



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Stitches & Gauge Polyamide Carpet tiles with Sus-Pac backing

Stitches & Gauges International Pte Ltd



EPD HUB, HUB-3613

Published on 11.07.2025, last updated on 11.07.2025, valid until 10.07.2030

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



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Stitches & Gauges International Pte Ltd
Address	No. 18 Tampines Industrial Crescent, #07-07A Space@Tampines Singapore 528605
Contact details	marketing.q@stitchesandgauge.com
Website	https://stitchesandgauge.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 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A5, and modules C1-C4, D
EPD author	Nguyen Thi Huong Thu – GreenViet Green Building Consultancy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Sarah Curpen, as an authorized verifier acting for EPD Hub Limited

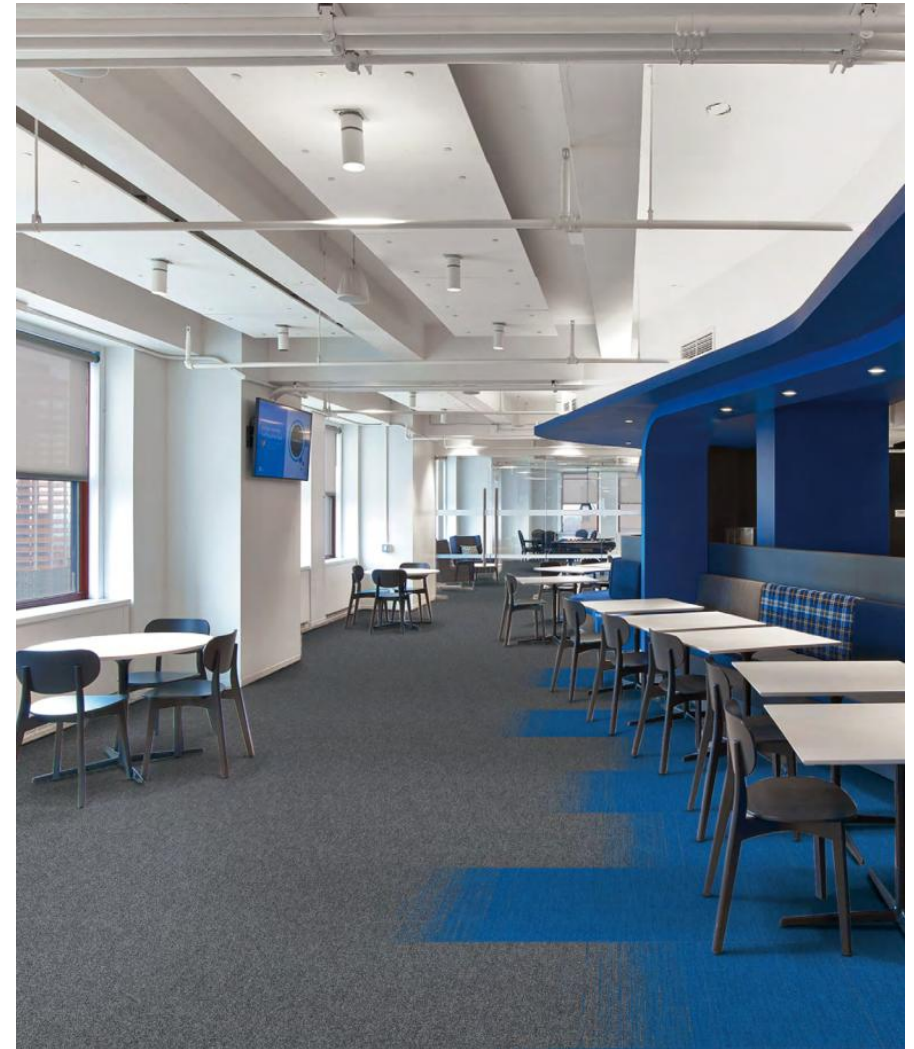
This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be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

PRODUCT

Product name	Stitches & Gauge Polyamide Carpet tiles with Sus-Pac backing
Additional labels	N/A
Product reference	N/A
Place(s) of raw material origin	China, South Korea
Place of production	Wuxi Fuxing Carpet Co., Ltd. Yangming Industry Avenue C Unit. No.98 Jinxing Science Park, Wuxi, Jiangsu, China.
Place(s) of installation and use	Asia Pacific, Europe, Middle East, North America and South America
Period for data	December 2023 - December 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0
A1-A3 Specific data (%)	9.94

ENVIRONMENTAL DATA SUMMARY

Declared unit	One square meter (1 m ²) of carpet tile
Declared unit mass	3.017 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1.17E+01
GWP-total, A1-A3 (kgCO ₂ e)	1.15E+01
Secondary material, inputs (%)	1
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	41
Net freshwater use, A1-A3 (m ³)	0.18



PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Stitches & Gauge International Pte Ltd is a Singapore-registered company whose mission is crafting floors for seamless solutions. While their manufacturing facilities are located in Asia, they have established global distribution channels across Asia Pacific, Europe, Middle East, North America and South America.

PRODUCT DESCRIPTION

This Environmental Product Declaration (EPD) covers all styles and patterns of Stitches & Gauge tufted carpet tiles manufactured in China, ranging from 550 g/m² (16 oz/yd²) onward. This product is intended for use as flooring in commercial settings. The product's markets of applicability include Asia Pacific, Europe, Middle East, North America, South America.

The Sus-Pac® (sustainable package, 7.0mm) is a secondary backing that is 100% PVC-free, recyclable, made from thermoplastic polyolefin. Carpet tiles also have a non-woven primary backing and fiberglass core.

Recycling Program Development

Stitches & Gauge is currently developing a carpet take back program to ensure that in the near future, used carpet tiles do not add to environmental waste. The program will first be implemented in Singapore and China, and will continue to be expanded in the region. Once the program is fully implemented, data and information will be recorded and tracked for internal audits and updates of the EPD report.

All customers are encouraged to return used carpet tiles to Stitches & Gauge for recycling. The program is made viable through partnerships with local recycling centers and third-party organizations that specialize in carpet recycling.

Some methods deployed are returning materials to the manufacturing cycle, creating new flooring products from the recycled content, and repurposing for use in community projects.

Manufacturing Site

The factory (Wuxi Fuxing Carpet factory) located in China meets the requirements of ISO 9001 Quality Management, ISO 14001 Environment Management, and ISO 45001 Health & Safety Management.

International Standards

Our carpet tiles are certified under the international green building product certification systems as below:

- U.S. CRI Green Label Plus (certified)
- Singapore Green Building Council (SGBC 4 ticks certified)
- Singapore Green Label (SGL certified)

Besides, the products are also tested under third party testing systems:

- ASTM E648 Flammability test (class 1)
- ASTM D2859 Flammability Pill test
- ASTM E662 Smoke Density test
- EN 45545 Toxicity Emission test
- ASTM D7570 Dimensional Stability test
- ASTM D1335 Tuft Bind test
- ASTM D5252 Hexapod Drum test
- AATCC 174 Antimicrobial test
- ATCC 175 Stain Resistance test
- AATCC 16 Colorfastness to Light test
- AATCC 165 Colorfastness to Crocking test
- AATCC 134 Electrostatic Propensity test

Further information can be found at <https://stitchesandgauge.com/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	45.6	China
Fossil materials	54.4	China, South Korea
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	0.05981

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	One square meter (1 m ²) of carpet tile
Mass per declared unit	3.017 kg
Functional unit	N/A
Reference service life	N/A

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	MND	X	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.

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

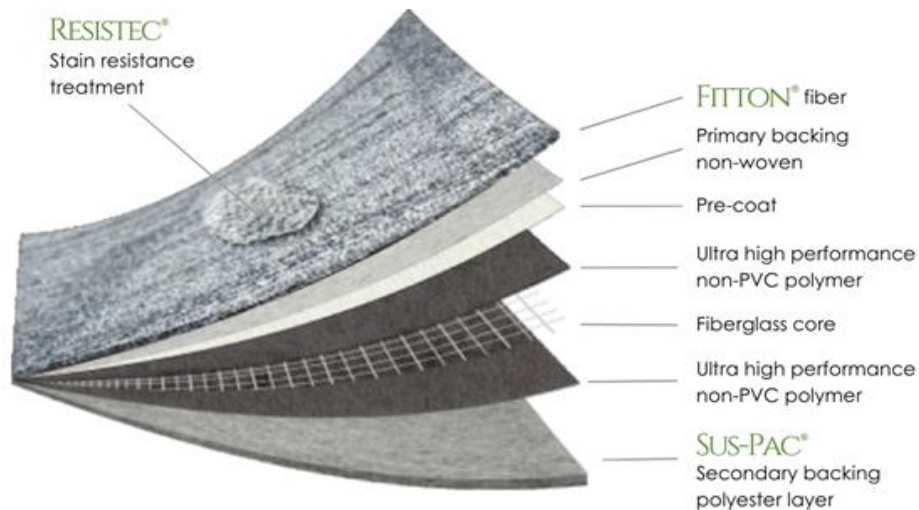
The carpet tile is composed of multiple engineered layers, each using specific raw materials that contribute to performance, durability, and sustainability. The primary raw materials used in the product include yarn (nylon), non-woven fabrics, thermoplastic polyolefin, polypropylene, ethylene vinyl acetate (EVA) copolymer, and polyester felt used in secondary backing (SUS-PAC® layer). Additional components include glass fiber mesh for dimensional stability, calcium carbonate (precipitated) as filler in pre-coating layers, and cleaning consumables applied for stain resistance treatment (RESISTEC® layer).

The production of carpet tiles involves the following key steps:

1. **Yarn:** Putting yarn (or nylon fiber) products that are sourced from other factories (suppliers) in place and preparing for tufting process
2. **Tufting:** Creating various constructions of carpets using specialized multi-needle sewing machines.
3. **Coating:** Applying a primary backing adhesion layer (pre-coating) to enhance stability, durability, tuft bind strength, and dimensional integrity.
4. **Backing:** Applying a secondary backing layer to enhance dimensional stability, durability, and performance.
5. **Cutting:** Cutting the carpet product into various tile sizes (50x50 cm, 25x100cm) while ensuring precise dimensions, clean edges, and consistency across all tiles.

6. **Quality Control (QC):** Ensuring the final product meets industry standards, customer specifications, and durability expectations.
7. **Packaging:** Once the manufacturing is completed, the packaging process protects the tiles, ensuring they are properly labeled and palletized for storage and transport. Packaging typically involves cardboard, PE film wrapping to protect edges, and wooden pallets, ensuring tiles arrive in pristine condition.

Manufacturing waste includes defective carpet tiles and excess material trimmed during cutting process, are collected and sent to the landfills. Other waste includes materials like polyolefin (used in backing), activated carbon, and paper tubes, are sold and transported a maximum of 100 km to a local treatment facility.



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. This stage is not considered in this study.

During the installation phase (A5), no consumables or energy are required onsite as all products are manually installed by skilled workers. Packaging materials, such as plastic (PE film), cardboard, and wooden pallets are supposed to be disposed of in landfills. Additionally, installation losses are estimated to be 3%, are predominantly directed to landfills as well.

PRODUCT USE AND MAINTENANCE (B1-B7)

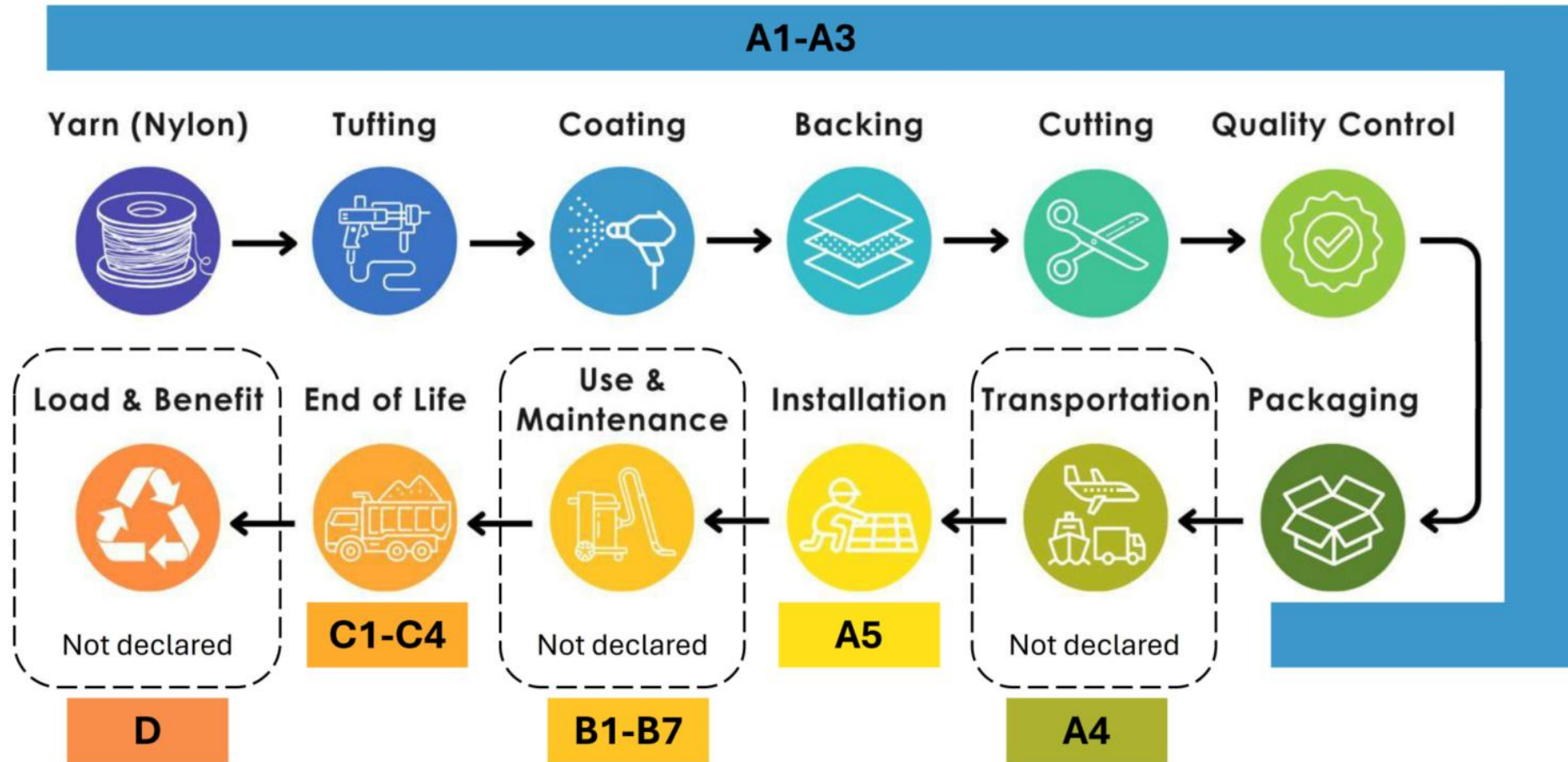
Impacts in B1-B7 stage have not been studied and not considered in this EPD. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

End of life stage includes deconstruction/demolition (module C1), transport to waste processing (module C2), waste processing for reuse, recovery and/or recycling (module C3) and disposal (module C4).

Consumption of energy and natural resources in the demolition process is assumed to be negligible as removal works are done manually (C1). The transport to the disposal of the materials and landfill is estimated at the maximum of 100 km (C2). It is assumed that 100% of the waste is collected and sent to the landfills (C4). Therefore, no benefit or load beyond the system boundary is claimed (D).

MANUFACTURING PROCESS



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 that is 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.

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.

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0

This EPD is product and factory specific.

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

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	A5	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	1.10E+01	7.99E-03	5.13E-01	1.15E+01	5.85E-01	0.00E+00	3.15E-02	0.00E+00	2.82E-01	0.00E+00
GWP – fossil	kg CO ₂ e	1.10E+01	7.99E-03	7.26E-01	1.17E+01	3.66E-01	0.00E+00	3.15E-02	0.00E+00	2.73E-01	0.00E+00
GWP – biogenic	kg CO ₂ e	-9.27E-03	0.00E+00	-2.19E-01	-2.28E-01	2.19E-01	0.00E+00	0.00E+00	0.00E+00	9.27E-03	0.00E+00
GWP – LULUC	kg CO ₂ e	1.18E-02	3.88E-06	5.16E-03	1.69E-02	5.14E-04	0.00E+00	1.41E-05	0.00E+00	2.25E-05	0.00E+00
Ozone depletion pot.	kg CFC-11e	5.13E-06	1.10E-10	1.07E-08	5.14E-06	1.54E-07	0.00E+00	4.65E-10	0.00E+00	8.52E-10	0.00E+00
Acidification potential	mol H ⁺ e	4.73E-02	5.68E-05	3.46E-03	5.09E-02	1.58E-03	0.00E+00	1.07E-04	0.00E+00	2.48E-04	0.00E+00
EP-freshwater ²⁾	kg Pe	1.53E-03	6.02E-07	1.77E-04	1.71E-03	5.38E-05	0.00E+00	2.45E-06	0.00E+00	3.66E-06	0.00E+00
EP-marine	kg Ne	1.35E-02	1.56E-05	1.93E-03	1.54E-02	9.63E-04	0.00E+00	3.53E-05	0.00E+00	6.15E-03	0.00E+00
EP-terrestrial	mol Ne	9.91E-02	1.72E-04	8.50E-03	1.08E-01	3.40E-03	0.00E+00	3.84E-04	0.00E+00	9.92E-04	0.00E+00
POCP (“smog”) ³⁾	kg NMVOCe	3.94E-02	5.62E-05	2.93E-03	4.24E-02	1.38E-03	0.00E+00	1.58E-04	0.00E+00	3.96E-04	0.00E+00
ADP-minerals & metals ⁴⁾	kg Sbe	7.50E-05	2.63E-08	2.74E-06	7.78E-05	2.35E-06	0.00E+00	8.79E-08	0.00E+00	7.49E-08	0.00E+00
ADP-fossil resources	MJ	2.03E+02	1.09E-01	1.21E+01	2.15E+02	6.57E+00	0.00E+00	4.57E-01	0.00E+00	7.35E-01	0.00E+00
Water use ⁵⁾	m ³ e depr.	7.58E+00	4.97E-04	1.38E-01	7.72E+00	2.33E-01	0.00E+00	2.26E-03	0.00E+00	3.77E-03	0.00E+00

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	A5	C1	C2	C3	C4	D
Particulate matter	Incidence	4.81E-07	5.27E-10	5.07E-08	5.32E-07	1.68E-08	0.00E+00	3.15E-09	0.00E+00	5.34E-09	0.00E+00
Ionizing radiation ⁶⁾	kBq U235e	2.50E-01	8.83E-05	5.54E-02	3.05E-01	9.40E-03	0.00E+00	3.98E-04	0.00E+00	7.88E-04	0.00E+00
Ecotoxicity (freshwater)	CTUe	4.50E+01	1.78E-02	4.21E+00	4.92E+01	3.40E+00	0.00E+00	6.47E-02	0.00E+00	1.01E+01	0.00E+00
Human toxicity, cancer	CTUh	1.58E-09	1.44E-12	2.04E-10	1.78E-09	5.89E-11	0.00E+00	5.20E-12	0.00E+00	3.25E-11	0.00E+00
Human tox. non-cancer	CTUh	6.04E-08	6.21E-11	7.69E-09	6.81E-08	3.09E-09	0.00E+00	2.96E-10	0.00E+00	6.57E-09	0.00E+00
SQP ⁷⁾	-	2.08E+01	5.16E-02	1.27E+01	3.36E+01	1.19E+00	0.00E+00	4.60E-01	0.00E+00	1.70E+00	0.00E+00

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	A5	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	5.82E+00	1.54E-03	1.89E-01	6.01E+00	-2.21E+00	0.00E+00	6.26E-03	0.00E+00	1.22E-02	0.00E+00
Renew. PER as material	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	5.82E+00	1.54E-03	1.89E-01	6.01E+00	-2.21E+00	0.00E+00	6.26E-03	0.00E+00	1.22E-02	0.00E+00
Non-re. PER as energy	MJ	1.50E+02	1.09E-01	-8.28E+00	1.42E+02	1.01E+00	0.00E+00	4.57E-01	0.00E+00	-1.06E+02	0.00E+00
Non-re. PER as material	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-re. PER	MJ	1.50E+02	1.09E-01	-8.28E+00	1.42E+02	1.01E+00	0.00E+00	4.57E-01	0.00E+00	-1.06E+02	0.00E+00
Secondary materials	kg	3.01E-02	5.23E-05	1.15E-01	1.45E-01	4.38E-03	0.00E+00	1.95E-04	0.00E+00	2.64E-04	0.00E+00
Renew. secondary fuels	MJ	3.07E-03	5.96E-07	1.69E-02	2.00E-02	6.01E-04	0.00E+00	2.47E-06	0.00E+00	4.94E-06	0.00E+00
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	1.79E-01	1.38E-05	1.53E-03	1.81E-01	4.52E-03	0.00E+00	6.76E-05	0.00E+00	-1.08E-02	0.00E+00

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A5	C1	C2	C3	C4	D
Hazardous waste	kg	9.43E-01	1.95E-04	6.30E-02	1.01E+00	3.05E-02	0.00E+00	7.74E-04	0.00E+00	1.32E-03	0.00E+00
Non-hazardous waste	kg	1.78E+01	3.60E-03	2.96E+00	2.07E+01	1.86E+00	0.00E+00	1.43E-02	0.00E+00	1.45E+01	0.00E+00
Radioactive waste	kg	9.10E-05	2.16E-08	1.35E-05	1.04E-04	3.19E-06	0.00E+00	9.75E-08	0.00E+00	1.93E-07	0.00E+00

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A5	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	3.19E-04	0.00E+00	0.00E+00	3.19E-04	9.58E-06	0.00E+00	0.00E+00	0.00E+00	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	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A5	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	1.02E+01	7.95E-03	7.40E-01	1.10E+01	5.00E-01	0.00E+00	3.13E-02	0.00E+00	2.61E-01	0.00E+00
Ozone depletion Pot.	kg CFC ₁₁ e	2.21E-06	8.82E-11	9.94E-09	2.22E-06	6.66E-08	0.00E+00	3.71E-10	0.00E+00	6.81E-10	0.00E+00
Acidification	kg SO ₂ e	3.67E-02	4.47E-05	2.69E-03	3.94E-02	1.22E-03	0.00E+00	8.20E-05	0.00E+00	1.84E-04	0.00E+00
Eutrophication	kg PO ₄ ³ e	8.40E-02	7.22E-06	8.61E-04	8.48E-02	2.78E-03	0.00E+00	2.00E-05	0.00E+00	3.10E-04	0.00E+00
POCP (“smog”)	kg C ₂ H ₄ e	2.79E-03	2.89E-06	2.13E-04	3.01E-03	1.27E-04	0.00E+00	7.31E-06	0.00E+00	5.27E-05	0.00E+00
ADP-elements	kg Sbe	6.95E-05	2.56E-08	2.69E-06	7.22E-05	2.18E-06	0.00E+00	8.57E-08	0.00E+00	7.27E-08	0.00E+00
ADP-fossil	MJ	1.79E+02	1.08E-01	1.11E+01	1.90E+02	5.81E+00	0.00E+00	4.51E-01	0.00E+00	7.23E-01	0.00E+00

ENVIRONMENTAL IMPACTS – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A5	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	1.10E+01	7.99E-03	7.31E-01	1.17E+01	3.66E-01	0.00E+00	3.15E-02	0.00E+00	2.73E-01	0.00E+00

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.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity, low voltage, in China. Ecoinvent 3.10.1, year: 2024.
Electricity kgCO _{2e} / kWh	0.88
Energy data source and quality	Natural gas, low pressure, in China. Ecoinvent 3.10.1, year: 2024.
Energy kgCO _{2e} / m ³	0.69

Installation scenario documentation A5

Scenario information	Value
Installation waste	Treatment of waste wood, untreated, sanitary landfill: 0.0113 kg CO _{2e} / kg. 0.00107 kg per declared unit of wood chips go to landfill.
Installation waste	Treatment of waste packaging paper, sanitary landfill: 0.0249 kg CO _{2e} / kg. 0.14996 kg per declared unit of cardboard go to landfill.
Installation waste	Treatment of waste plastic, mixture, sanitary landfill: 0.0932 kg CO _{2e} / kg. 0.00188 kg per declared unit of packaging film and 0.09051 kg product loss per declared unit during installation go to landfill.

Vehicle type used for transport	Market for transport, freight, lorry >32 metric ton, EURO5.
Assumptions for transportation	100 km
Capacity utilization	100 % of the capacity in volume

End of life scenario documentation

Scenario information	Value
Collection process	2.92649 kg
Vehicle type used for transport	Market for transport, freight, lorry >32 metric ton, EURO5.
Assumptions for transportation	100 km
Capacity utilization	100 % of the capacity in volume

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 15802+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

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited.
11.07.2025

