

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	Hilti Aktiengesellschaft
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-HIL-20250333-CBN1-EN
Issue date	10.07.2025
Valid to	09.07.2030

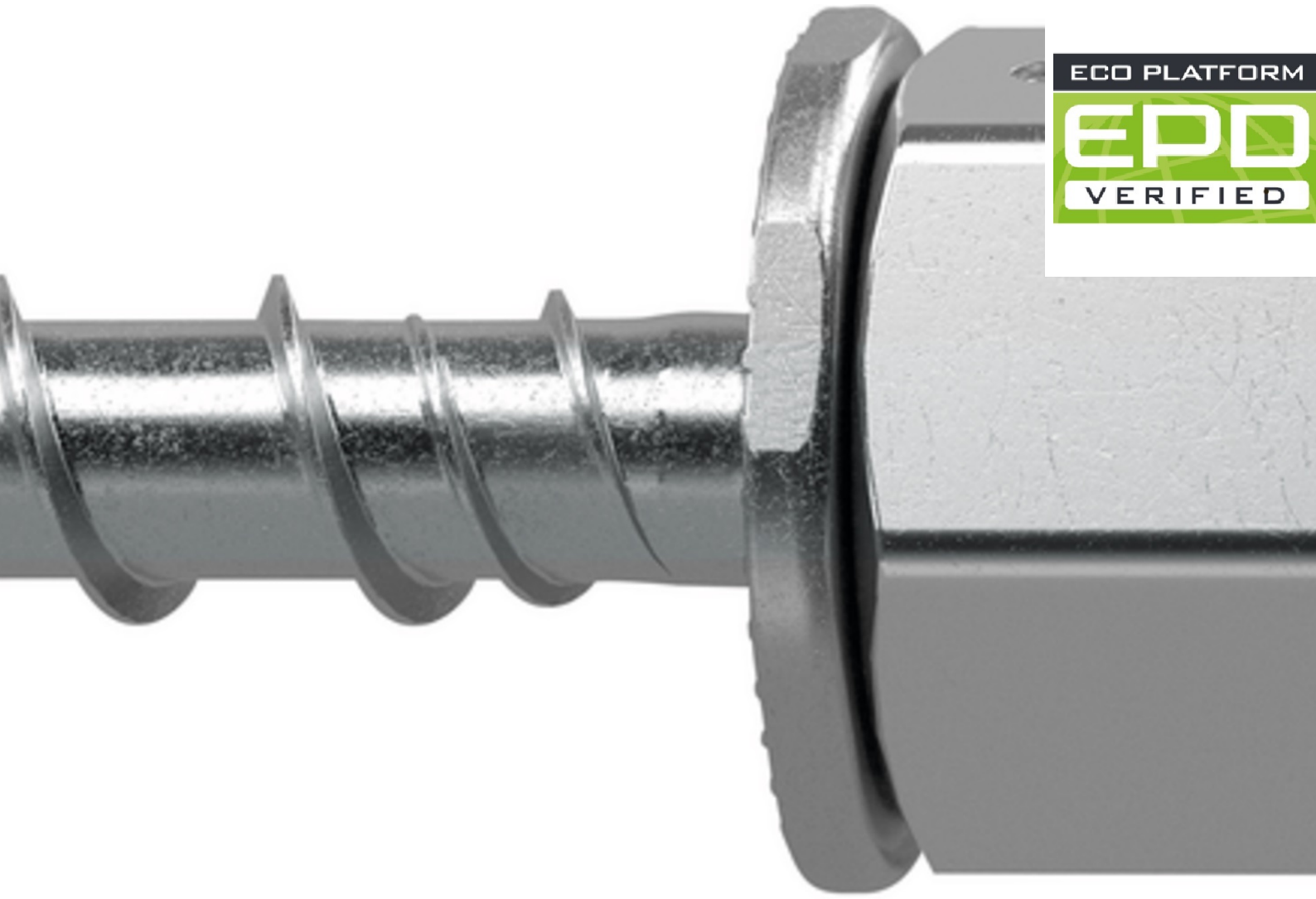
HUS3-IQ
HILTI AG

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ECO PLATFORM

EPD
VERIFIED



General Information

HILTI AG

Programme holder

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Germany

Declaration number

EPD-HIL-20250333-CBN1-EN

This declaration is based on the product category rules:

Screws, 01.06.2023
(PCR checked and approved by the SVR)

Issue date

10.07.2025

Valid to

09.07.2030

Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)

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HUS3-IQ

Owner of the declaration

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Declared product / declared unit

The declared product is the HUS3-IQ 6x35 M8 bucket from HILTI AG. The declared unit refers to 1 kg of the product. The packaging is also included in the calculation, as the product is sold by Hilti with packaging. The declared unit is expressed in [kg].

Scope:

This document refers to the HUS3-IQ 6x35 M8 bucket a representative product for the HUS-IQ portfolio. The HUS3-IQ 6x35 M8 bucket was selected as a representative product because it is the best-selling item in the portfolio. Specific data from the HILTI AG manufacturing plant in Tainan, Taiwan was collected for the preparation of the LCA. The input and output flows used in this calculation were collected as annual average consumption for the year 2024. The procedure for allocating the data to the declared unit is described in the chapter Allocation.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR		
Independent verification of the declaration and data according to ISO 14025:2011		
<input type="checkbox"/>	internally	<input checked="" type="checkbox"/> externally

Matthias Klingler,
(Independent verifier)

Product

Product description/Product definition

The HUS3-IQ is a high-performance one-click, push-to-fit anchor designed for fast and efficient installations in various construction applications, particularly for hanging threaded rod trapezes and interior finishing (e.g., suspended ceilings). With its innovative click-to-connect system, it enables up to 50% faster installation of prefabricated trapezes compared to conventional rod hangers, significantly reducing overhead strain while maintaining quality and safety. The HUS3-IQ provides the same ETA performance as the HUS3-I (ETA 10/0005 for redundant fastenings), making it a reliable and secure choice for static trapeze installations in concrete. In the European Union and European Free Trade Association (EU/EFTA) (excluding Switzerland), the HUS3-IQ falls under *Regulation (EU) No. 305/2011 (CPR)* and requires a declaration of performance based on *ETA 10/0005*, assessed according to *EAD 330232-01-0601-v03* for mechanical fasteners with variable embedment depth in concrete. National regulations apply for application and usage. The Hilti HUS3-IQ anchor is made of carbon steel and features a hex head or internally threaded head for versatile installations. It is not reusable or removable but ensures a secure and efficient installation in a drilled hole through its fast click-fit mechanism. For a full system solution, the HUS3-IQ can be combined with Hilti modular support systems and tools, making it ideal for pipe, ventilation, sprinkler, and electrical applications. The HUS3-IQ is specifically designed for trapeze installations with M8/M10 threaded rods, making it ideal for pipe, ventilation, sprinkler, and electrical system installations. It is particularly suited for repetitive installation tasks, allowing for faster and more efficient fastening in commercial, residential, industrial, and infrastructure projects.

Application

The HUS3-IQ is specifically designed for trapeze installations with M8/M10 threaded rods, making it ideal for pipe, ventilation, sprinkler, and electrical system installations. It is particularly suited for repetitive installation tasks, allowing for faster and more efficient fastening in commercial, residential, industrial, and infrastructure projects.

LCA: Calculation rules

Declared Unit

The declared product here is an anchor from HILTI AG, designated as 'HUS3-IQ 6x35 M8 bucket ', representing the HUS-IQ portfolio. The declared unit refers to 1 kg of the product. The packaging, based on 1 kg of the product, is also included in the calculation with 0,0334 kg. The following table shows the data for the declared unit.

Declared unit

Name	Value	Unit
Declared unit HUS3-IQ 6x35 M8 bucket	0	kg/m ²
HUS3-IQ 6x35 M8 bucket	1	kg
conversion factor	1	-

System boundary

Type of EPD: cradle to factory gate with modules C1-C4 and module D. The following information modules are de-fined as system boundaries in this study:

Production stage (A1- A3):

- A1, Raw material,

Technical Data

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to ETA 10/0005 and the relevant product technical data sheets.

Constructional data

Name	Value	Unit
Nominal embedment depth (acc. to ETA)	35	mm
drill hole diameter (acc. to ETA)	6	mm
Wrench size (acc. to ETA)	17	mm

Source: Hilti HUS3 Screw Anchor ETA-10/0005

Base materials/Ancillary materials

Name	Value	Unit
Screw	Carbon steel, galvanized ($\geq 5 \mu\text{m}$), Rupture elongation A5 $\leq 8\%$	
Coupler	Carbon steel, galvanized ($\geq 5 \mu\text{m}$), Rupture elongation A5 $\leq 8\%$	
Spring	Stainless steel	

Source: Hilti HUS3 Screw Anchor ETA-10/0005

Recycling content: The product is made of 98% carbon steel (20% recycled content) and 2% stainless steel (60% recycled content). The overall recycled content is weighted by the material share in the product. The total recycled mass share in the product is 19.6%. The recycled content is assumed to be 30% pre-consumer and 70% post-consumer for both types.

Reference service life

The lifetime of the HUS3-IQ is defined by the EAD 330232-01-0601-v03 and described in the ETA 10/0005 as referenced further. The provisions made in this European technical assessment are based on an assumed working life of the anchor of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

- A2, Transport to the manufacturer,
- A3, Production.

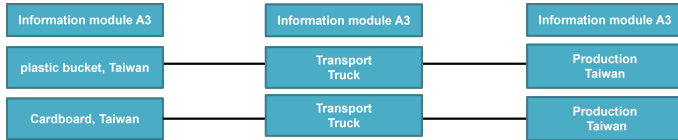
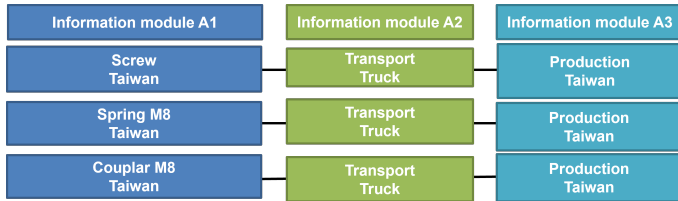
End of life (C1- C4):

- C1, Dismantling/demolition,
- C2, Transport,
- C3, Waste treatment,
- C4, Disposal.

Reuse, recovery and recycling potential (D)

To accurately record the indicators and environmental impacts of the declared unit, a total of nine information modules are considered. The information modules A1 to A3 cover the material provision, transport to the production site, and the production processes of the product itself.

The intermediate products are sourced from Asia, and transport is carried out by truck.



Information modules C1 to C4 cover the dismantling or demolition of the product from the building, transportation for

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

No renewable raw materials are used; therefore, the biogenic carbon is reported as zero. However, the packaging contains the following raw material that includes biogenic carbon.

Information on describing the biogenic carbon content at factory gate

Cardboard

Name	Value	Unit
Biogenic carbon content in product Cardboard	0.00006	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂.

End of life (C1-C4)

The demolition of the screw anchor from the building is calculated in information module C1. The demolition is carried out with an electric screwdriver. The electrical energy

waste disposal, waste treatment and final disposal of the product. Additionally, reuse, recovery and recycling potentials are addressed in information module D

Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Europe

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account. Database Sphera LCA for Experts

consumption for the tool is assumed to be 0.0038 MJ for the specified unit. The screw anchor is transported 50 km by truck to the nearest recycling plant. The shredding process is represented by the data set 'RER: Construction Waste Treatment Plant'. This includes a material loss of 3%, which is shown as landfill in the data set.

Name	Value	Unit
Collected separately waste type waste type	1	kg
Recycling	0.97	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Module D presents the substitution potential of primer steel and stainless steel through a recycling scenario.

Name	Value	Unit
Net flow steel	0,766	kg
Net flow stainless steel	0,0058	kg

LCA: Results

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 kg HUS3-IQ 6x35 M8 bucket

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ eq	3.45E+00	5.39E-04	4.71E-03	2.76E-03	0	-3.23E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ eq	3.44E+00	5.38E-04	4.66E-03	2.74E-03	0	-3.24E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ eq	7.82E-03	3.48E-07	0	0	0	1.56E-04
Global Warming Potential luluc (GWP-luluc)	kg CO ₂ eq	1.89E-03	2.82E-07	4.82E-05	2.36E-05	0	-8.77E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	1.35E-11	6.68E-15	5.52E-16	5.39E-15	0	-2.09E-17
Acidification potential of land and water (AP)	mol H ⁺ eq	1.69E-02	7.99E-07	1.85E-05	1.39E-05	0	-2.02E-04
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	1.81E-06	1.47E-10	1.26E-08	6.87E-09	0	-4.75E-08
Eutrophication potential aquatic marine (EP-marine)	kg N eq	2.9E-03	2.17E-07	8.9E-06	6.47E-06	0	-2.9E-05
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	3.17E-02	2.36E-06	9.64E-05	7.01E-05	0	-3.14E-04
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	9.26E-03	6.08E-07	1.66E-05	1.72E-05	0	-8.82E-05
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	1.93E-06	3.96E-11	3.1E-10	2.79E-09	0	-9.52E-07
Abiotic depletion potential for fossil resources (ADPF)	MJ	3.97E+01	9.79E-03	5.96E-02	5.07E-02	0	-4.02E-01
Water use (WDP)	m ³ world eq deprived	1.32E-01	2.97E-05	1.87E-05	4.88E-04	0	-1.34E-02

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 kg HUS3-IQ 6x35 M8 bucket

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	3.22E+00	1.63E-03	4.39E-03	4.97E-03	0	-7.55E-02
Renewable primary energy resources as material utilization (PERM)	MJ	1.35E-02	0	0	0	0	0
Total use of renewable primary energy resources (PERT)	MJ	3.23E+00	1.63E-03	4.39E-03	4.97E-03	0	-7.55E-02
Non renewable primary energy as energy carrier (PENRE)	MJ	3.83E+01	9.79E-03	5.96E-02	5.07E-02	0	-4.02E-01
Non renewable primary energy as material utilization (PENRM)	MJ	1.41E+00	0	0	0	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	3.97E+01	9.79E-03	5.96E-02	5.07E-02	0	-4.02E-01
Use of secondary material (SM)	kg	1.98E-01	0	0	0	0	7.72E-01
Use of renewable secondary fuels (RSF)	MJ	0	0	0	0	0	0
Use of non renewable secondary fuels (NRSF)	MJ	0	0	0	0	0	0
Use of net fresh water (FW)	m ³	4.46E-03	1.92E-06	2.11E-06	1.33E-05	0	-5.51E-04

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 kg HUS3-IQ 6x35 M8 bucket

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	3.79E-09	1.95E-12	2.16E-12	6.99E-12	0	-3.69E-06
Non hazardous waste disposed (NHWD)	kg	4.55E-02	2.47E-06	7.84E-06	1.28E-05	0	3.62E-04
Radioactive waste disposed (RWD)	kg	7.66E-04	1.24E-06	7.85E-08	6.43E-07	0	-2.62E-06
Components for re-use (CRU)	kg	0	0	0	0	0	0
Materials for recycling (MFR)	kg	0	0	0	1E+00	0	0
Materials for energy recovery (MER)	kg	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	1.09E-03	0	0	0	0	0
Exported thermal energy (EET)	MJ	1.93E-03	0	0	0	0	0

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1 kg HUS3-IQ 6x35 M8 bucket

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Incidence of disease due to PM emissions (PM)	Disease incidence	ND	ND	ND	ND	ND	ND
Human exposure efficiency relative to U235 (IR)	kBq U235 eq	ND	ND	ND	ND	ND	ND
Comparative toxic unit for ecosystems (ETP-fw)	CTUe	ND	ND	ND	ND	ND	ND
Comparative toxic unit for humans (carcinogenic) (HTP-c)	CTUh	ND	ND	ND	ND	ND	ND

Comparative toxic unit for humans (noncarcinogenic) (HTP-nc)	CTUh	ND	ND	ND	ND	ND	ND
Soil quality index (SQP)	SQP	ND	ND	ND	ND	ND	ND

Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. 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 or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators “abiotic depletion potential for non-fossil resources”, “abiotic depletion potential for fossil resources”, “water (user) deprivation potential, deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans – cancerogenic”, “Potential comparative toxic unit for humans - not cancerogenic”, “potential soil quality index”. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

References

EN 15804

EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

ISO 14025

EN ISO 14025:2011, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

EAD 330747-00-0601

European Assessment Document — Fasteners for use in concrete for multiple use for non-structural systems.

EAD 330232-01-0601-v03

European Assessment Document — Mechanical fasteners for use in concrete.

ETA-10/0005

European Technical Assessment — Hilti HUS3 Screw Anchor

IBU 2021

General Instructions for the EPD Programme of Institut Bauen und Umwelt e.V., Version 2.0.

Berlin: Institut Bauen und Umwelt e.V., 2021. www.ibu-epd.de

Produktkategorienregeln Bauprodukte Teil A

Produktkategorienregeln für Bauprodukte und Dienstleistungen — Rechenregeln für die Ökobilanz und Anforderungen an den Hintergrundbericht, Version 1.4. Institut Bauen und Umwelt e.V., 04.2024.

Product Category Rules Part B

Requirements on the EPD for Screws
01.06.2023

Regulation (EU) No. 305/2011

Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

Sphera

LCA for Experts: Ganzheitliche Bilanzierung. Leinfelden-Echterdingen: Sphera Solution GmbH (Hrsg.). Available at: www.gabi-software.com/deutsch/index/ (Accessed: 07.11.2023).



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