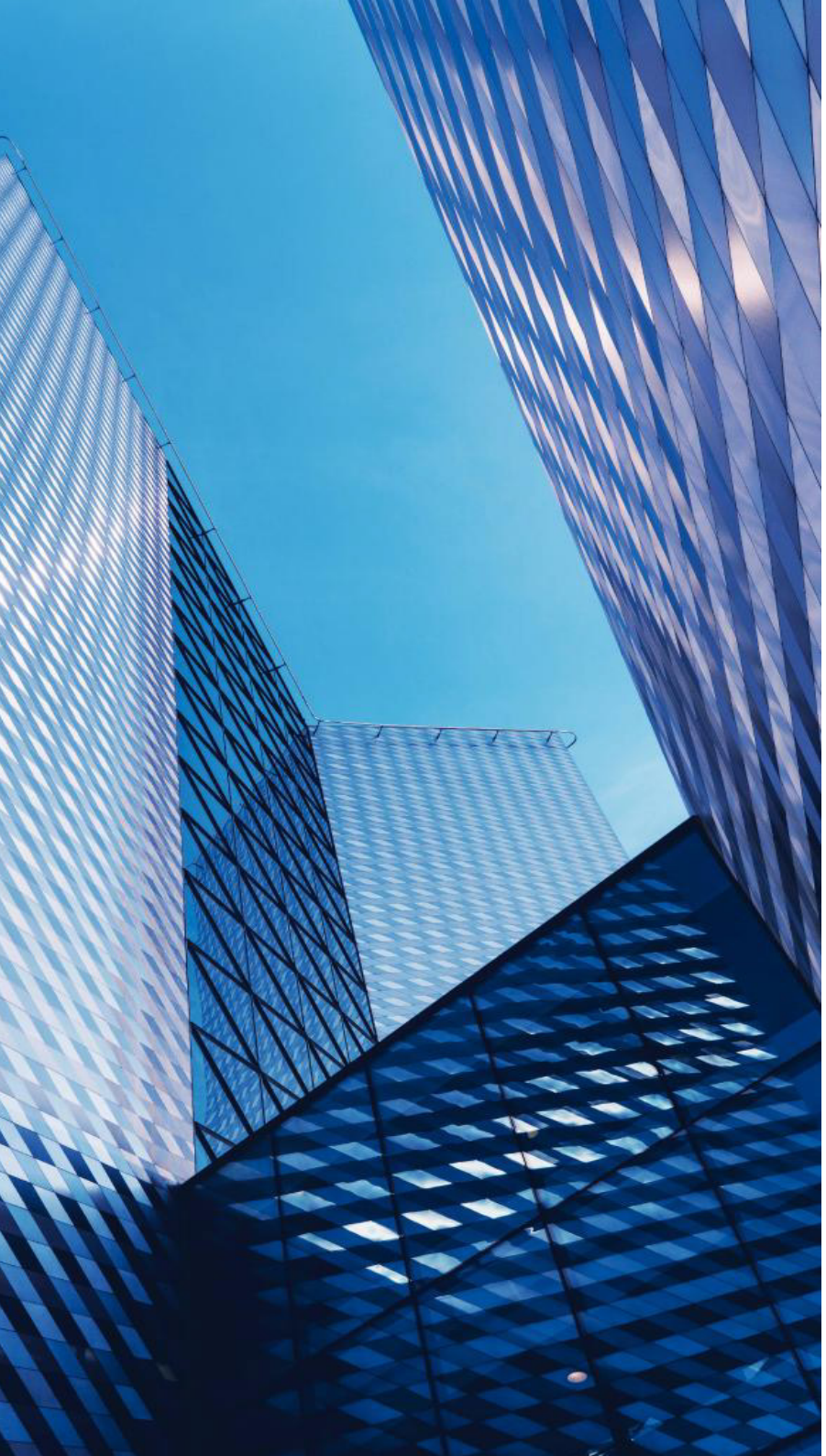


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

OBEX CORTEX 0210FR Paste Adhesive
OBEX Protection Ltd

EPD HUB, HUB-3835
Published on 12.09.2025, last updated on 12.09.2025, valid until 11.09.2030

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	OBEX Protection Ltd
Address	Unit 5, Norton Road, Broomhall, Worcester, WR5 2QR
Contact details	technical@obexuk.com
Website	obexglobal.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Muhammad Zeeshan (Independent consultant)
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	OBEX CORTEX 0210FR Paste Adhesive
Additional labels	-
Product reference	0210FR Class A2 Paste Adhesive
Place(s) of raw material origin	Europe
Place of production	United Kingdom
Place(s) of installation and use	United Kingdom
Period for data	01/01/2024 until 31/12/2024
Averaging in EPD	No grouping

ENVIRONMENTAL DATA SUMMARY

Declared unit	1kg of 0210FR OBEX CORTEX 0210FR Class A2 Paste Adhesive
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	3.76E+00
GWP-total, A1-A3 ($kgCO_2e$)	3.76E+00
Secondary material, inputs (%)	1.7
Secondary material, outputs (%)	70
Total energy use, A1-A3 (kWh)	13.5
Net freshwater use, A1-A3 (m^3)	0.06

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

OBEX Protection Ltd specializes in the manufacture and distribution of innovative protection films and membrane solutions for the construction industry.

The company was founded in Worcester UK by the Francis family in January 2010 and has since become the global leader in fire-rated membrane innovation for the window and façade industry.
In the early years, OBEX focused on the production of protection tapes and films for the window manufacturing industry, building a reputation for quality products backed by an excellent service.

In 2013, OBEX received ISO 9001 certification. We also opened our Australian office, shipping product from the UK to supply the growing demand in Australasia.
Two years later in 2015 we opened our French division, where the SPEEDSTER taping system proved to be very popular.

It was during 2015 that OBEX took the step of diversification into the production of EPDM membranes, quickly becoming a key supplier of membranes and associated products to the construction industry. Over the next few months, the rapidly increasing demand for OBEX products required investment in state-of-the-art machinery, including sending the first slitting machine out to Australia.

One of the most significant innovations in the history of OBEX has been the development of our OBEX CORTEX fire-rated membrane systems.

This has become a real game-changer for the construction industry for two reasons:

- Firstly, architects, contractors and installers now have a source for façade membrane systems that are not only compliant with the government's fire-regulations but, importantly, are also rigorously tested to the correct EN standards for performance.
- Secondly, they also have access to our expertise in correct product specification, correct installation procedures and compatibility data, as well as a free site-support provision for install training and QA reporting.

July **2020** saw us relocate to our brand new 27,500 sq.ft. premises, providing space for greater stock holding, a new R&D zone and a great environment for the OBEX team.
Today, OBEX Protection continues its rapid growth, based on a strong commitment to innovation, quality and service, backed by a culture of openness, honesty and fairness.

We look forward to working with you, so that together, we can play a key part in protecting and enhancing the buildings of the future.

PRODUCT DESCRIPTION

OBEX CORTEX 0210FR Class A2 Paste Adhesive is used in conjunction with the OBEX CORTEX 0200FR Class A2 Interface Sealing Membrane, to create weather and airtight seals within the through-wall construction and other interfaces.
This solvent-free, moisture-curing paste adhesive, achieves an A2-s1,d0 fire classification when tested to EN 13501-1. It has been specifically developed as a high-performance, easily applied adhesive with excellent UV resistance, high adhesion levels and is compatible with most common building substrates.
Typical Uses

- Bonding and sealing OBEX CORTEX 0200FR Class A Interface Sealing Membrane.

Typical Uses

For creating a weather and airtight seal when bonding OBEX CORTEX 0500FR Class B Interface Sealing Membrane.

Further information can be found at:
obexglobal.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	40.82	Germany, Turkey, Switzerland
Fossil materials	54.60	Germany, Turkey, Switzerland
Bio-based materials	4.57	Germany, Turkey, Switzerland

BIOGENIC CARBON CONTENT

The mass of biogenic carbon containing materials in the product or packaging is less than 5 % of the mass of the product or packaging, the declaration of biogenic carbon content is omitted. As biogenic carbon is less than 5% that's why it is omitted.

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0.014 kg C

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1kg of 0210FR Paste Adhesive
Mass per declared unit	1 kg
Functional unit	1kg of 0210FR Paste Adhesive
Reference service life	50 Years

SUBSTANCES, REACH - VERY HIGH CONCERN

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

TECHNICAL SPECIFICATIONS

3rd party certification
BBA Certificate No.175396

Chemical base
Oxime

Curing system
Moisture curing

Shore A
20, DIN 53 505 (N/mm2)

Elongation
458%

Temperature resistance
-50°C to 120°C

Application Temperature
5°C to 40°C

Fire Classification | EN 13501-1
A2-s1,d0

Consistency
Stable paste

Curing time
2mm/24hours (23°C, %50 R.H)

Density
1.40 + 0.03gr/cm3

Maximum allowed distortion
235

Tensile Strength
1.0 MPa

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	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. All packaging involved in the packing of the Adhesive paste 0210 are mentioned in the EPD.

The manufacturing process begins with the purchase of adhesive paste materials from authorized supplier. The manufacturing process for paste starting with the Raw Material Supply. After raw material receiving as per specific recipe mixing of paste completed and after completion of manufacturing, the process then moves to packaging, where the paste is packaged in the plastic film and are carefully secured with tape to ensure stability and protection. After the packaging product are packed in the pallet and finally, the finished and securely packaged adhesive paste are delivered to the customer. This streamlined process ensures that the paste maintain their integrity while adhering to sustainability practices outlined in the supplier's EPD.

All processes are covered by the site's ISO 9001:2015-certified Quality Management System and ISO 14001:2015-certified Environmental Management System.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) by lorry cover fuel direct exhaust emissions, environmental impacts of fuel production. To calculate the distance of average distance of product deliver to customer main customers of 2024 year are determined and average distance of all customer is calculated which is 184km which is considered in the EPD. As per the 1kg of the declared unit the weight of the product with packaging as per declared unit 1.04855 kg which is transported to the customer site. All packaging (plastic, wood pallet & cardboard) of materials waste during installation of product are consider in the EPD A5 section. There is no need of the energy for the installation of the adhesive paste 0210 that's why no energy element is needed in it.

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)

No Energy consumption is considered in this section for the process of de-construction (C1) from the building as is it remove from building manually by hand. It is assumed that 70% of final product is recycled and 30% transported to landfill as per EU directives as it is mostly polymer.

For plastic packaging It is assumed that 70% of the packaging is recycled and 30% is transported to landfill for packaging plastic material in the end-of-life section as per EU directives.

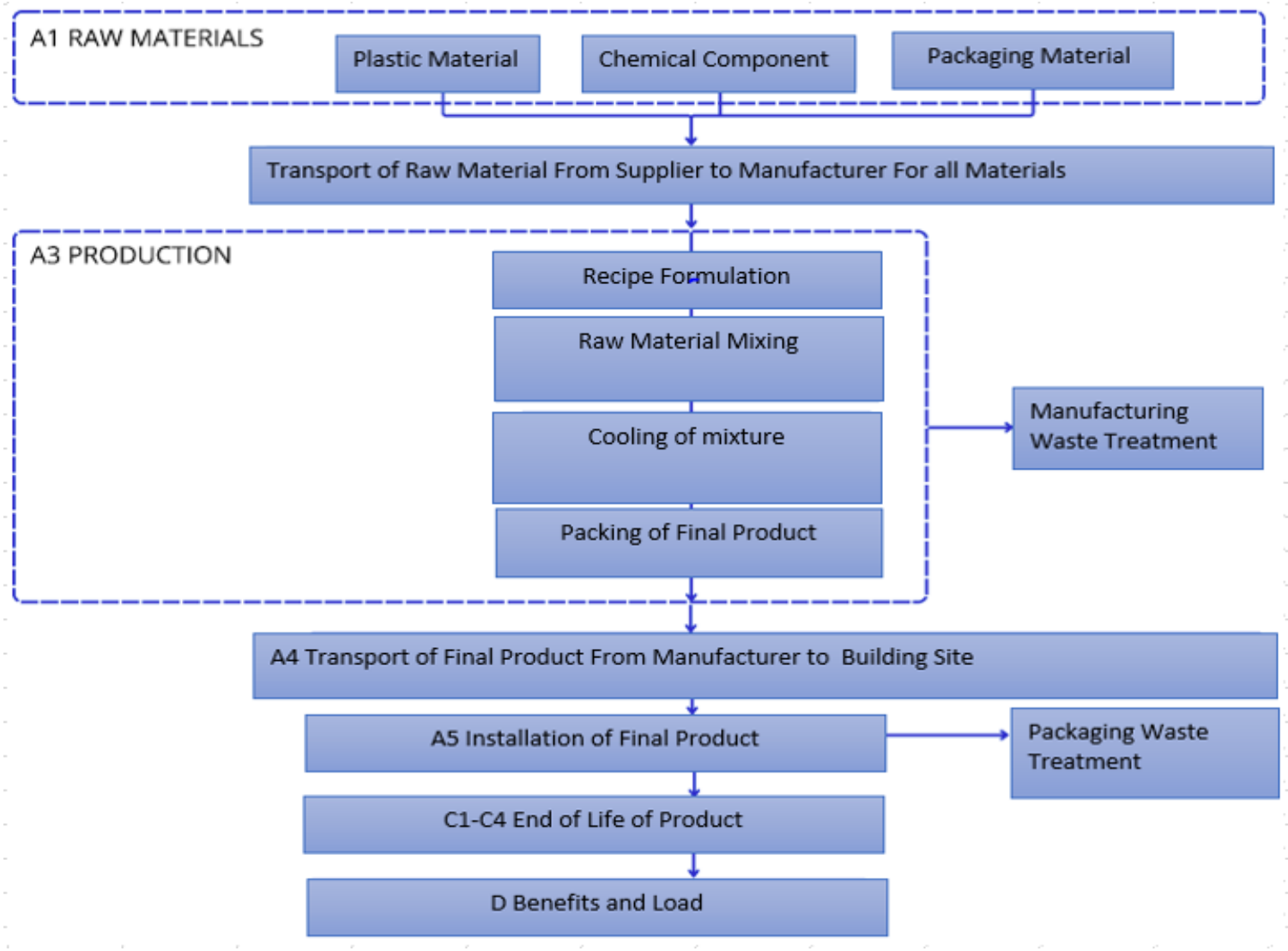
For cardboard packaging It is assumed that 80% of the cardboard packaging is recycled and 20% is transported to landfill as per European Commission.

The wooden pallet is taken as per the RICS WLCA methodology, which states that the end-of-life scenarios for wood panel products are 99% incineration for energy recovery, with 1% disposed of in landfill.

The recycling facility, incineration facility and landfill site are assumed to be 50 km away from the demolition site all the distance is covered using EURO 5 lorry 3.5-7.5 metric ton.

As demolition did not involve any process or energy that's why it is not included in the C1 section it is done manually, In C2 transportation from the demolition site to incineration/ recycling/ landfilling site are included in the EPD, In C3 section plastic/ cardboard materials are recycled back after end of life and wood base products are burn for energy recovery. All transportation involve in the end of life is incorporated in the EPD. Remaining waste after recycling and incineration is landfilled as mention in the C4 section. For recycling of the final product after end-of-life benefits of recycled material is added in the section 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.

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	No Allocation
Packaging material	No Allocation
Ancillary materials	No Allocation
Manufacturing energy and waste	No Allocation

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. 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	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	3.39E+00	3.36E-01	-4.04E-02	3.68E+00	5.84E-02	8.04E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.96E-02	2.84E-01	1.09E-01	-2.54E-01
GWP – fossil	kg CO_2e	3.39E+00	3.36E-01	3.81E-02	3.76E+00	5.84E-02	1.73E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.96E-02	2.84E-01	1.08E-01	-2.54E-01
GWP – biogenic	kg CO_2e	0.00E+00	0.00E+00	-7.86E-02	-7.86E-02	0.00E+00	7.86E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP – LULUC	kg CO_2e	2.12E-03	1.66E-04	1.52E-04	2.44E-03	2.51E-05	7.71E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.57E-05	0.00E+00	4.41E-05	-1.03E-04
Ozone depletion pot.	kg CFC_{-11}e	3.03E-04	4.86E-09	3.69E-09	3.03E-04	7.96E-10	2.01E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.93E-10	1.14E-10	5.36E-10	-1.25E-09
Acidification potential	mol H^+e	2.13E-02	3.25E-03	1.87E-04	2.47E-02	1.90E-04	9.10E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.52E-05	3.68E-04	3.46E-04	-8.52E-04
EP-freshwater[2)]	kg Pe	6.43E-04	2.34E-05	1.63E-05	6.83E-04	4.52E-06	9.57E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.71E-06	2.37E-02	3.03E-04	-7.07E-04
EP-marine	kg Ne	4.04E-03	8.43E-04	6.73E-05	4.95E-03	6.02E-05	3.95E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.82E-05	8.31E-05	1.14E-04	-2.87E-04
EP-terrestrial	mol Ne	4.33E-02	9.31E-03	5.44E-04	5.31E-02	6.55E-04	3.91E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.07E-04	9.14E-04	1.15E-03	-2.92E-03
POCP ("smog")[3)]	kg NMVOCe	1.38E-02	2.93E-03	1.59E-04	1.69E-02	2.59E-04	1.16E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.24E-04	2.61E-04	3.34E-04	-8.99E-04
ADP-minerals & metals[4)]	kg Sbe	1.87E-05	9.28E-07	1.85E-07	1.98E-05	1.89E-07	6.16E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.29E-07	4.79E-09	4.61E-07	-1.08E-06
ADP-fossil resources	MJ	4.27E+01	4.60E+00	7.18E-01	4.80E+01	8.05E-01	1.95E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.03E-01	3.75E+00	6.57E-01	-1.53E+00
Water use[5)]	m^3e depr.	1.16E+00	2.07E-02	3.79E-02	1.21E+00	3.58E-03	9.95E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.08E-03	1.76E-05	6.88E-03	-1.67E-02

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	3.06E-07	2.35E-08	1.74E-09	3.31E-07	4.06E-09	2.90E-10	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.79E-09	3.01E-09	3.61E-09	-8.61E-09
Ionizing radiation[6]	kBq U235e	1.41E-01	3.68E-03	4.78E-04	1.45E-01	6.62E-04	2.04E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.86E-04	6.57E-04	1.15E-03	-2.68E-03
Ecotoxicity (freshwater)	CTUe	4.06E+01	6.64E-01	7.52E-02	4.14E+01	1.39E-01	7.71E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.39E-02	1.25E-11	3.42E+02	-8.00E+02
Human toxicity, cancer	CTUh	1.14E-09	6.05E-11	6.56E-11	1.27E-09	9.33E-12	1.09E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.37E-12	6.13E-11	4.42E-09	-1.04E-08
Human tox. non-cancer	CTUh	4.15E-08	2.50E-09	1.16E-10	4.41E-08	4.74E-10	2.31E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.45E-10	6.13E-11	1.00E-06	-2.35E-06
SQP[7]	-	1.47E+01	2.92E+00	6.19E+00	2.38E+01	4.16E-01	9.50E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.70E-01	1.08E-02	6.86E-01	-1.60E+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	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	5.59E+00	6.16E-02	7.94E-01	6.44E+00	1.16E-02	-5.04E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.09E-03	3.06E-01	2.84E-02	3.56E-01
Renew. PER as material	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
Total use of renew. PER	MJ	5.59E+00	6.16E-02	7.94E-01	6.44E+00	1.16E-02	-5.04E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.09E-03	3.06E-01	2.84E-02	3.56E-01
Non-re. PER as energy	MJ	3.64E+01	4.60E+00	6.82E-01	4.17E+01	8.05E-01	3.20E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.03E-01	3.74E+00	6.57E-01	-1.53E+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	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-re. PER	MJ	3.64E+01	4.60E+00	6.82E-01	4.17E+01	8.05E-01	3.20E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.03E-01	3.74E+00	6.57E-01	-1.53E+00
Secondary materials	kg	1.70E-02	2.15E-03	6.22E-03	2.53E-02	3.44E-04	1.77E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.15E-04	3.37E-03	1.66E-04	-3.89E-04
Renew. secondary fuels	MJ	1.19E-04	2.22E-05	1.12E-02	1.13E-02	4.12E-06	1.28E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.77E-06	5.02E-04	3.58E-06	-8.36E-06
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	3.80E-01	3.80E-01	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	2.88E-02	5.92E-04	3.21E-02	6.15E-02	1.02E-04	8.31E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.69E-05	8.64E-08	3.15E-04	-7.35E-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	1.96E-01	7.85E-03	1.22E-03	2.05E-01	1.38E-03	1.75E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.27E-04	1.40E-02	6.89E-01	-1.61E+00
Non-hazardous waste	kg	4.54E+00	1.41E-01	2.27E-02	4.71E+00	2.66E-02	2.92E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.61E-02	5.07E-06	6.01E-02	-1.68E-01
Radioactive waste	kg	2.27E-03	9.00E-07	3.14E-06	2.27E-03	1.62E-07	5.03E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	9.48E-08	5.21E-06	2.85E-07	-6.66E-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	1.00E-03	1.00E-03	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	4.80E-06	4.80E-06	0.00E+00	2.02E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	7.00E-01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	3.28E-07	3.28E-07	0.00E+00	2.77E-02	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	1.92E-04	1.92E-04	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 – Electricity	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
Exported energy –	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

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_2e	3.43E+00	3.34E-01	1.25E-02	3.78E+00	5.81E-02	1.72E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.94E-02	2.83E-01	1.08E-01	-2.58E-01
Ozone depletion Pot.	kg CFC_{-11}e	4.04E-04	3.87E-09	1.25E-10	4.04E-04	6.35E-10	1.63E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.15E-10	2.13E-10	4.32E-10	-1.01E-09
Acidification	kg SO_2e	1.76E-02	2.58E-03	6.13E-05	2.02E-02	1.46E-04	6.65E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.40E-05	2.98E-04	2.59E-04	-6.35E-04
Eutrophication	kg PO_4^3e	2.48E-03	3.61E-04	3.02E-04	3.14E-03	3.39E-05	2.04E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.81E-05	2.83E-05	5.46E-05	-1.45E-04
POCP (“smog”)	kg C_2H_4e	1.44E-03	1.52E-04	6.79E-06	1.60E-03	1.29E-05	5.49E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.48E-06	2.33E-05	1.85E-05	-1.10E-04
ADP-elements	kg Sbe	1.19E-05	9.05E-07	5.08E-08	1.28E-05	1.84E-07	5.49E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.25E-07	6.40E-09	2.79E-07	-6.52E-07
ADP-fossil	MJ	3.69E+01	4.54E+00	1.64E-01	4.16E+01	7.95E-01	1.92E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.97E-01	3.04E+00	6.39E-01	-1.49E+00

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	1.19E-05	9.05E-07	5.08E-08	1.28E-05	1.84E-07	5.49E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.25E-07	6.40E-09	2.79E-07	-6.52E-07
Hazardous waste disposed	kg	1.94E-01	7.85E-03	1.00E-03	2.03E-01	1.38E-03	1.75E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.27E-04	1.40E-02	6.89E-01	-1.61E+00
Non-haz. waste disposed	kg	4.54E+00	1.41E-01	1.71E-02	4.70E+00	2.66E-02	2.92E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.61E-02	5.07E-06	6.01E-02	-1.68E-01
Air pollution	m^3	1.54E+03	7.09E+01	5.72E+00	1.61E+03	1.10E+01	4.33E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.61E+00	2.27E+01	1.53E+01	-5.73E+01
Water pollution	m^3	7.74E+00	2.14E+00	6.72E-02	9.95E+00	3.62E-01	6.27E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.79E-01	6.35E-01	2.42E+01	-5.65E+01

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_2e	3.39E+00	3.36E-01	3.82E-02	3.76E+00	5.84E-02	1.73E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.96E-02	2.84E-01	1.09E-01	-2.54E-01

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..

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
12.09.2025

VERIFIED ISO 14025