

ENVIRONMENTAL PRODUCT DECLARATION

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

Tool Bag - Medium
Hilti AG



EPD HUB, HUB-2218

Published on 13.12.2024, last updated on 13.12.2024, valid until 13.12.2029

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Hilti AG
Address	Feldkircherstrasse 100, 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+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Manufactured product
Category of EPD	Third party verified EPD
Parent EPD number	HUB-2035
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Antonio Gastaldo
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 Iamkaddam, as an authorized verifier acting for EPD Hub Limited

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	Tool Bag - Medium
Additional labels	
Product reference	2323711
Place of production	273 Renmin Road, Hengji Town, Jianhu City Yancheng, Jiangsu, China
Period for data	Calendar year 2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit
Declared unit mass	1.785 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	6,02E+00
GWP-total, A1-A3 (kgCO ₂ e)	6,05E+00
Secondary material, inputs (%)	62.5
Secondary material, outputs (%)	19.4
Total energy use, A1-A3 (kWh)	23.4
Net freshwater use, A1-A3 (m ³)	0.05

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Hilti Corporation (Hilti Aktiengesellschaft or Hilti AG, also known as Hilti Group) is a Liechtensteiner multinational company that develops, manufactures, and markets products for the construction, building maintenance, energy and manufacturing industries, mainly to the professional end-user.

PRODUCT DESCRIPTION

This product is a soft-sided toolbag mostly made of RPET, used for the storage and transport of construction equipment.

Further information can be found at www.hilti.group.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	20.26	Jiangsu, China
Minerals		
Fossil materials	79.97	Jiangsu, China
Bio-based materials		

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

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

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit
Mass per declared unit	1.785 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	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demoltion	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.

After the raw materials arrive to the manufacturing site, they enter a cutting and sewing workshop, then quality control and testing is performed. The finished toolbag is then put in a LDPE packaging sleeve and is ready to be shipped.

Assumptions:

- No weight loss due to manufacturing is assumed.
- Electricity for manufacturing assumed to derive from hard coal since 60% of electricity in China has this source (<https://ourworldindata.org/energy/country/china#what-sources-does-the-country-get-its-electricity-from>).

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.

Transport for raw materials is reported in A4 since the bag is produced by a supplier and the finished product is then shipped to Hilti. Transportation distances based on ship and truck transport from China (Changzhou and Jiaying) to Liechtenstein (Schaan).

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

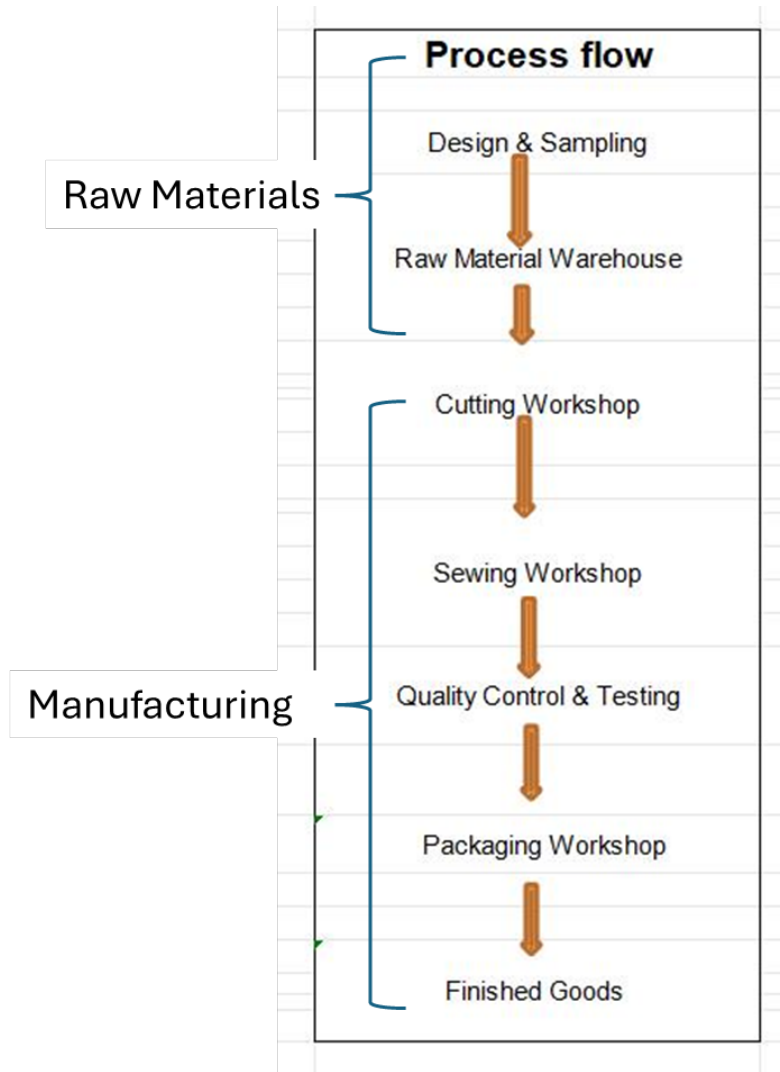
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Module C3 accounts for energy and resource inputs for sorting and treating of materials for recycling. Landfilled materials are included in module C4. The disposal scenario foresees mechanical separation of the constituent materials with negligible energy consumption per unit. Polymers are assumed to have a

20% landfill and 80% incineration rate. A recycling rate of 85% is applied for steel/iron, a rate of 60% for zinc, while the rest assumed to end in landfill. The use of regional facilities is assumed, which is reflected in the use of road transport at distances of 50-250km. Due to the material recovery potential of the product, and material and energy recovery potential of its 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. The Emission Factor for PP was used for Poly+Nylon; PET used for Polyester, and iron treatment used for steel due to lack of better alternative and chemical similarity.

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 material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

AVERAGES AND VARIABILITY

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

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

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, 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 – total ¹⁾	kg CO ₂ e	5,39E+00	0,00E+00	6,63E-01	6,05E+00	3,80E-01	2,48E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,27E-02	2,27E+00	1,88E-01	-9,86E-01
GWP – fossil	kg CO ₂ e	5,36E+00	0,00E+00	6,63E-01	6,02E+00	3,80E-01	2,48E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,27E-02	2,27E+00	1,88E-01	-9,86E-01
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	6,98E-05	6,98E-05	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
GWP – LULUC	kg CO ₂ e	3,08E-02	0,00E+00	9,54E-05	3,09E-02	2,46E-04	8,63E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,74E-06	5,37E-05	1,56E-05	2,00E-04
Ozone depletion pot.	kg CFC-11e	2,07E-06	0,00E+00	4,15E-09	2,07E-06	7,83E-08	1,25E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,14E-09	9,99E-09	9,59E-10	-1,22E-08
Acidification potential	mol H ⁺ e	3,17E-02	0,00E+00	3,18E-03	3,49E-02	9,77E-03	6,40E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,53E-05	7,11E-04	6,73E-05	-3,65E-03
EP-freshwater ²⁾	kg Pe	2,41E-04	0,00E+00	1,45E-05	2,56E-04	1,69E-06	1,90E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,88E-07	1,49E-06	3,62E-07	-1,11E-05
EP-marine	kg Ne	5,53E-03	0,00E+00	7,05E-04	6,24E-03	2,42E-03	2,97E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,81E-05	2,96E-04	2,78E-05	-3,85E-04
EP-terrestrial	mol Ne	5,94E-02	0,00E+00	7,76E-03	6,71E-02	2,69E-02	2,62E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,10E-04	3,02E-03	2,53E-04	-7,62E-03
POCP (“smog”) ³⁾	kg NMVOCe	1,94E-02	0,00E+00	2,09E-03	2,15E-02	7,03E-03	7,08E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,73E-05	7,55E-04	7,25E-05	-4,05E-03
ADP-minerals & metals ⁴⁾	kg Sbe	3,07E-04	0,00E+00	4,69E-07	3,08E-04	6,90E-07	7,85E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,38E-08	1,30E-06	1,41E-07	-1,41E-05
ADP-fossil resources	MJ	9,15E+01	0,00E+00	6,69E+00	9,81E+01	4,98E+00	1,09E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,36E-01	7,39E-01	1,09E-01	-2,58E+01
Water use ⁵⁾	m ³ e depr.	2,07E+00	0,00E+00	1,02E-01	2,17E+00	1,69E-02	8,20E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,49E-03	9,10E-02	8,56E-03	-1,72E-01

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	3,06E-07	0,00E+00	4,72E-08	3,53E-07	1,75E-08	9,30E-11	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,34E-09	7,42E-09	1,15E-09	-3,66E-08
Ionizing radiation ⁶⁾	kBq 11235e	4,22E-01	0,00E+00	8,13E-03	4,30E-01	2,36E-02	6,31E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,58E-03	3,38E-03	8,92E-04	2,58E-04
Ecotoxicity (freshwater)	CTUe	2,56E+02	0,00E+00	1,67E+01	2,73E+02	3,44E+00	2,10E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,05E-01	1,27E+01	6,63E-01	-1,44E+01
Human toxicity, cancer	CTUh	1,28E-08	0,00E+00	1,39E-10	1,29E-08	2,07E-10	2,31E-12	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,94E-12	1,67E-10	3,69E-11	3,05E-09
Human tox. non-cancer	CTUh	2,58E-07	0,00E+00	6,37E-09	2,65E-07	2,62E-09	4,69E-11	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,95E-10	9,22E-09	4,78E-10	1,59E-08
SQP ⁷⁾	-	2,09E+01	0,00E+00	1,37E+00	2,23E+01	1,61E+00	1,22E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,25E-01	4,99E-01	1,96E-01	-1,27E+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	5,84E+00	0,00E+00	2,90E-01	6,13E+00	4,31E-02	4,77E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,85E-03	5,15E-02	8,84E-03	-4,91E-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	5,84E+00	0,00E+00	2,90E-01	6,13E+00	4,31E-02	4,77E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,85E-03	5,15E-02	8,84E-03	-4,91E-01
Non-re. PER as energy	MJ	7,23E+01	0,00E+00	5,92E+00	7,82E+01	4,98E+00	1,09E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,36E-01	7,39E-01	1,09E-01	-1,09E+01
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	1,15E+01
Total use of non-re. PER	MJ	7,23E+01	0,00E+00	5,92E+00	7,82E+01	4,98E+00	1,09E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,36E-01	7,39E-01	1,09E-01	5,84E-01
Secondary materials	kg	1,12E+00	0,00E+00	6,74E-04	1,12E+00	2,09E-03	2,48E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,00E-04	7,98E-04	4,85E-04	5,92E-01
Renew. secondary fuels	MJ	3,11E-03	0,00E+00	5,81E-04	3,69E-03	9,08E-06	2,10E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,14E-06	4,05E-05	4,01E-06	-5,29E-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	5,11E-02	0,00E+00	2,45E-03	5,36E-02	4,02E-04	7,02E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,20E-05	9,15E-03	1,03E-04	-1,64E-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	5,12E-01	0,00E+00	8,00E-02	5,92E-01	6,54E-03	7,04E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,61E-04	3,05E-02	1,49E-03	-2,19E-01
Non-hazardous waste	kg	9,74E+00	0,00E+00	5,59E-01	1,03E+01	6,78E-02	1,31E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,49E-03	1,09E+00	2,26E-01	-9,42E-01
Radioactive waste	kg	1,59E-04	0,00E+00	2,98E-06	1,62E-04	3,49E-05	4,44E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,24E-06	1,32E-06	3,11E-07	-7,95E-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	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	5,90E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	3,47E-01	1,36E-01	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	2,35E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,08E+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	5,35E+00	0,00E+00	6,33E-01	5,98E+00	3,77E-01	2,47E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,25E-02	2,26E+00	1,89E-01	-9,12E-01
Ozone depletion Pot.	kg CFC ₁₁ e	1,48E-06	0,00E+00	3,70E-09	1,48E-06	6,20E-08	1,02E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,07E-09	8,99E-09	8,03E-10	-1,61E-08
Acidification	kg SO ₂ e	2,63E-02	0,00E+00	2,59E-03	2,89E-02	7,81E-03	4,74E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,41E-05	5,21E-04	5,07E-05	-3,01E-03
Eutrophication	kg PO ₄ ³ e	1,09E-02	0,00E+00	6,40E-04	1,16E-02	9,03E-04	3,44E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,69E-05	6,96E-04	3,76E-04	-8,63E-04
POCP (“smog”)	kg C ₂ H ₄ e	1,52E-03	0,00E+00	1,15E-04	1,63E-03	2,05E-04	2,55E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,94E-06	1,85E-05	4,37E-06	-4,52E-04
ADP-elements	kg Sbe	3,06E-04	0,00E+00	4,64E-07	3,06E-04	6,76E-07	7,65E-09	MND	MND	MND	MND	MND	MND	MND	0,00E+00	6,21E-08	1,20E-06	1,39E-07	-1,40E-05
ADP-fossil	MJ	9,14E+01	0,00E+00	6,69E+00	9,81E+01	4,98E+00	1,09E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,36E-01	7,39E-01	1,09E-01	-2,58E+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
13.12.2024

