

Environmental Product Declaration

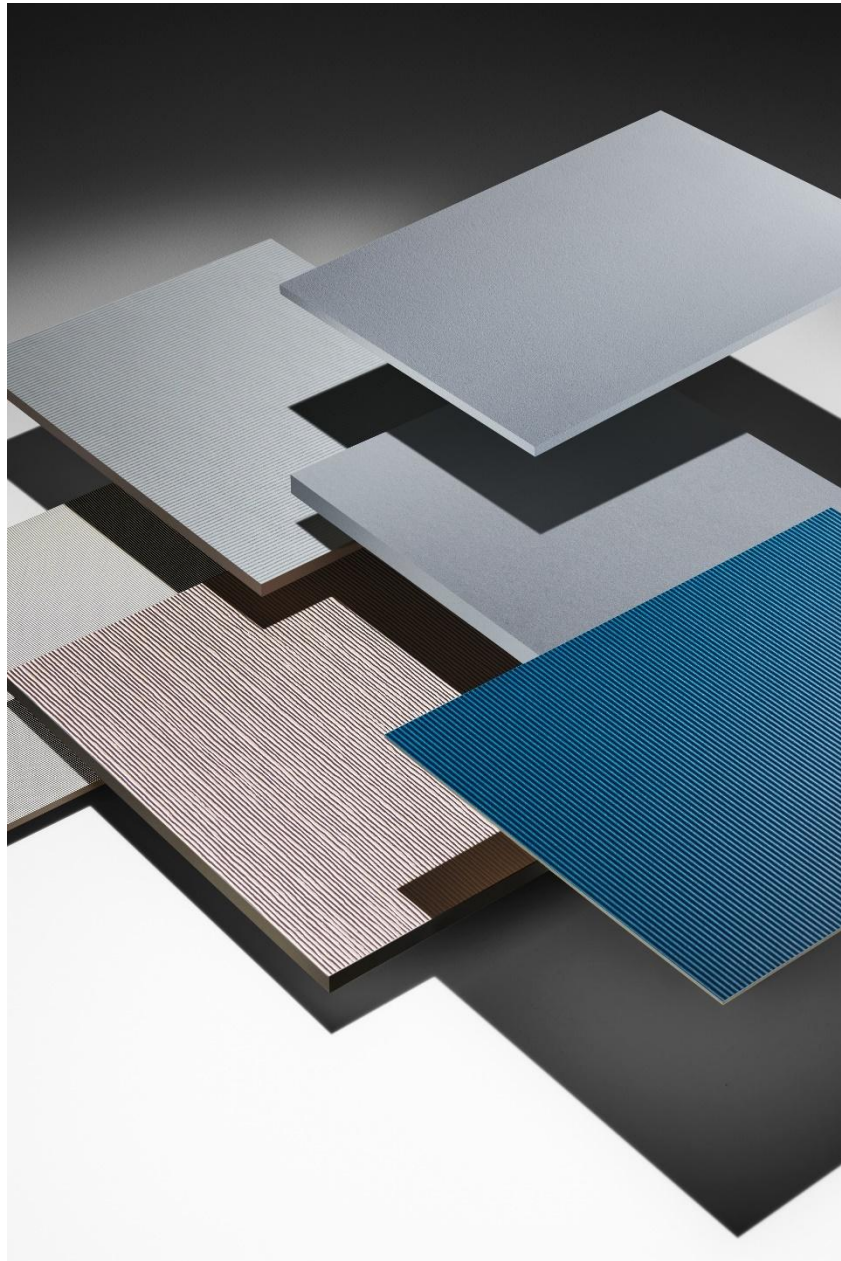
In accordance with
EN 15804+A2
& ISO 14025 / ISO 21930

Print HPL Compact 6 mm: Standard, F1, Polaris, MEG, MEG CS, Re-Abet

Abet Laminati S.p.A.

EPD HUB, HUB-2857

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General Information

Manufacturer

Manufacturer	Abet Laminati S.p.A.
Address	Viale Industria 21, 12042 Bra (CN), Italy
Contact details	sga@abetlaminati.com
Website	abetlaminati.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
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Luz Sanchez
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

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	Print HPL Compact
Additional labels	Print HPL Compact 6 mm: Standard, F1, Polaris, MEG, MEG CS, Re-Abet
Product reference	-
Place of production	Viale Industria 21, 12042 Bra (CN), Italy Strada Falchetto 30, 12042 Bra (CN), Italy
Period for data	Calendar year 2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	-16,3 and 10,7%

Environmental data summary

Declared unit	1 m2 of Print HPL (High Pressure Laminate) Compact 6 mm
Declared unit mass	8,70 Kg
GWP-fossil, A1-A3 (kgCO₂e)	1,96E+01
GWP-total, A1-A3 (kgCO₂e)	1,03E+01
Secondary material, inputs (%)	0,43
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	121
Net fresh water use, A1-A3 (m3)	0,28

Product and Manufacturer

About the manufacturer

Abet Laminati was founded in Bra, Italy and is one of the world's leading manufacturers of HPL (High Pressure decorative Laminates), with a global sales network. In more than sixty years of history, the company has revealed a continued commitment to the research and development of products to satisfy the market demand, operating in full respect of the environment. Abet Laminati propose a wide range of standard and customised digital print decorative laminates and permanent collaborations with renowned international architects and designers.

Product description

The decorative laminates Print HPL Compact are sheets composed of layers of kraft paper (virgin or recycled) and one or more surface decorative layers, both impregnated with thermosetting resins, dried and pressed under high pressure ($\geq 5\text{MPa}$) at high temperatures ($\geq 120\text{ }^\circ\text{C}$). The final product is a stable, homogenous, non-porous, resistant and long-lasting material ($\geq 1350\text{ kg/m}^3$), easy to handle and machine. The material is impact resistant, scratch and wear resistant, light fastness resistant, heat resistant and possesses good hygienic and anti-static properties, being easy to clean and maintain. Panels for exterior use are also characterized by thermal shock resistance and weathering and corrosion resistance. The product complies with the performance requirements of European standard EN 438-4.

PRINT HPL Compact by Abet Laminati are laminate panels intended for interior and exterior applications. Panels for interior use have an extensive aesthetic potential for building change rooms, shower and toilet cubicles, lockers, cabinets, benches, partition walls and doors in various public environments such as health spas, gyms, resorts, swimming pools, hotels, sports centres, schools and kindergartens, factories, hospitals and laboratories. It is also particularly suitable for office and kitchen furniture. Panels for exterior use are characterized by high resistance to outdoor weathering conditions, such as direct sunlight, rain and frost. They are suitable for façade cladding, parapets and balustrades, and signage, and are particularly suited for building ventilated façades.

PRINT HPL Compact panels, with a thickness from 2 mm to 30 mm, are supplied in sheet form in a variety of sizes, colours and surface finishes. Panels

containing recycled kraft can be supplied on demand and applications will be verified case by case.

For an improved fire behaviour, fire retardant panels are available both for indoor and outdoor applications. In this case, the laminate core contains halogen-free additives.

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

Product raw material main composition

Raw material category	Amount, mass- %	Material origin
Metals	-	-
Minerals	-	-
Fossil materials	29,56	EU
Bio-based materials	70,43	EU

Biogenic carbon content

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	2,506
Biogenic carbon content in packaging, kg C	0,035

Functional unit and service life

Declared unit	1 m ² of PRINT HPL (High Pressure Laminate) Compact 6 mm
Mass per declared unit	8,70 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	X	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	Deconstr./demol.	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.

Raw material sampling and acceptance

All the raw materials are purchased from external suppliers. Before the storage, papers, resins and chemical additives are subject to laboratory acceptance controls. The approved materials are stored in warehouses. The resins are stored in tanks.

Impregnation and composition

Impregnation of kraft/decorative paper is performed on continuous lines composed of unwinder systems, immersion bath, squeeze rollers, drying ovens and cutter. Paper is stretched on unwinder system, passing through an

immersion bath with phenolic/melamine resins. The resin excess is removed through squeeze rollers. At the end of the process impregnated paper is cut into sheets and stacked in pallets. The sheets of Kraft paper impregnated with phenolic resin are assembled in packs (composition). The number of kraft sheets determines the thickness of the final panel. The sheets of decor paper impregnated with melamine resins are stored in appropriated and controlled warehouse.

Composition and pressure

Impregnated papers and ancillary paper sheets are layered and pressed under high pressure ($\geq 5\text{MPa}$) at high temperatures ($\geq 120\text{ }^\circ\text{C}$). During the process, the thermosetting resins flow throughout the paper fibres creating irreversibly cross-linked chemical bonds, converting the impregnated paper sheets into a single rigid laminate panel.

Squaring

After the thermal lamination, the edges of the panel are refined.

Inspection and forwarding

The finished panels are sent to final inspection for both aesthetic and dimensional characteristic controls.

As a last step, the final products are packed, identified and sent to their destination. The standard packaging is composed of polyethylene film, strapping and wood pallets. The single panel can be covered by a removable protective film.

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.

Average distance of transportation from production plant to retailer's site is assumed as 1232 Km by truck and 2470 Km by ship. Vehicle capacity utilization volume factor is assumed to be 1 which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible.

To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints. Transportation does not cause losses as product is packaged properly. Environmental impacts from installation into the building include generation of waste packaging materials (A5) and release of biogenic carbon dioxide from wood pallets packaging. The impacts of material production, its processing and

its disposal as installation waste are also assessed. Electricity consumption for installation of PRINT HPL Compact is considered, too.

Product use and maintenance (B1-B7)

The impacts associated with use and maintenance are outside of the system boundaries and are not included in the scope of this LCA. Air, soil, and water impacts during the use phase have not been studied.

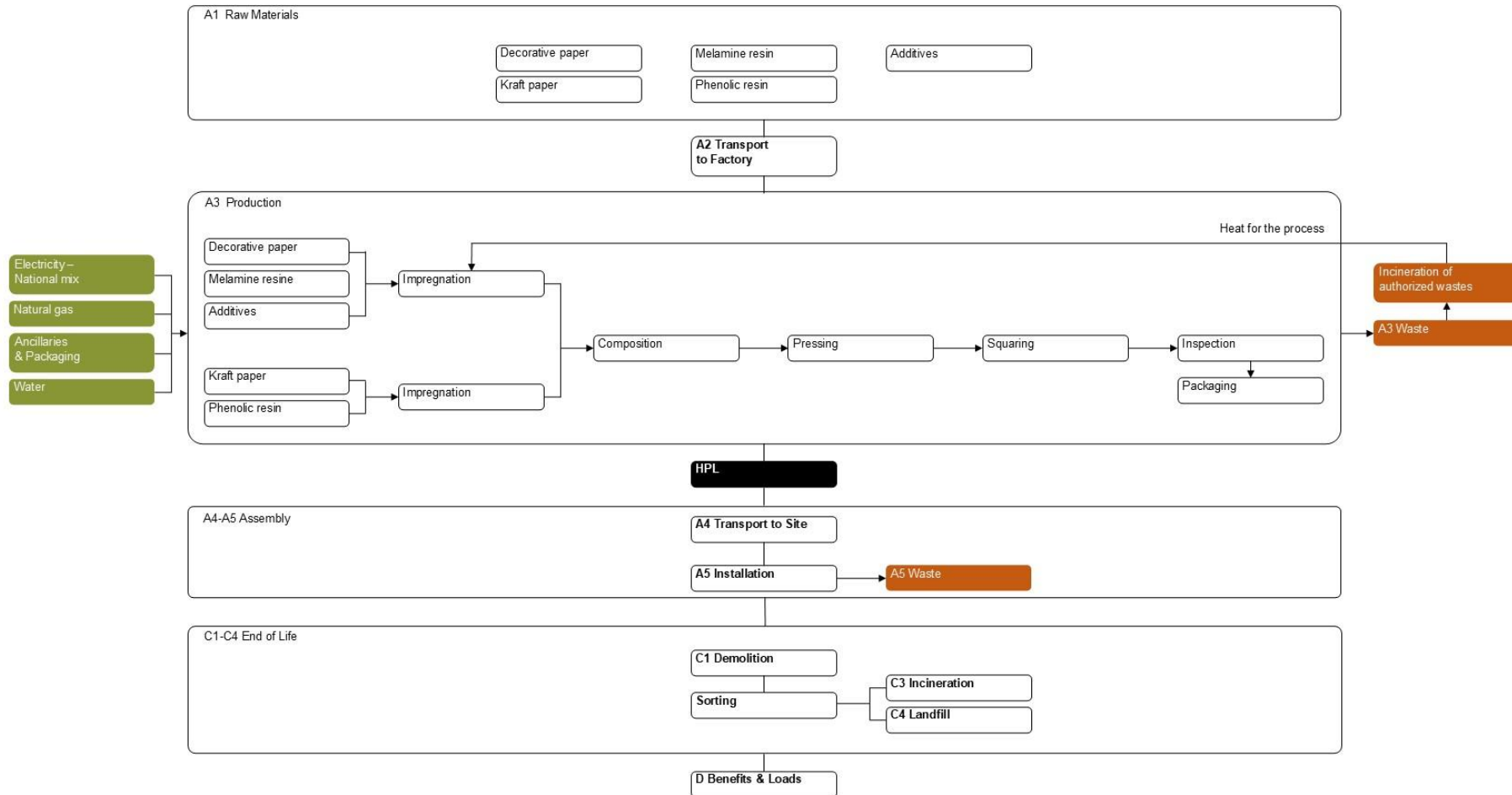
For information, the service life in standard applications can range from 20 to 50 years according to ICDLI aisbl suggestion based on expert judgment. The quantity of materials required for maintenance as water and pieces of reusable rags are considered minimal. The use phase has been considered as not relevant for the life cycle emissions of PRINT HPL Compact and is, therefore, not accounted into the assessment.

Product end of life (C1-C4, D)

It is assumed that the waste is collected separately and transported to the waste treatment facility. Transportation distance to waste treatment plant is assumed to be 100 Km and the transportation method is assumed to be lorry (C2). Module C3 accounts for energy and resource inputs for incineration of the HPL. Due to the energy recovery potential of the product, and material and energy recovery potential of packaging, recycled raw materials lead to avoided virgin material production and the energy recovered from incineration replaces electricity and heat from primary sources. Benefits and loads from incineration and recycling are included in Module 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 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.

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 materials	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	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	-16,3% and 10,7%

This EPD is an average of 6 products all produced in 1 site. Please see variance above. Supporting LCAs in same project as representative.

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 v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

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 – total¹⁾	kg CO ₂ e	4,14E+00	1,11E+00	5,08E+00	1,03E+01	2,13E+00	4,04E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,51E-01	9,48E+00	0,00E+00	-6,39E+00
GWP – fossil	kg CO ₂ e	1,38E+01	1,11E+00	4,73E+00	1,96E+01	2,13E+00	2,76E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,51E-01	2,90E-01	0,00E+00	-6,15E+00
GWP – biogenic	kg CO ₂ e	-9,67E+00	0,00E+00	3,50E-01	-9,32E+00	0,00E+00	1,28E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	9,19E+00	0,00E+00	-2,46E-01
GWP – LULUC	kg CO ₂ e	2,76E-02	5,29E-04	1,26E-03	2,94E-02	9,37E-04	1,81E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,16E-05	9,81E-05	0,00E+00	-1,02E-03
Ozone depletion pot.	kg CFC-11e	7,77E-07	2,48E-07	6,80E-07	1,70E-06	4,66E-07	2,27E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,33E-08	2,39E-08	0,00E+00	-4,45E-07
Acidification potential	mol H ⁺ e	7,61E-02	1,06E-02	1,06E-02	9,72E-02	1,48E-02	1,04E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,25E-04	2,42E-03	0,00E+00	-4,69E-02
EP-freshwater²⁾	kg Pe	7,78E-04	8,45E-06	7,27E-05	8,59E-04	1,70E-05	3,22E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,27E-06	3,14E-06	0,00E+00	-2,28E-04
EP-marine	kg Ne	1,85E-02	2,58E-03	2,45E-03	2,35E-02	3,99E-03	4,40E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,82E-04	1,05E-03	0,00E+00	-5,57E-03
EP-terrestrial	mol Ne	1,91E-01	2,86E-02	2,30E-02	2,42E-01	4,42E-02	3,95E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,01E-03	1,08E-02	0,00E+00	-6,51E-02
POCP (“smog”)³⁾	kg NMVOCe	6,83E-02	8,24E-03	8,24E-03	8,48E-02	1,26E-02	1,10E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,13E-04	2,66E-03	0,00E+00	-1,81E-02
ADP-minerals & metals⁴⁾	kg Sbe	1,33E-04	2,77E-06	5,90E-06	1,42E-04	6,98E-06	1,17E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,25E-07	1,00E-06	0,00E+00	-4,37E-06
ADP-fossil resources	MJ	2,82E+02	1,64E+01	8,21E+01	3,81E+02	3,05E+01	2,00E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,19E+00	1,97E+00	0,00E+00	-6,51E+01
Water use⁵⁾	m ³ e depr.	9,68E+00	7,03E-02	8,59E-01	1,06E+01	1,30E-01	1,21E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,57E-03	6,09E-01	0,00E+00	-1,06E+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, 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	8,29E-07	1,02E-07	8,08E-08	1,01E-06	1,70E-07	3,67E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,29E-08	1,94E-08	0,00E+00	-4,23E-07
Ionizing radiation ⁶⁾	kBq U235e	1,13E+00	7,78E-02	1,58E-01	1,36E+00	1,41E-01	1,07E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,02E-02	6,45E-03	0,00E+00	-2,93E-01
Ecotoxicity (freshwater)	CTUe	3,42E+02	1,41E+01	3,13E+01	3,88E+02	2,73E+01	4,50E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,01E+00	1,74E+01	0,00E+00	-1,33E+02
Human toxicity, cancer	CTUh	4,70E-08	4,54E-10	8,96E-09	5,64E-08	8,46E-10	4,20E-11	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,66E-11	7,85E-10	0,00E+00	-1,85E-09
Human tox. non-cancer	CTUh	1,73E-07	1,28E-08	1,84E-08	2,04E-07	2,49E-08	6,86E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,87E-09	3,28E-08	0,00E+00	-5,84E-08
SQP ⁷⁾	-	1,37E+03	1,50E+01	4,80E+01	1,43E+03	1,96E+01	1,95E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,51E+00	6,95E-01	0,00E+00	-4,47E+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	1,44E+02	1,79E-01	6,63E+00	1,50E+02	3,44E-01	1,58E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,56E-02	7,87E-02	0,00E+00	-1,39E+01
Renew. PER as material	MJ	9,05E+01	0,00E+00	-3,35E+00	8,72E+01	0,00E+00	-1,12E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-8,61E+01	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,34E+02	1,79E-01	3,28E+00	2,38E+02	3,44E-01	-1,11E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,56E-02	-8,60E+01	0,00E+00	-1,39E+01
Non-re. PER as energy	MJ	1,95E+02	1,64E+01	7,41E+01	2,86E+02	3,05E+01	2,00E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,19E+00	1,97E+00	0,00E+00	-6,51E+01
Non-re. PER as material	MJ	8,73E+01	0,00E+00	3,17E+00	9,05E+01	0,00E+00	-7,49E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-8,30E+01	0,00E+00	2,30E+00
Total use of non-re. PER	MJ	2,82E+02	1,64E+01	7,72E+01	3,76E+02	3,05E+01	-7,29E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,19E+00	-8,10E+01	0,00E+00	-6,28E+01
Secondary materials	kg	3,73E-02	5,38E-03	1,16E-02	5,42E-02	1,04E-02	2,97E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,20E-04	2,91E-03	0,00E+00	-5,70E-03
Renew. secondary fuels	MJ	6,85E-03	4,71E-05	4,55E-02	5,24E-02	1,22E-04	2,70E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,32E-06	4,96E-05	0,00E+00	-4,44E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	2,34E-01	1,95E-03	4,19E-02	2,78E-01	3,46E-03	1,11E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,58E-04	1,08E-02	0,00E+00	-5,66E-02

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	1,07E+00	2,26E-02	1,02E-01	1,20E+00	4,37E-02	9,68E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,15E-03	0,00E+00	0,00E+00	-4,93E-01
Non-hazardous waste	kg	2,30E+01	3,36E-01	3,02E+00	2,64E+01	6,69E-01	2,09E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,03E-02	8,70E+00	0,00E+00	-1,82E+01
Radioactive waste	kg	4,16E-04	1,11E-04	8,04E-05	6,08E-04	2,03E-04	7,65E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,44E-05	0,00E+00	0,00E+00	-1,77E-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	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00	9,31E-02	MND	MND	MND	MND	MND	MND	MND	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	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	0,00E+00	0,00E+00	0,00E+00	8,83E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	6,87E+01	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 ₂ e	1,34E+01	1,10E+00	4,64E+00	1,91E+01	2,11E+00	2,77E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,50E-01	2,76E-01	0,00E+00	-6,03E+00
Ozone depletion Pot.	kg CFC-11e	6,85E-07	1,97E-07	5,71E-07	1,45E-06	3,69E-07	1,85E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,64E-08	2,17E-08	0,00E+00	-3,70E-07
Acidification	kg SO ₂ e	6,00E-02	8,50E-03	8,65E-03	7,72E-02	1,16E-02	7,85E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,87E-04	1,76E-03	0,00E+00	-4,00E-02
Eutrophication	kg PO ₄ ³ e	8,73E-02	1,22E-03	3,28E-03	9,18E-02	2,03E-03	5,36E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,12E-04	1,38E-03	0,00E+00	-9,31E-03
POCP ("smog")	kg C ₂ H ₄ e	7,68E-03	2,65E-04	9,12E-04	8,86E-03	3,92E-04	5,34E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,98E-05	5,42E-05	0,00E+00	-1,75E-03
ADP-elements	kg Sbe	1,31E-04	2,70E-06	5,79E-06	1,40E-04	6,81E-06	1,14E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,13E-07	7,67E-07	0,00E+00	-4,30E-06
ADP-fossil	MJ	2,82E+02	1,64E+01	8,21E+01	3,81E+02	3,05E+01	2,00E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,19E+00	1,97E+00	0,00E+00	-6,51E+01

Environmental impacts – 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-GHG9)	kg CO ₂ e	1,38E+01	1,11E+00	4,73E+00	1,96E+01	2,13E+00	2,76E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,51E-01	2,90E-01	0,00E+00	-6,15E+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.

Annex 1 : GWP for averaged products

Impact category	EN 15804+A2, PEF (A1-A3)					
	HPL Compact Standard 6 mm	HPL Compact F1-fire retardant 6 mm	Compact Polaris 6 mm	MEG Standard 6 mm	MEG CS 6 mm	Re-Abet 6mm
GWP fossil KgCO _{2e}	1,96E+01	2,09E+01	1,64E+01	1,78+01	1,96E+01	2,17E+01
GWP biogenic KgCO _{2e}	-9,32E+00	-6,92E+00	-9,37E+00	-8,72E+00	-8,63+00	1,02E+01
GWP LULUC KgCO _{2e}	2,94E-02	2,77E-02	2,52E-02	2,78E-02	2,98E-02	9,87E-02
GWP total KgCO _{2e}	1,03E+01	1,40E+01	7,09E+00	9,16E+00	1,10E+01	1,16E+01
Total GWP fossil KgCO _{2e}	2,25E+01	2,32E+01	1,91E+01	2,04+01	2,22E+01	2,46E+01

Impact category	EN 15804+A1, CML (A1-A3)					
	HPL Compact Standard 6 mm	HPL Compact F1 6 mm	Compact Polaris 6 mm	MEG Standard 6 mm	MEG CS 6 mm	Re-Abet 6mm
GWP fossil KgCO _{2e}	1,91E+01	2,03E+01	1,61E+01	1,74E+01	1,91E+01	2,12E+01

Annex 2 : Scaling table – HPL Compact Standard, HPL MEG Standard

Impact category	EN 15804+A2, PEF (A1-A3)		
	HPL Compact Standard 4mm	MEG Standard 10 mm	Re-Abet 13 mm
GWP fossil KgCO _{2e}	1,46E+01	2,93E+01	4,23E+01
GWP biogenic KgCO _{2e}	-6,18E+00	-1,52E+01	-2,20E+01
GWP LULUC KgCO _{2e}	2,06E-02	4,57E-02	2,13E-01
GWP total KgCO _{2e}	3,45E+01	1,41E+01	2,06E+01
Total GWP fossil KgCO _{2e}	1,66E+01	3,37E+01	4,81E+01

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.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited
29.01.2025

