-01	2.68E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.47E-03	3.65E-01	5.32E-04	-1.58E+00
Non-hazardous waste	kg	4.24E+01	1.49E-01	3.59E+00	4.61E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.02E-01	1.06E+01	4.80E+00	-3.74E+01
Radioactive waste	kg	3.87E-03	9.97E-07	2.62E-04	4.13E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.24E-07	3.61E-06	8.45E-08	-2.10E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.45E-02	0.00E+00	0.00E+00	1.45E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	2.30E+00	0.00E+00	0.00E+00
Materials for energy rec	kg	4.33E-03	0.00E+00	0.00E+00	4.33E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.09E+02	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	4.60E+01	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	6.33E+01	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	2.34E+01	4.26E-01	3.23E+00	2.71E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.25E-01	2.27E+01	1.08E-01	-9.90E+00
Ozone depletion Pot.	kg CFC ₁₁ e	6.36E-06	4.99E-09	1.08E-07	6.47E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.73E-09	7.82E-09	2.66E-10	-1.14E-07
Acidification	kg SO ₂ e	8.29E-02	5.11E-03	7.34E-03	9.53E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.84E-04	4.57E-03	7.17E-05	-4.73E-02
Eutrophication	kg PO ₄ ³ e	2.70E-02	6.44E-04	1.42E-03	2.91E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.43E-04	1.68E-03	1.78E-04	-6.49E-03
POCP (“smog”)	kg C ₂ H ₄ e	7.32E-03	2.78E-04	5.05E-04	8.10E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.23E-05	3.10E-04	2.16E-05	-3.98E-03
ADP-elements	kg Sbe	3.00E-04	8.30E-07	9.26E-06	3.10E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.23E-07	3.97E-06	2.73E-08	-5.32E-05
ADP-fossil	MJ	3.16E+02	5.71E+00	4.31E+01	3.65E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.22E+00	5.10E+00	2.86E-01	-1.31E+02

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	2.43E+01	4.28E-01	3.24E+00	2.80E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.26E-01	2.27E+01	1.13E-01	-9.99E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity, medium voltage, residual mix - Ecoinvent 3.11
Electricity CO2e / kWh	0,47

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	12.80
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	2.30
Recovery process – kg for energy recovery	9.25
Disposal (total) – kg for final deposition	1.24
Scenario assumptions e.g. transportation	250km for recycling, 150km for incineration and 50 km for landfill Collections assumed separate

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity, medium voltage, residual mix, United Kingdom, Ecoinvent, 0.47 kgCO2e/kWh

End-of-life scenario documentation - C1-C4 (Data source)

1. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 1.5237 kg
2. Treatment of waste steel, inert material landfill, Ecoinvent, 0.27 kg
3. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.063 kg
4. Treatment of waste aluminium, sanitary landfill, Ecoinvent, 0.007 kg
5. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.66 kg
6. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 1.43 kg
7. Exported Energy: Electricity, Ecoinvent, 7.49 MJ
8. Exported Energy: Electricity, Ecoinvent, 2.31 MJ
9. Exported Energy: Electricity, Ecoinvent, 36.247 MJ
10. Exported Energy: Electricity, Ecoinvent, 0.0025 MJ
11. Exported Energy: Thermal, Ecoinvent, 10.3 MJ
12. Exported Energy: Thermal, Ecoinvent, 3.18 MJ
13. Exported Energy: Thermal, Ecoinvent, 49.775 MJ
14. Exported Energy: Thermal, Ecoinvent, 0.0035 MJ
15. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.77 kg
16. Treatment of waste polyurethane seal, sorting plant, Ecoinvent, Materials for recycling, 0.054 kg
17. Treatment of waste polyurethane, municipal incineration, Ecoinvent, 0.47 kg
18. Treatment of waste polyurethane, sanitary landfill, Ecoinvent, 0.19 kg
19. Treatment of waste plastic, mixture, municipal incineration, Ecoinvent, 7.35 kg
20. Treatment of municipal solid waste, sanitary landfill, Ecoinvent, 2.4 kg
21. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 4.0E-4 kg
22. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 3.7E-4 kg
23. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 2.3E-4 kg

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Elma Avdyli as an authorized verifier for EPD Hub Limited 13.03.2026

