

ENVIRONMENTAL PRODUCT DECLARATION

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

Exterior Framing Self Drilling Screws
Hilti AG



EPD HUB, HUB-1804

Published on 16.08.2024, last updated on 16.08.2024, valid until 16.08.2029



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Hilti AG
Address	Feldkircherstrasse 100
Contact details	Sustainability@Hilti.com
Website	www.hilti.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 und ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Elise Janssen, Hilti AG
EPD verification	Unabhängige Verifizierung dieser EPD und der Daten gemäß ISO 14025: <input type="checkbox"/> Interne Prüfung <input checked="" type="checkbox"/> Externe Verifizierung
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	Exterior Framing Self Drilling Screws
Additional labels	See appendix
Product reference	2099044
Place of production	Kaohsiung, Taiwan
Period for data	Calendar year 2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	-0.3%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of Zinc plated carbon steel screw
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO₂e)	3.84E+00
GWP-total, A1-A3 (kgCO₂e)	3.70E+00
Secondary material, inputs (%)	23.5
Secondary material, outputs (%)	85
Total energy use, A1-A3 (kWh)	13.1
Total water use, A1-A3 (m³e)	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 33,000 team members in over 120 countries the company stands for direct customer relationships, quality and innovation. Hilti generated annual sales of more than CHF 6.3 billion in 2022. 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

Hilti Exterior Framing Self Drilling Screws portfolio consists of Galvanic zinc plated and Electro coated (CRC) carbon steel screws. Various head types (Hex head (HWH), Phillips Pan Head (PPH), TPCH (Torx Pancake Head), Phillips Truss Head (PTH), Phillips Pancake Head (PPCH), Phillips Flat Truss Head (PFTH)) and tip type (lightning tip, racing tip, pilot point, stitch) are covered in the offering. Typical application for structural timber screws include Rafter reinforcement, CLT walls and ceilings, Support reinforcement with steel plate, Transverse tension reinforcement for notching, and connection to base point of support.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	Taiwan
Minerals		
Fossil materials		
Bio-based materials		

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	0.0134

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
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	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.

The galvanized steel screw is made from low-carbon steel. The referenced product is S-MD12-14x3/4 HWH3 self drilling screw, which is a number 12 tip 3 screw with hex head, used for connection of steel frames. The steel is all

BOF coming from one supplier. The coils are cut and cold formed to form the blank in its final size and shape. The part is the rolled to form the thread and the heat treated to get the desired properties. The steel screw is zinc plated and finally packaged and distributed. The manufacturing process requires electricity and fuels for powering the production equipment. Wastewater treatment is also considered. A wooden pallet and cardboard are used as packaging materials for transporting the screw to the dedicated market places.

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.

The transportation is calculated based on the distance traveled by lorry/ship from the supplier to the warehouses in Hilti North America. Vehicle capacity utilization volume factor 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/cardboard boxes. The impacts of material production, its processing and its disposal as installation waste are also assessed. Bolts used in the installation process and electricity consumption for the assembly are considered, too. No installation losses happen in this stage if the installation process is carried out appropriately according to Hilti instructions.

PRODUCT USE AND MAINTENANCE (B1-B7)

The use phase is not relevant for the life cycle emissions of this product and is, therefore, not accounted into the assessment.

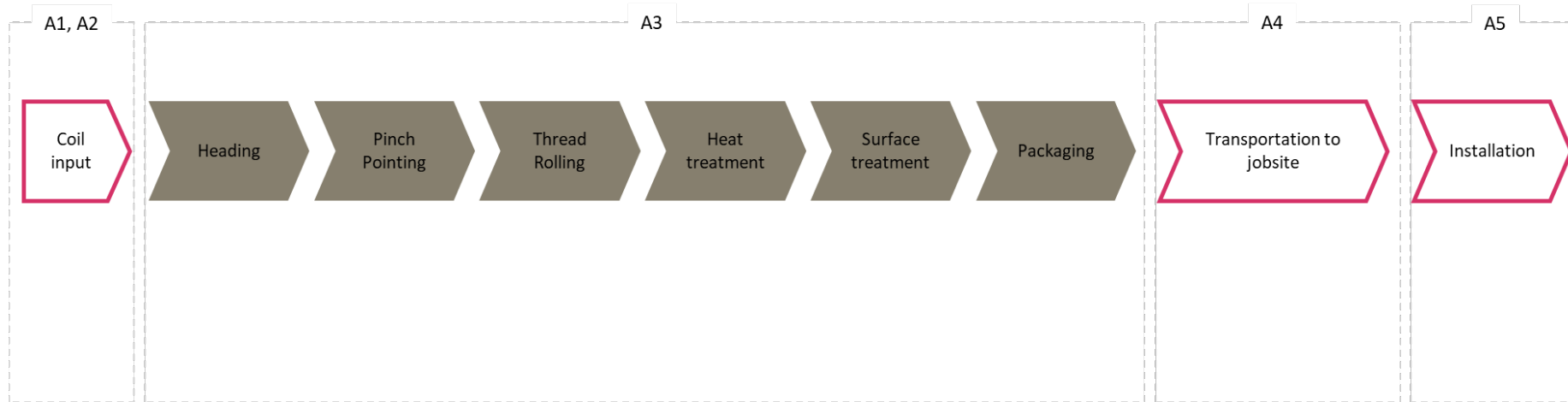
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The product is considered to be dismantled by a power tool and with negligible energy use. It is assumed that the steel waste is collected separately and transported to the waste treatment facility. Transportation distance to waste treatment plant and to landfill is assumed to be 60 km, the transportation method is assumed to be lorry. Module C3 accounts for energy and resource inputs for sorting and treating of steel for recycling. Landfilled material is included in module C4. 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.

Recycling rate of 85% in the calculation is based on world average. 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.

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	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	-0.3% %

The averaging of products is calculated based on the lightest and heaviest product in the series. The declared unit 1 kg of zinc plated screw is representative for a product consisting of a screw with total weight of 0.00344kg. The thickness of the galvanization coating is on average 3 microns. The products included in the averaging are also self drilling screws, hex head or flat head screws. They share the function of connecting exterior frames together.

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	2,72E+00	1,11E-02	1,07E+00	3,79E+00	1,25E-01	4,95E-02	MND	MND	MND	MND	MND	MND	MND	MNR	1,74E-02	2,19E-02	7,91E-04	-1,87E+00
GWP – fossil	kg CO ₂ e	2,72E+00	1,11E-02	1,11E+00	3,84E+00	1,25E-01	6,48E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,73E-02	2,19E-02	7,90E-04	-1,87E+00
GWP – biogenic	kg CO ₂ e	0,00E+00	0,00E+00	-4,88E-02	-4,88E-02	0,00E+00	4,88E-02	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP – LULUC	kg CO ₂ e	1,87E-03	4,54E-06	2,36E-03	4,24E-03	8,99E-05	2,71E-07	MND	MND	MND	MND	MND	MND	MND	MNR	7,09E-06	2,86E-05	7,46E-07	-1,19E-03
Ozone depletion pot.	kg CFC-11e	1,23E-07	2,45E-09	3,90E-08	1,65E-07	2,49E-08	6,88E-11	MND	MND	MND	MND	MND	MND	MND	MNR	3,86E-09	2,35E-09	3,20E-10	-7,17E-08
Acidification potential	mol H ⁺ e	1,18E-02	4,62E-05	5,68E-03	1,76E-02	3,95E-03	5,38E-06	MND	MND	MND	MND	MND	MND	MND	MNR	1,18E-04	2,51E-04	7,43E-06	-7,84E-03
EP-freshwater ²⁾	kg Pe	1,14E-04	9,39E-08	5,81E-05	1,73E-04	4,63E-07	9,42E-09	MND	MND	MND	MND	MND	MND	MND	MNR	1,47E-07	9,53E-07	8,28E-09	-8,03E-05
EP-marine	kg Ne	2,35E-03	1,35E-05	9,72E-04	3,33E-03	9,72E-04	2,34E-06	MND	MND	MND	MND	MND	MND	MND	MNR	4,49E-05	5,33E-05	2,57E-06	-1,42E-03
EP-terrestrial	mol Ne	2,70E-02	1,49E-04	1,08E-02	3,79E-02	1,08E-02	2,48E-05	MND	MND	MND	MND	MND	MND	MND	MNR	4,94E-04	6,14E-04	2,83E-05	-1,62E-02
POCP (“smog”) ³⁾	kg NMVOCe	1,18E-02	4,53E-05	2,93E-03	1,48E-02	2,80E-03	6,36E-06	MND	MND	MND	MND	MND	MND	MND	MNR	1,36E-04	1,69E-04	8,23E-06	-7,75E-03
ADP-minerals & metals ⁴⁾	kg Sbe	3,55E-05	3,87E-08	5,38E-06	4,10E-05	1,76E-07	2,81E-09	MND	MND	MND	MND	MND	MND	MND	MNR	6,04E-08	2,51E-06	1,82E-09	-2,75E-05
ADP-fossil resources	MJ	2,75E+01	1,61E-01	1,45E+01	4,22E+01	1,58E+00	6,57E-03	MND	MND	MND	MND	MND	MND	MND	MNR	2,53E-01	2,62E-01	2,17E-02	-1,80E+01
Water use ⁵⁾	m ³ e depr.	9,87E-01	7,05E-04	3,09E-01	1,30E+00	4,77E-03	1,76E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,10E-03	4,46E-03	6,87E-05	-5,35E-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	2,11E-07	9,48E-10	4,43E-08	2,56E-07	4,19E-09	9,81E-11	MND	MND	MND	MND	MND	MND	MND	MNR	2,02E-09	3,42E-09	1,50E-10	-1,42E-07
Ionizing radiation ⁶⁾	kBq 11235e	1,05E-01	7,49E-04	1,61E-01	2,67E-01	7,28E-03	2,35E-05	MND	MND	MND	MND	MND	MND	MND	MNR	1,18E-03	1,57E-03	9,80E-05	-5,60E-02
Ecotoxicity (freshwater)	CTUe	8,46E+01	1,48E-01	2,22E+01	1,07E+02	1,02E+00	2,62E-02	MND	MND	MND	MND	MND	MND	MND	MNR	2,33E-01	1,23E+00	1,41E-02	-6,15E+01
Human toxicity, cancer	CTUh	1,58E-08	4,17E-12	4,07E-10	1,62E-08	7,40E-11	1,54E-12	MND	MND	MND	MND	MND	MND	MND	MNR	1,05E-11	3,67E-11	3,53E-13	-1,16E-08
Human tox. non-cancer	CTUh	6,13E-08	1,38E-10	1,26E-08	7,40E-08	6,66E-10	5,96E-11	MND	MND	MND	MND	MND	MND	MND	MNR	2,63E-10	1,59E-09	9,24E-12	-4,47E-08
SQP ⁷⁾	-	9,12E+00	1,12E-01	8,05E+00	1,73E+01	2,76E-01	4,46E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,74E-01	5,23E-01	4,63E-02	-6,73E+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	2,64E+00	1,89E-03	2,26E+00	4,91E+00	1,11E-02	1,78E-04	MND	MND	MND	MND	MND	MND	MND	MNR	2,95E-03	4,04E-02	1,88E-04	-1,90E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,29E-01	4,29E-01	0,00E+00	-4,29E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	6,05E-02
Total use of renew. PER	MJ	2,64E+00	1,89E-03	2,69E+00	5,34E+00	1,11E-02	-4,28E-01	MND	MND	MND	MND	MND	MND	MND	MNR	2,95E-03	4,04E-02	1,88E-04	-1,84E+00
Non-re. PER as energy	MJ	2,75E+01	1,61E-01	1,44E+01	4,21E+01	1,58E+00	6,57E-03	MND	MND	MND	MND	MND	MND	MND	MNR	2,53E-01	2,62E-01	2,17E-02	-1,80E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	2,55E-02	2,55E-02	0,00E+00	-2,55E-02	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	3,78E-04
Total use of non-re. PER	MJ	2,75E+01	1,61E-01	1,45E+01	4,22E+01	1,58E+00	-1,89E-02	MND	MND	MND	MND	MND	MND	MND	MNR	2,53E-01	2,62E-01	2,17E-02	-1,80E+01
Secondary materials	kg	2,35E-01	5,30E-05	6,26E-03	2,41E-01	7,12E-04	1,08E-05	MND	MND	MND	MND	MND	MND	MND	MNR	8,28E-05	2,81E-04	4,55E-06	-1,71E-01
Renew. secondary fuels	MJ	3,10E-04	6,87E-07	1,03E-02	1,06E-02	2,02E-06	3,43E-08	MND	MND	MND	MND	MND	MND	MND	MNR	1,07E-06	1,43E-05	1,19E-07	-2,04E-04
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	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	2,19E-02	1,90E-05	8,59E-03	3,05E-02	1,04E-04	-4,77E-06	MND	MND	MND	MND	MND	MND	MND	MNR	2,98E-05	1,27E-04	2,37E-05	-1,15E-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	1,08E+00	2,32E-04	9,37E-02	1,17E+00	2,15E-03	1,26E-05	MND	MND	MND	MND	MND	MND	MND	MNR	3,63E-04	2,02E-03	0,00E+00	-7,97E-01
Non-hazardous waste	kg	4,67E+00	3,71E-03	2,50E+00	7,17E+00	1,82E-02	2,62E-02	MND	MND	MND	MND	MND	MND	MND	MNR	5,80E-03	5,11E-02	1,50E-01	-3,27E+00
Radioactive waste	kg	4,99E-05	1,06E-06	4,48E-05	9,58E-05	1,12E-05	1,84E-08	MND	MND	MND	MND	MND	MND	MND	MNR	1,68E-06	1,16E-06	0,00E+00	-2,63E-05

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	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	5,10E-02	5,10E-02	0,00E+00	3,78E-03	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	8,50E-01	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	MNR	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	2,97E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	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	2,60E+00	1,10E-02	1,09E+00	3,70E+00	1,24E-01	7,10E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,72E-02	2,15E-02	7,74E-04	-1,78E+00
Ozone depletion Pot.	kg CFC ₁₁ e	1,23E-07	1,94E-09	3,25E-08	1,58E-07	1,97E-08	5,67E-11	MND	MND	MND	MND	MND	MND	MND	MNR	3,06E-09	1,90E-09	2,53E-10	-7,56E-08
Acidification	kg SO ₂ e	9,61E-03	3,60E-05	4,73E-03	1,44E-02	3,16E-03	3,87E-06	MND	MND	MND	MND	MND	MND	MND	MNR	8,70E-05	2,03E-04	5,61E-06	-6,45E-03
Eutrophication	kg PO ₄ ³ e	4,86E-03	8,25E-06	2,05E-03	6,93E-03	3,53E-04	4,51E-06	MND	MND	MND	MND	MND	MND	MND	MNR	2,07E-05	6,31E-05	1,21E-06	-3,35E-03
POCP (“smog”)	kg C ₂ H ₄ e	1,24E-03	1,46E-06	1,92E-04	1,43E-03	8,14E-05	1,87E-07	MND	MND	MND	MND	MND	MND	MND	MNR	2,62E-06	7,71E-06	2,35E-07	-9,03E-04
ADP-elements	kg Sbe	3,53E-05	3,78E-08	5,37E-06	4,07E-05	1,73E-07	2,66E-09	MND	MND	MND	MND	MND	MND	MND	MNR	5,90E-08	2,51E-06	1,79E-09	-2,74E-05
ADP-fossil	MJ	2,75E+01	1,61E-01	1,45E+01	4,22E+01	1,58E+00	6,57E-03	MND	MND	MND	MND	MND	MND	MND	MNR	2,53E-01	2,62E-01	2,17E-02	-1,80E+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
16.08.2024



APPENDIX

PRODUCT PORTFOLIO INCLUDED IN SCOPE

The following list of products are included in the scope of this declaration, as represented by Self-drill screw S-MD12-14x3/4" HWH3 (item number 2099044)

Item number	Item designation	Weight [kg]
311438	Self-drill screw S-MD 8-18x1/2" HWH2	1.53
311439	Self-drill screw S-MD 8-18x3/4" HWH2	1.94
2099050	Self-drill screw S-MD1/4-14x1 1/2" HHWH3	8.76
311441	Self-drill screw S-MD8-18x1/2" PPH2	1.4
311445	Self-drill screw S-MD 10-16x1/2" HWH2	2.27
2313929	Self-drill screw S-MD10-16x3/4HHWH3(CRC)	3.2
2099051	Self-drill screw S-MD1/4-14x2" HHWH3	11.05
2313926	Self-drill screw S-MD10-16x3/4 HWH3(CRC)	2.62
311447	Self-drill screw S-MD 10-16x1" HWH2	3.39
2099041	Self-drill screw S-MD10-16x1 1/2" HWH3	4.33
2099040	Self-drill screw S-MD10-16x1 1/4" HWH3	3.79
2099052	Self-drill screw S-MD12-24x7/8" HWH4	4.43
2099047	Self-drill screw S-MD12-14x2" HWH3	7.22
2099049	Self-drill screw S-MD1/4-14x1" HHWH3	6.6
2099043	Self-drill screw S-MD10-16x3/4" PPH3	2.63
2098767	Self-drill screw S-MD10-16x5/8" HWH3	2.37
2099053	Self-drill screw S-MD12-24x1 1/4" HWH4	5.55
2098865	Drywall screw S-DD12-14x1" TPCH3 Z	4.1
2099045	Self-drill screw S-MD12-14x1" HWH3	4.17
2099054	Self-drill screw S-MD12-24x1 1/4" HWH5	5.32
311446	Self-drill screw S-MD 10-16x3/4" HWH2	2.67
2099046	Self-drill screw S-MD12-14x1 1/2" HWH3	5.74
2313928	Self-drill screw S-MD12-24x7/8 HWH4(CRC)	4.43

Item number	Item designation	Weight [kg]
2098766	Self-drill screw S-MD10-16x3/4" HWH3	2.62
2098768	Self-drill screw S-MD10-16x3/4" HHWH3	3.2
2099044	Self-drill screw S-MD12-14x3/4" HWH3	3.44
2099042	Self-drill screw S-MD10-16x5/8" PPH3	2.33
2098769	Self-drill screw S-MD10-16x1" HWH3	3.23
2099048	Self-drill screw S-MD1/4-14x3/4" HHWH3	5.61
2415107	Self-drill screw S-MD 8-18x3/4 HWH2 CRC	1.94
2415109	Self-drill screw S-MD 10-16X5/8 PPH3 CRC	2.33
312011	S-MD 10-16 X 7/8 HHWH Pilot Point	4.5
312010	S-MD 12-14x1 HHWH STITCH	4.3
2297642	S-DD 10-18 X 3/4 PTH #3	2.48
2297641	S-DD 10-16 X 5/8 PPCH #3	2.5
2297640	S-DD 10-12 X 3/4 PPTH #3	2.03