ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Dura Daggerboard 19mm
Dura Composites (UK)

EPD HUB, HUB-3309
Published on 15.05.2025, last updated on 15.05.2025, valid until 14.05.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Dura Composites (UK)
Address	Dura House, Telford Road, Clacton on Sea, CO15 4LP, Essex, UK
Contact details	info@duracomposites.com
Website	www.duracomposites.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Camilla Weiss
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited

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	Dura Daggerboard 19mm
Additional labels	
Product reference	-
Place(s) of raw material origin	-
Place of production	Huzhou, Zhejiang, China
Place(s) of installation and use	
Period for data	Calendar year 2024
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2
Declared unit mass	11.62 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	4.93E+01
GWP-total, A1-A3 ($kgCO_2e$)	4.87E+01
Secondary material, inputs (%)	2.19
Secondary material, outputs (%)	0.08
Total energy use, A1-A3 (kWh)	171
Net freshwater use, A1-A3 (m^3)	0.35

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Dura Composites is a leading global supplier of composite products for flooring, structures and façades, which are ideal for the industrial, construction, rail, marine, landscaping & architectural sectors as a long-lasting and cost-effective replacement for wood, steel and concrete. Our experienced team has extensive knowledge and practical experience of fibreglass reinforced plastic, composite timber and other related emerging materials. The range of products on offer from Dura Composites is vast, from floor walkway grating, garden decking, building cladding and industrial handrailing to service risers and trench covers. All products offer customers a low life cycle cost thanks to their long life expectancy and low maintenance requirements. In 2017 and in 2020, Dura Composites was awarded the Queen's Award for Enterprise in recognition of our achievements at the forefront of composite material technology. Dura Composites' products are also available through a well-established global distribution network

PRODUCT DESCRIPTION

Dura Dagger Boards offer a sustainable, long-lasting alternative to traditional timber for canopy, valance, soffit and façade applications. Dagger boards have been common at UK stations since the late 1850s, and primarily served the practical function of removing water from the canopy and reducing weather-inflicted damage such as rot, thereby preventing deterioration of the canopy itself. Engineered for durability with minimal maintenance, they provide both functional and aesthetic benefits. for rapid installation and require virtually no maintenance over their long design life. The lightweight design simplifies handling, and with a Class B fire rating (BS EN 13501), they enhance safety without compromising durability. The Dagger board consists mainly of PVC with additional additives and pigments and is available in multiple design variants and colours. This EPD has been produced for the plain uncut variant, named Norah, and represents a section of 1000mm x 1000mm x 19mm.

Further information can be found at www.duracomposites.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	16.5	China
Fossil materials	83.5	China
Bio-based materials	-	-

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	0.0129

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2
Mass per declared unit	11.62 kg
Functional unit	-
Reference service life	60 years

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	x	MND	MND	MND	MND	MND	MND	MND	MND	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

Modules not declared = MND. Modules not relevant = MNR

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.

The raw materials, consisting of PVC resin, foaming agents, and other additives, are mixed together and melted. The foaming process expands the material and this is then extruded to form large boards. After cooling, these boards are then cut to the desired shape. The final products are packaged in a PE wrap and stacked on timber bearers or pallets, ready for shipment. This PE wrap is removed in the UK after shipping and disposed of using an average EU scenario. Depending on the design variant, the manufactured Daggerboard is then cut to the desired pattern in the UK using a CNC machine, with the off-cuts being sent to landfill. The design that this EPD is based on, the Norah has no pattern and remains unchanged after manufacture, and therefore no additional cutting process or energy usage has been considered here. New packaging is added for customer delivery, including further PE wrap and PET banding. The timber bearers or pallets are reused for delivery to the customer.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Installation has not been included as this is carried out by the customer, and as the customer is also usually responsible for supplying their own fixings suitable for their construction environment, fixings have not been included here. The packaging used to transport the products is removed on delivery and average EU scenarios have been used for the wood and plastic packaging waste consisting recycling, incineration, and landfill options. As module A5 is not declared in this EPD, packaging waste scenarios are considered in EOL stage.

PRODUCT USE AND MAINTENANCE (B1-B7)

No product use or maintenance is calculated in this EPD.

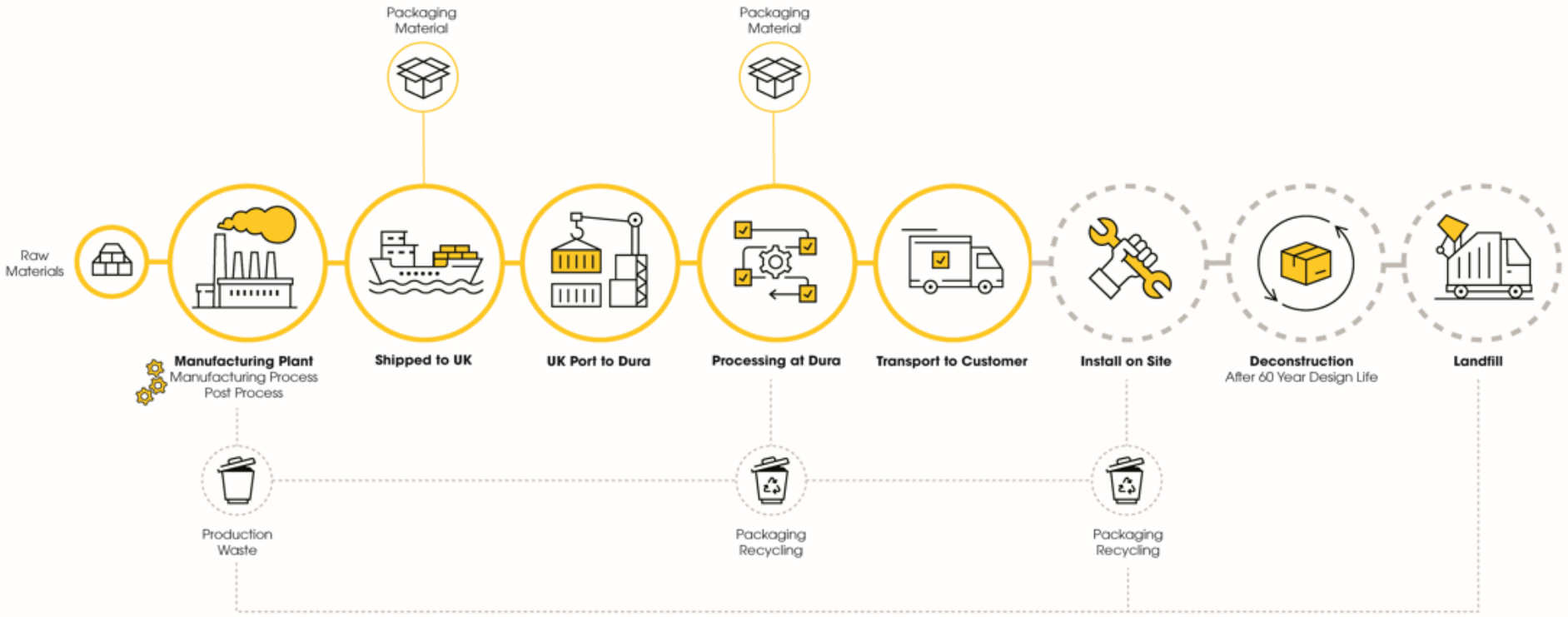
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy in the de-construction process is considered. It is assumed that the waste is collected separately and transported to the waste treatment center. Transportation distance to treatment is assumed as 100 km and the transportation

method is assumed to be lorry. 100% of the installed material is assumed to be landfilled.

SYSTEM BOUNDARY 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.

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/AC2021 and JRC EF 3.1.

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	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3 (%)	-

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

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

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

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_2e	3.67E+01	5.60E+00	6.37E+00	4.87E+01	4.47E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.50E-03	2.25E-01	2.97E-02	8.09E-01	-7.37E-03
GWP – fossil	kg CO_2e	3.73E+01	5.60E+00	6.39E+00	4.93E+01	4.46E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.50E-03	2.25E-01	6.04E-04	1.32E-01	-1.08E-02
GWP – biogenic	kg CO_2e	-5.96E-01	1.33E-03	-2.12E-02	-6.16E-01	8.85E-05	MND	MND	MND	MND	MND	MND	MND	MND	6.63E-07	4.46E-05	2.91E-02	6.76E-01	3.42E-03
GWP – LULUC	kg CO_2e	3.28E-02	3.29E-03	3.74E-03	3.99E-02	1.58E-04	MND	MND	MND	MND	MND	MND	MND	MND	6.27E-07	7.95E-05	1.37E-06	8.50E-05	-1.18E-05
Ozone depletion pot.	kg CFC_{-11}e	7.31E-06	7.11E-08	4.95E-08	7.43E-06	8.88E-09	MND	MND	MND	MND	MND	MND	MND	MND	1.47E-10	4.48E-09	7.82E-12	3.30E-09	-2.88E-10
Acidification potential	mol H^+e	1.81E-01	9.64E-02	3.17E-02	3.09E-01	1.40E-03	MND	MND	MND	MND	MND	MND	MND	MND	1.19E-04	7.04E-04	3.87E-06	1.41E-03	-5.31E-05
EP-freshwater[2)]	kg Pe	1.11E-02	4.65E-04	1.10E-03	1.27E-02	2.96E-05	MND	MND	MND	MND	MND	MND	MND	MND	1.31E-07	1.49E-05	1.54E-07	2.04E-04	-4.60E-06
EP-marine	kg Ne	3.82E-02	2.55E-02	7.17E-03	7.09E-02	4.71E-04	MND	MND	MND	MND	MND	MND	MND	MND	5.51E-05	2.37E-04	1.58E-06	3.55E-04	-8.50E-06
EP-terrestrial	mol Ne	3.22E-01	2.82E-01	7.34E-02	6.77E-01	5.12E-03	MND	MND	MND	MND	MND	MND	MND	MND	6.03E-04	2.58E-03	1.61E-05	3.78E-03	-8.61E-05
POCP ("smog")[3)]	kg NMVOCe	1.43E-01	7.92E-02	2.03E-02	2.43E-01	2.19E-03	MND	MND	MND	MND	MND	MND	MND	MND	1.68E-04	1.10E-03	4.66E-06	1.33E-03	-4.44E-05
ADP-minerals & metals[4)]	kg Sbe	4.64E-04	1.15E-05	3.16E-06	4.79E-04	1.46E-06	MND	MND	MND	MND	MND	MND	MND	MND	4.13E-09	7.36E-07	1.52E-09	3.00E-07	-4.53E-08
ADP-fossil resources	MJ	6.76E+02	6.97E+01	7.29E+01	8.18E+02	6.27E+00	MND	MND	MND	MND	MND	MND	MND	MND	1.23E-01	3.16E+00	7.69E-03	2.89E+00	-2.48E-01
Water use[5)]	m^3e depr.	1.35E+01	3.91E-01	8.96E-01	1.48E+01	3.08E-02	MND	MND	MND	MND	MND	MND	MND	MND	1.62E-04	1.55E-02	3.58E-04	1.49E-02	-3.12E-03

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, PEF

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	1.83E-06	5.30E-07	4.46E-07	2.81E-06	3.51E-08	MND	MND	MND	MND	MND	MND	MND	MND	1.65E-10	1.77E-08	5.75E-11	2.13E-08	-4.32E-10
Ionizing radiation[6)]	kBq U235e	1.82E+00	7.92E-02	7.21E-01	2.62E+00	7.99E-03	MND	MND	MND	MND	MND	MND	MND	MND	3.06E-05	4.03E-03	2.99E-05	2.53E-03	-2.23E-03
Ecotoxicity (freshwater)	CTUe	5.15E+02	9.81E+00	1.69E+01	5.42E+02	8.23E-01	MND	MND	MND	MND	MND	MND	MND	MND	5.78E-03	4.15E-01	2.96E-03	2.83E+00	-2.22E-02
Human toxicity, cancer	CTUh	4.68E-08	1.22E-09	4.90E-10	4.85E-08	7.61E-11	MND	MND	MND	MND	MND	MND	MND	MND	4.43E-13	3.84E-11	4.10E-13	6.83E-11	-2.16E-12
Human tox. non-cancer	CTUh	4.36E-07	3.16E-08	3.17E-08	4.99E-07	3.94E-09	MND	MND	MND	MND	MND	MND	MND	MND	1.87E-11	1.98E-09	2.18E-11	3.76E-09	-8.72E-11
SQP[7)]	-	1.26E+02	2.77E+01	1.80E+01	1.71E+02	3.73E+00	MND	MND	MND	MND	MND	MND	MND	MND	7.88E-03	1.88E+00	4.56E-03	6.75E+00	-4.76E-02

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	2.27E+01	1.50E+00	3.15E+00	2.73E+01	1.08E-01	MND	MND	MND	MND	MND	MND	MND	MND	4.02E-04	5.46E-02	-2.48E-01	-1.44E-01	7.18E-02
Renew. PER as material	MJ	9.26E+00	0.00E+00	-5.82E-03	9.26E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-2.70E-01	-8.99E+00	2.41E-02
Total use of renew. PER	MJ	3.19E+01	1.50E+00	3.14E+00	3.66E+01	1.08E-01	MND	MND	MND	MND	MND	MND	MND	MND	4.02E-04	5.46E-02	-5.18E-01	-9.13E+00	9.59E-02
Non-re. PER as energy	MJ	4.47E+02	6.97E+01	7.10E+01	5.88E+02	6.27E+00	MND	MND	MND	MND	MND	MND	MND	MND	1.23E-01	3.16E+00	7.70E-03	2.89E+00	-2.48E-01
Non-re. PER as material	MJ	2.27E+02	0.00E+00	-1.06E+01	2.16E+02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	-1.33E-01	-2.16E+02	9.31E-02
Total use of non-re. PER	MJ	6.74E+02	6.97E+01	6.04E+01	8.04E+02	6.27E+00	MND	MND	MND	MND	MND	MND	MND	MND	1.23E-01	3.16E+00	-1.26E-01	-2.13E+02	-1.55E-01
Secondary materials	kg	2.54E-01	5.50E-02	6.59E-03	3.16E-01	2.87E-03	MND	MND	MND	MND	MND	MND	MND	MND	1.24E-05	1.45E-03	6.79E-06	1.06E-03	2.08E-03
Renew. secondary fuels	MJ	3.15E-03	2.51E-04	7.41E-04	4.14E-03	3.62E-05	MND	MND	MND	MND	MND	MND	MND	MND	8.24E-08	1.83E-05	5.53E-08	1.97E-05	-2.40E-07
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	3.21E-01	9.70E-03	2.16E-02	3.52E-01	8.44E-04	MND	MND	MND	MND	MND	MND	MND	MND	5.36E-06	4.25E-04	3.59E-06	-4.30E-02	-1.07E-04

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	3.87E+00	2.13E-01	7.26E-01	4.81E+00	8.99E-03	MND	MND	MND	MND	MND	MND	MND	MND	4.98E-05	4.53E-03	8.13E-05	5.70E-03	-6.11E-04
Non-hazardous waste	kg	3.29E+02	2.83E+00	1.92E+01	3.51E+02	1.90E-01	MND	MND	MND	MND	MND	MND	MND	MND	8.18E-04	9.57E-02	9.93E-03	5.79E+01	-6.09E-02
Radioactive waste	kg	4.60E-04	1.94E-05	1.77E-04	6.56E-04	1.99E-06	MND	MND	MND	MND	MND	MND	MND	MND	7.39E-09	1.00E-06	7.48E-09	6.18E-07	-5.70E-07

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	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	8.00E-03	8.00E-03	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	9.60E-03	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	1.19E-01	1.19E-01	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	5.00E-02	5.00E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.00E-02	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	6.90E-02	6.90E-02	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.80E-02	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

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_2e	3.70E+01	5.57E+00	6.34E+00	4.89E+01	4.43E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.44E-03	2.24E-01	6.02E-04	1.32E-01	-1.07E-02
Ozone depletion Pot.	kg $CFC_{-11}e$	7.29E-06	5.68E-08	3.90E-08	7.39E-06	7.07E-09	MND	MND	MND	MND	MND	MND	MND	MND	1.16E-10	3.56E-09	6.36E-12	2.64E-09	-2.35E-10
Acidification	kg SO_2e	1.51E-01	7.63E-02	2.60E-02	2.54E-01	1.06E-03	MND	MND	MND	MND	MND	MND	MND	MND	8.39E-05	5.35E-04	2.86E-06	1.13E-03	-4.48E-05
Eutrophication	kg PO_4^3e	3.87E-01	9.54E-03	3.97E-03	4.01E-01	2.70E-04	MND	MND	MND	MND	MND	MND	MND	MND	1.90E-05	1.36E-04	8.22E-07	3.10E-04	-1.05E-05
POCP (“smog”)	kg C_2H_4e	1.43E-02	4.13E-03	1.50E-03	2.00E-02	1.01E-04	MND	MND	MND	MND	MND	MND	MND	MND	6.86E-06	5.10E-05	2.18E-07	7.48E-05	-3.66E-06
ADP-elements	kg Sbe	4.67E-04	1.12E-05	3.05E-06	4.81E-04	1.43E-06	MND	MND	MND	MND	MND	MND	MND	MND	4.07E-09	7.19E-07	1.44E-09	2.91E-07	-4.47E-08
ADP-fossil	MJ	6.47E+02	6.84E+01	6.03E+01	7.75E+02	6.13E+00	MND	MND	MND	MND	MND	MND	MND	MND	1.23E-01	3.09E+00	7.20E-03	2.85E+00	-2.09E-01

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

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_2e	3.73E+01	5.60E+00	6.39E+00	4.93E+01	4.46E-01	MND	MND	MND	MND	MND	MND	MND	MND	9.50E-03	2.25E-01	6.05E-04	1.32E-01	-1.08E-02

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited
15.05.2025