



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

HIT-RE 100 Injectible Epoxy Mortar Chemical Anchor
Hilti AG



EPD HUB, HUB-4837

Published on 09.01.2026, last updated on 09.01.2026, valid until 09.01.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025)

and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Hilti AG
Address	Feldkircherstrasse 100, FL-9494, Schaan, Liechtenstein
Contact details	sustainability@hilti.com
Website	www.hilti.group

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	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	Siti Nur Syaza Abdul Rahman, Hilti AG
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

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	HIT-RE 100 Injectable Epoxy Mortar Chemical Anchor
Additional labels	-
Product reference	2123381; 2123383; 2123384; 2123385; 2123386; 2123389
Place(s) of raw material origin	Germany
Place of production	Bavaria, Germany (City: commercially sensitive)
Place(s) of installation and use	Global
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	+/-20.52
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	1,31

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of HIT-RE 100
Declared unit mass	1 kg
Mass of packaging	0,154 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	4,17
GWP-total, A1-A3 (kgCO ₂ e)	4,02
Secondary material, inputs (%)	1,58
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	19,8
Net freshwater use, A1-A3 (m ³)	0,03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

The Hilti Group supplies the worldwide construction and energy industries with technologically leading products, systems, software and services. With about 34,000 team members in over 120 countries the company stands for direct customer relationships, quality and innovation. The headquarters of the Hilti Group have been located in Schaan, Liechtenstein, since its founding in 1941. The company is privately owned by the Martin Hilti Family Trust, which ensures its long-term continuity. The Hilti Group's purpose is making construction better, based on a passionate and inclusive global team and a caring and performance-oriented culture.

PRODUCT DESCRIPTION

The Hilti HIT-RE 100 adhesive anchoring system is a more cost-effective addition to the slow cure adhesive anchor portfolio and designed for solid performance in a wide range of applications. Designed to utilize the existing Hilti dispenser platform and ICC-ES approved for cracked and uncracked concrete, this anchor is the perfect complement to the portfolio for day-to-day jobsite needs.

PERFORMANCE

- ICC approved for cracked and uncracked concrete.
- Works in all types of base material conditions including submerged underwater.
- Simpler installation with the new SafeSet electric dispenser.
- Simplified hole cleaning and accurate dosing with battery dispenser.

RELIABILITY

- Automatic hole cleaning with SafeSet™ hollow drill bit technology.
- Tested with wide range of rod diameters and embedments.

APPLICATIONS AND ADVANTAGES

- Anchoring light structural steel connections (e.g. steel columns, beams).
- Anchoring secondary steel elements.
- Rebar doweling and connecting secondary post-installed rebar.
- Substituting misplaced or missing rebar.
- ICC-ES evaluated for cracked and un-cracked concrete.
- Tested with a wide range of rod diameters and embedments.
- Complete anchor system available, including HAS-E, HAS-B, and HAS-R threaded rods.
- Easier and more accurate dispensing with battery dispenser.
- Use a variety of hole conditions including water-filled holes and underwater.

Hilti HIT-RE 100 has been tested and fulfils requirements for Volatile Organic Compound Emissions and content tests according to:
LEED v4, LEED v4.1 BETA (February 2025) and LEED v5 (April 2025)
California Department of Public Health (CDPH) Standard Method v1.2-2017 (School Classroom and Private Office Scenario).

It also has been tested and fulfils the requirements for VOC Content according to:
South Coast Air Quality Management District Rule 1168 (2022) requirement for "multi-purpose construction adhesive"

Further information can be found at www.hilti.group

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	38,44	Germany, UK, France
Fossil materials	61,56	Switzerland, Austria
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	0,0291

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of HIT-RE 100
Mass per declared unit	1 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	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND. 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 no ancillary materials. Also, handling of waste formed in the production processes at the manufacturing facilities is included in this stage. The study also does not consider the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product consists of a proprietary chemical formulation contained in two-component foil packs (330 ml/11.16 oz and 500 ml/16.91 oz) with lid. The formulation consists of high-performance injectable hybrid mortar for anchoring in concrete and for rebar connections with proprietary chemical formulation, produced and packaged in sealed foil packs at Hilti’s manufacturing facility in Germany. The materials are sourced from various suppliers across Europe, with an estimated average transport distance of 400 km by truck before arriving at Hilti’s production facility. At this site, core manufacturing processes—including formulation blending, process integration, and final packaging—are carried out. No secondary materials or fuels are used throughout the manufacturing process. Packaging materials consist primarily of foil packs, cardboard and paper, which are used to secure the assembled connectors for transport to designated market locations. The finished product is temporarily stored in bulk at Hilti’s distribution center before final delivery.

The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

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.

Transportation distance is defined according to the PCR. A sales-weighted average transport distance from the production plant in southern Germany to a representative place of installation in each sales region is used for A4 (equating to 921,405 km by truck and 17384,1 km by container ship for this product due to its global distribution). 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 products are packaged properly. Also, volume capacity utilization factor is assumed to be 1 for the nested packaged products. Disposal of the packaging, including some residual product within, is accounted for in A5. It is also assumed about 1% losses of material losses during the installation (A5). Emissions due to installation are assumed to be negligible as they are typically performed using simple manual tools which do not consume energy.

PRODUCT USE AND MAINTENANCE (B1-B7)

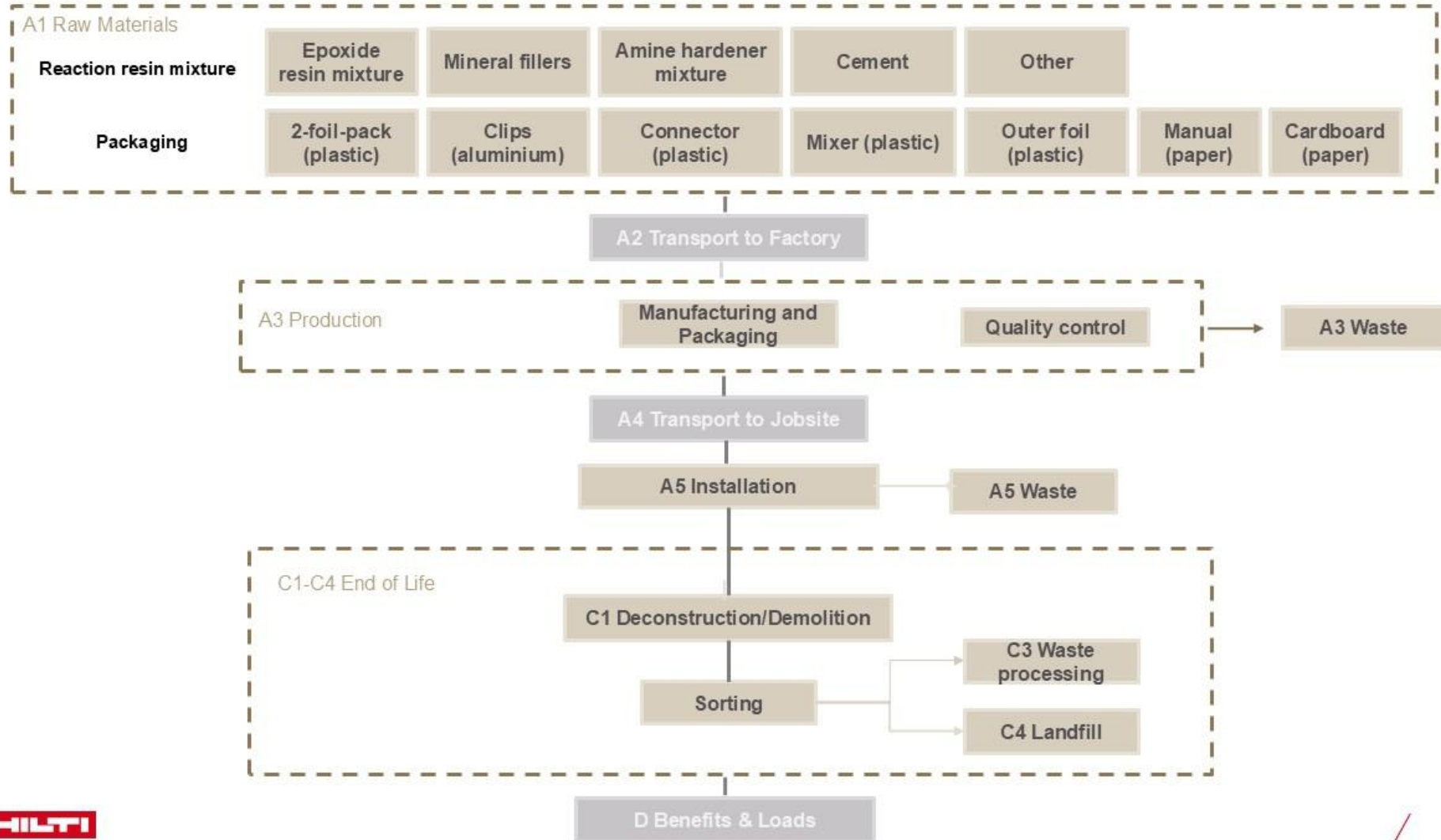
This EPD does not cover the use phase.

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

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. As a wet-applied chemical formulation which cannot be economically separated from the concrete to which it is applied, it is assumed that the product must be disposed of entirely in landfill. Transportation distance to landfill is assumed as 50 km and the transportation method is assumed to be lorry (C2). Benefits and loads from incineration and recycling are included in Module D. According to world average data published by Eurostat, the recycling rate of plastic packaging is 40%, steel packaging is 81%, and paper and cardboard packaging is 83%. Actual recyclability may vary between regions.

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.

This EPD study includes the provision of all materials, transportation, and emission flows, and end-of-life processing of product. All industrial processes from raw material acquisition, pre-processing, production, product distribution, installation and end-of-life management are included. Due to lack of data, no ancillary materials data are included in the model, but they do not exceed the 1% cut-off criteria. These include materials which are used in the product manufacturing only in very small amounts and have a negligible impact on the emissions of the product. The production of capital equipment, construction activities, 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	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on representative product
Variation in GWP-fossil for A1-A3, %	+/-20.52

HIT-RE 100 is available in multiple packaging size: a two-component foil pack with various sizes of 330 ml/11.16 oz and 500 ml/16.91 oz. The chemical

formulation, manufacturing processes and locations remain identical in every case. The version in 500 ml/16.91 oz foil pack is used as the representative product for this EPD as it accounts for the clear majority of sales, and the variability in GWP-fossil for A1-A3 is within the allowed range. All product variants were assessed separately and in full in order to document this.

LCA SOFTWARE AND BIBLIOGRAPHY

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

ENVIRONMENTAL IMPACT DATA

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	3,56E+00	5,29E-02	4,06E-01	4,02E+00	4,11E-01	2,27E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,39E-03	0,00E+00	6,24E-03	-8,28E-02
GWP – fossil	kg CO ₂ e	3,56E+00	5,29E-02	5,61E-01	4,17E+00	4,11E-01	1,20E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,38E-03	0,00E+00	6,24E-03	-4,76E-02
GWP – biogenic	kg CO ₂ e	4,08E-03	1,17E-05	-1,58E-01	-1,54E-01	7,29E-05	1,07E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,22E-06	0,00E+00	-1,99E-06	-3,54E-02
GWP – LULUC	kg CO ₂ e	2,69E-03	2,37E-05	2,78E-03	5,50E-03	1,84E-04	6,13E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,41E-06	0,00E+00	3,57E-06	1,61E-04
Ozone depletion pot.	kg CFC ₋₁₁ e	1,17E-07	7,81E-10	1,29E-08	1,31E-07	7,07E-09	1,45E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,95E-11	0,00E+00	1,81E-10	-9,53E-10
Acidification potential	mol H ⁺ e	1,46E-02	1,80E-04	2,57E-03	1,73E-02	7,17E-03	2,76E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,84E-05	0,00E+00	4,43E-05	-2,06E-04
EP-freshwater ²⁾	kg Pe	9,15E-04	4,12E-06	1,91E-04	1,11E-03	2,01E-05	1,26E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,19E-07	0,00E+00	5,13E-07	-3,60E-05
EP-marine	kg Ne	3,73E-03	5,93E-05	5,90E-04	4,38E-03	1,97E-03	9,44E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,03E-06	0,00E+00	1,69E-05	-5,77E-05
EP-terrestrial	mol Ne	3,22E-02	6,45E-04	5,69E-03	3,86E-02	2,18E-02	7,20E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,56E-05	0,00E+00	1,84E-04	-5,93E-04
POCP (“smog”) ³⁾	kg NMVOCe	1,30E-02	2,66E-04	2,17E-03	1,55E-02	6,22E-03	2,54E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,70E-05	0,00E+00	6,60E-05	-2,56E-04
ADP-minerals & metals ⁴⁾	kg Sbe	3,69E-05	1,48E-07	4,48E-06	4,15E-05	8,72E-07	4,67E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,50E-08	0,00E+00	9,92E-09	-3,50E-07
ADP-fossil resources	MJ	6,82E+01	7,68E-01	9,90E+00	7,89E+01	5,42E+00	9,05E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,81E-02	0,00E+00	1,53E-01	-8,58E-01
Water use ⁵⁾	m ³ e depr.	1,01E+00	3,79E-03	2,67E-01	1,28E+00	2,12E-02	1,59E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,86E-04	0,00E+00	4,42E-04	8,96E-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, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,42E-07	5,30E-09	3,24E-08	1,79E-07	2,79E-08	2,48E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,39E-10	0,00E+00	1,01E-09	-2,46E-09
Ionizing radiation ⁶⁾	kBq 11235a	2,48E-01	6,69E-04	4,70E-02	2,95E-01	4,82E-03	3,33E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,80E-05	0,00E+00	9,63E-05	1,17E-03
Ecotoxicity (freshwater)	CTUe	1,03E+02	1,09E-01	8,98E+00	1,12E+02	5,66E-01	1,25E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,10E-02	0,00E+00	1,29E-02	-1,21E-01
Human toxicity, cancer	CTUh	9,68E-09	8,73E-12	4,50E-10	1,01E-08	1,22E-10	1,09E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,88E-13	0,00E+00	1,15E-12	-6,84E-12
Human tox. non-cancer	CTUh	3,71E-08	4,97E-10	5,26E-09	4,29E-08	2,92E-09	7,19E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,06E-11	0,00E+00	2,64E-11	-2,78E-10
SQP ⁷⁾	-	1,01E+01	7,73E-01	1,47E+01	2,56E+01	1,91E+00	3,50E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,87E-02	0,00E+00	3,02E-01	-3,14E+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	3,28E+00	1,05E-02	2,55E+00	5,84E+00	6,92E-02	-1,09E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,07E-03	0,00E+00	1,48E-03	-5,75E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,08E+00	1,08E+00	0,00E+00	-1,08E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,44E-01
Total use of renew. PER	MJ	3,28E+00	1,05E-02	3,63E+00	6,91E+00	6,92E-02	-2,17E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,07E-03	0,00E+00	1,48E-03	-2,32E-01
Non-re. PER as energy	MJ	5,70E+01	7,68E-01	7,67E+00	6,55E+01	5,42E+00	-1,49E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,81E-02	0,00E+00	1,53E-01	-8,64E-01
Non-re. PER as material	MJ	1,12E+01	0,00E+00	1,39E+00	1,26E+01	0,00E+00	-1,39E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	-1,12E+01	3,72E-01
Total use of non-re. PER	MJ	6,82E+01	7,68E-01	9,06E+00	7,80E+01	5,42E+00	-2,89E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,81E-02	0,00E+00	-1,10E+01	-4,93E-01
Secondary materials	kg	1,58E-02	3,27E-04	3,59E-02	5,20E-02	2,52E-03	6,82E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,32E-05	0,00E+00	3,85E-05	3,91E-02
Renew. secondary fuels	MJ	3,50E-04	4,15E-06	6,47E-03	6,82E-03	1,93E-05	6,98E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,22E-07	0,00E+00	7,97E-07	1,06E-06
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	2,67E-02	1,14E-04	7,33E-03	3,42E-02	5,60E-04	3,10E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,15E-05	0,00E+00	1,59E-04	2,33E-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	2,15E-01	1,30E-03	3,82E-02	2,54E-01	7,47E-03	3,87E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,32E-04	0,00E+00	1,69E-04	-7,76E-03
Non-hazardous waste	kg	5,63E+00	2,41E-02	1,66E+00	7,31E+00	1,32E-01	2,19E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,45E-03	0,00E+00	3,87E-03	-2,71E-01
Radioactive waste	kg	6,35E-05	1,64E-07	3,73E-05	1,01E-04	1,19E-06	1,11E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,67E-08	0,00E+00	2,35E-08	3,08E-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	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,03E-01	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,61E-01	ND	ND	ND	ND	ND	ND	ND	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	1,53E-01	ND	ND	ND	ND	ND	ND	ND	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	2,08E-01	ND	ND	ND	ND	ND	ND	ND	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 ₂ e	3,53E+00	5,26E-02	5,63E-01	4,15E+00	4,09E-01	1,28E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,35E-03	0,00E+00	6,19E-03	-4,68E-02
Ozone depletion Pot.	kg CFC ₁₁ e	1,02E-07	6,23E-10	1,09E-08	1,14E-07	5,62E-09	1,25E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,34E-11	0,00E+00	1,44E-10	-7,95E-10
Acidification	kg SO ₂ e	1,17E-02	1,38E-04	2,08E-03	1,39E-02	5,64E-03	2,18E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,40E-05	0,00E+00	3,28E-05	-1,59E-04
Eutrophication	kg PO ₄ ³ e	1,09E-01	3,36E-05	4,67E-03	1,14E-01	7,37E-04	1,16E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,41E-06	0,00E+00	1,04E-05	-4,72E-05
POCP (“smog”)	kg C ₂ H ₄ e	1,34E-03	1,23E-05	2,21E-04	1,58E-03	3,08E-04	2,28E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,25E-06	0,00E+00	3,10E-06	-2,36E-05
ADP-elements	kg Sbe	3,08E-05	1,44E-07	3,87E-06	3,48E-05	8,55E-07	3,98E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,46E-08	0,00E+00	9,72E-09	-3,51E-07
ADP-fossil	MJ	6,40E+01	7,57E-01	9,05E+00	7,38E+01	5,34E+00	8,48E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,70E-02	0,00E+00	1,52E-01	-8,80E-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 ₂ e	3,56E+00	5,29E-02	5,63E-01	4,18E+00	4,11E-01	1,20E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,38E-03	0,00E+00	6,25E-03	-4,74E-02

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

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity production, wind, 1-3MW turbine, onshore, Norway, Ecoinvent, 0.0151 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry 16-32 metric ton, EURO3, 921,405 km
2. Market for transport, freight, sea, container ship, 17384,1 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	-
Volume capacity utilization factor	1

Installation scenario documentation - A5 (Installation waste)

1. Treatment of inert waste, inert material landfill, Ecoinvent, 0.01 kg
2. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.022 kg
3. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 0.021 kg
4. Exported Energy: Electricity, Ecoinvent, 0.14 MJ
5. Exported Energy: Electricity, Ecoinvent, 0.0062 MJ
6. Exported Energy: Electricity, Ecoinvent, 0.0066 MJ
7. Exported Energy: Thermal, Ecoinvent, 0.19 MJ
8. Exported Energy: Thermal, Ecoinvent, 0.0086 MJ
9. Exported Energy: Thermal, Ecoinvent, 0.0095 MJ
10. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.013 kg
11. Treatment of metal scrap, mixed, for recycling, unsorted, sorting, Ecoinvent,

Materials for recycling, 0.018 kg

12. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.0042 kg

13. Treatment of waste paper, unsorted, sorting, Ecoinvent, Materials for recycling, 0.029 kg

14. Treatment of waste packaging paper, municipal incineration, Ecoinvent, 0.0028 kg

15. Treatment of waste packaging paper, municipal incineration, Ecoinvent, 0.0033 kg

16. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 0.0031 kg

17. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 0.0037 kg

18. Treatment of waste paperboard, unsorted, sorting, Ecoinvent, Materials for recycling, 0.034 kg

Use stages scenario documentation - C1-C4 (Data source)

1. Treatment of inert waste, inert material landfill, Ecoinvent, 1.0 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Transported 50 km by truck to local recycling station

THIRD-PARTY VERIFICATION STATEMENT

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

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

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

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

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

[Verified tools](#)

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Imane Uald Lamkaddam as an authorized verifier for EPD Hub Limited
09.01.2026

