ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	fischerwerke GmbH & Co. KG
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-FIW-20260589-CBI1-EN
Issue date	09/11/2026
Valid to	08/11/2031

FNA II nail anchor – corrosion-resistant steel in the versions R and HCR

fischerwerke GmbH & Co. KG

Institut Bauen und Umwelt e.V.

ECO PLATFORM EPD VERIFIED

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General Information

fischerwerke GmbH & Co. KG

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-FIW-20260589-CBI1-EN

This declaration is based on the product category rules:

Wall plugs made of plastic and metal, 01/08/2021
(PCR checked and approved by the SVR)

Issue date

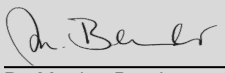
09/11/2026

Valid to

08/11/2031



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



Dr. Martina Bender
(Managing Director Institut Bauen und Umwelt e.V.)

FNA II nail anchor – corrosion-resistant steel in the versions R and HCR

Owner of the declaration

fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72178 Waldachtal
Germany

Declared product / declared unit

The declared unit is defined as 1 kilogram of nail anchor FNA II in the versions R and HCR.

Scope:

The declared unit is defined as 1 kilogram of nail anchor FNA II in the versions R and HCR, based on the representative product FNA II 6X30/30 R.
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 evidence.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard is abbreviated 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
☐ internal ☒ external



Sr Lucas Berman,
(Independent verifier)

Product

Product description/Product definition

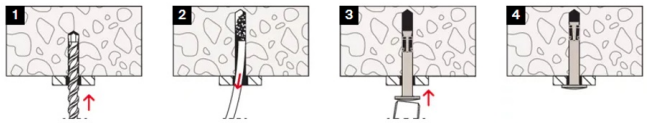
The fischer nail anchor FNA II is available in two corrosion-resistant versions. The R version is made from stainless steel, while the HCR version is made from high corrosion-resistant steel. In the following, these variants are collectively referred to as the corrosion-resistant versions (R and HCR).

The anchor is pushed into a predrilled cylindrical drill hole and expanded by loading. The FNA II nail anchor in the versions R and HCR has a European Technical Approval and is classified in fire resistance class R 120. The assortment is offered with different head shapes: with nail head, with nail head and pre-mounted washer or with thread and flange nut.
For placing the product on the market in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland), *Regulation (EU) No. 2024/3110 (CPR)* applies. The product requires a declaration of performance taking into account ETA no ETA-06/0175 of 2 March 2021 for fischer nail anchor FNA II.

Application

The FNA II in the versions R and HCR is mounted in a few hammer blows or with a hammer drill. Required equipment includes a drilling machine and dust extraction system. Installation must comply with applicable national occupational health and safety regulations.

The nail anchor can be installed manually or using the following dedicated setting tools:
FNA S-SBO: Slip-on attachment for drills
FNA S-SDS: Series installation with drilling hammer
FNA S-H: Manual installation of mounting rails.



The FNA II with nail head is intended for push-through installation.
The FNA II M6 is suitable for both pre-positioned and push-through installation.

According to the European Technical Approval, the product is approved for use in both cracked and non-cracked concrete of strength classes C12/15 to C50/60 for multiple fixings in non-structural applications.
In addition, suitable base materials include solid sand-lime brick, natural stone with dense structure, and prestressed hollow-core concrete slabs.

Technical data

Constructional data

Name	Value	Unit
Wall plug diameter	6	mm
Length	42 - 160	mm
Effective embedment depth	25, 30	mm
Nominal drill bit diameter	6	mm
Depth of drill hole	31, 36	mm
Maximum torque moment (only threaded types)	4	Nm
Minimum thickness of member	80	mm
Maximum thickness of fixture	400	mm

The FNA II nail anchor is classified as fire resistance class R 120 in accordance with *DIN EN 1992-1-2:2010-12* and *TR 020* (Evaluation of Anchorages in Concrete concerning Resistance to Fire).

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *ETA-06/0175* of 2 March 2021 for fischer nail anchor FNA II.

Base materials/auxiliary materials

The products represented here are all made from the same materials.

Name	Value	Unit
Raw material: corrosion-resistant steel	100	%

This product contains substances listed in the *Candidate List of Substances of Very High Concern for Authorisation (SVHC)* (date: 26.05.2026) exceeding 0.1 percentage by mass: NO

This product contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on the *Candidate List of Substances of Very High Concern for Authorisation (SVHC)* (date: 26.05.2026), exceeding 0.1 percentage by mass: NO

Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the *(EU) Biocidal Products Regulation No. 528/2012)*: NO

Reference service life

No modules from the use phase have been declared. No reference service life is stated for this reason.

LCA: Calculation rules

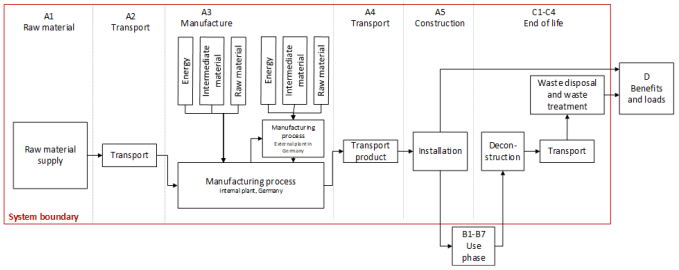
Declared unit

The declared unit is defined as 1 kilogram of nail anchor FNA II in the versions R and HCR.

Declared unit

Name	Value	Unit
Declared unit	1	kg
Gross density (average)	8050	kg/m^3
Conversion factor	65,18	pce / kg

System boundary



The system boundaries selected are cradle to gate with options, modules A4 - A5, modules C1 – C4, and module D.

Modules A1 - A3 comprise the following activities:

- Provision of energy
- Provision of raw materials and further processing to coil and sheet material
- Transportation of raw materials
- Provision of operating and auxiliary materials and packaging
- Transportation between the production stages within Germany
- Production of nail and clip (cold forming, punching, metal forming, pickling)
- Assembly and packaging
- Treatment of production waste (material losses during cold forming and punching)

Module A4 – A5 include:

- Transportation to the construction site
- Energy for the installation process
- Disposal of product packaging

Module C1 – C4 include:

- Demolition of the entire building (proportional to weight)
- Transportation to the waste disposal site
- Sorting in the sorting plant
- End-of-life scenario for steel:
  Recycling rate: 90 %
  Landfill: 5 %
  Incineration 5 %

Module D accounts for the net environmental benefits and loads beyond the system boundary resulting from:

- Recycling of steel scrap (90 % of post-consumer steel content).
- Energy recovery through the incineration of cardboard packaging
- No carbon offsetting or compensation measures are included in the calculations.

Geographic representativeness

Country or region in which the declared product system is manufactured, used or handled at the end of the product's life span: Global

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all data sets to be compared were created according to *EN 15804* and the building context and product-specific performance characteristics are taken into account. The database referred to in this study is ecoinvent allocation, cut-off EN 15804, version 3.12.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

Information on describing the biogenic carbon content at factory gate

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.01	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

Electricity mix (A3)

The production sites of fischerwerke GmbH & Co. KG use 100 % renewable energy, in 01.01.-31.12.2025 consisting of the following energy sources:

Energy source	Origin	Emission factors of carbon footprint
Biomass	Hungary	7,47E-02 kg CO2Eq/kWh
Geothermal energy	Finland	6,93E-02 kg CO2Eq/kWh
Geothermal energy	Iceland	2,52E-02 kg CO2Eq/kWh

Transport to the building site (A4)

The transport from the production location to the construction site is carried out by a freight lorry with a distance of 100 km. Based on this value, the exact transport distance can be scaled up on a case-by-case basis.

Name	Value	Unit
Transport distance	100	km

The underlying dataset represents the transport of 1 metric ton of goods over a distance of 1 km. The vehicle fleet operates on diesel and reflects a fleet average, covering different lorry classes and EURO emission standards. The average load factor includes empty return trips.

Installation into the building (A5)

Name	Value	Unit
Electricity consumption	0.123	kWh
Material loss	-	kg
Output substances following waste treatment on site (packaging)	0.051	kg

End of life (C1-C4)

Name	Value	Unit
Collected separately waste type steel	1	kg
Collected as mixed construction waste	-	kg
Reuse	-	kg
Recycling	0.9	kg
Energy recovery	-	kg
Landfilling	0.05	kg
Incineration	0.05	kg

Waste scenario according to NMD ID 50.

C1: Since the nail anchor is integrally embedded in the structure and cannot be removed without substantial demolition effort, it is assumed to remain in place until the end-of-life of the entire structure. The impacts related to deconstruction are assigned to module C1 (deconstruction/demolition) and are modelled using an *ecoinvent* dataset for demolition machinery operation.

C3 - C4: Steel is considered fully recyclable without quality loss. The end-of-life scenario follows the default assumptions of NMD Dataset ID 50, with 90 % of the steel allocated to recycling, 5 % to incineration and 5 % to landfill. The corresponding end-of-life processes are accounted for in modules C3 and C4.

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

Name	Value	Unit
Collection rate	90	%

Module D accounts for avoided burdens from the recycling of post-consumer steel scrap and from electrical energy recovery through the incineration of cardboard packaging waste beyond the system boundary.

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	X	X	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 nail anchor FNA II – R and HCR

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	4.35E+00	1.64E-02	8.91E-02	4.68E-03	4.57E-03	1.98E-02	1.84E-03	-9.43E-01
GWP-fossil	kg CO_2 eq	4.36E+00	1.63E-02	8.69E-02	4.68E-03	4.55E-03	2.01E-02	1.83E-03	-9.32E-01
GWP-biogenic	kg CO_2 eq	-1.88E-02	2.67E-05	5.06E-02	7.51E-07	7.46E-06	1.67E-02	6.24E-06	-9.94E-03
GWP-luluc	kg CO_2 eq	7.23E-03	5.43E-05	1.76E-04	4.69E-07	1.52E-05	2.46E-05	4.71E-06	-9.81E-04
ODP	kg CFC11 eq	5.77E-08	2.76E-10	6.25E-10	7.13E-11	7.7E-11	2.73E-10	3.8E-11	-6.49E-09
AP	mol H^+ eq	4.65E-02	7.48E-05	4.6E-04	1.61E-05	2.09E-05	1.92E-04	9.85E-06	-5.31E-03
EP-freshwater	kg P eq	3.67E-03	1.74E-06	4.23E-05	1.49E-07	4.87E-07	1.08E-05	1.96E-07	-9.7E-04
EP-marine	kg N eq	5.61E-03	2.86E-05	9.23E-05	6.83E-06	8E-06	5.14E-05	3.82E-06	-9.41E-04
EP-terrestrial	mol N eq	6.04E-02	3.07E-04	9.11E-04	7.46E-05	8.57E-05	5.68E-04	4.12E-05	-9.78E-03
POCP	kg NMVOC eq	2.02E-02	1.06E-04	2.66E-04	2.67E-05	2.97E-05	1.73E-04	1.45E-05	-3E-03
ADPE	kg Sb eq	2.49E+01	5.45E-08	5.38E-07	1.69E-09	1.52E-08	7.36E-07	4.98E-09	-2.66E-05
ADPF	MJ	6.99E+01	2.29E-01	1.14E+00	6.02E-02	6.41E-02	2.68E-01	3.22E-02	-1.06E+01
WDP	m^3 world eq deprived	2.35E+00	1.31E-03	2.2E-02	1.51E-04	3.66E-04	4.83E-03	7.7E-04	-3.72E-01

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 kg nail anchor FNA II – R and HCR

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	2.09E+01	3.52E-03	1.83E-01	3.76E-04	9.83E-04	2.6E-02	4E-04	-2.9E+00
PERM	MJ	0	0	0	0	0	0	0	0
PERT	MJ	2.09E+01	3.52E-03	1.83E-01	3.76E-04	9.83E-04	2.6E-02	4E-04	-2.9E+00
PENRE	MJ	6.99E+01	2.3E-01	1.14E+00	6.02E-02	6.42E-02	2.68E-01	3.22E-02	-1.06E+01
PENRM	MJ	0	0	0	0	0	0	0	0
PENRT	MJ	6.99E+01	2.3E-01	1.14E+00	6.02E-02	6.42E-02	2.68E-01	3.22E-02	-1.06E+01
SM	kg	4.16E-01	1.01E-04	1.98E-04	2.49E-05	2.83E-05	2.14E-04	1.37E-05	7.91E-01
RSF	MJ	9.78E-03	1.31E-06	1.41E-06	6.55E-08	3.65E-07	8.18E-06	1.79E-07	-2.74E-04
NRSF	MJ	0	0	0	0	0	0	0	0
FW	m^3	1.81E+00	3.35E-05	5.16E-04	3.62E-06	9.37E-06	-5.76E-04	1.83E-05	-8.55E-03

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 kg nail anchor FNA II – R and HCR

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	4.2E+00	1.56E-03	2.18E-02	1.95E-04	4.35E-04	2.16E-02	1.67E-04	-3.98E+00
NHWD	kg	1.11E+01	2.45E-02	2.15E-01	9.73E-04	6.85E-03	5.06E-01	1.03E-01	-2.72E+00
RWD	kg	2.46E-04	4.78E-08	2.74E-06	5.91E-09	1.34E-08	1.67E-07	5.48E-09	-1.55E-05
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	2.61E-03	6.34E-06	4.65E-02	1.05E-06	1.77E-06	4.5E-01	2.89E-04	-7.31E-04
MER	kg	2.75E-05	1.41E-08	6.21E-08	8.11E-10	3.93E-09	3.04E-08	1.34E-09	-1.41E-05
EEE	MJ	2.87E-02	2.31E-05	1.28E-03	2.85E-06	6.47E-06	7.44E-05	2.33E-04	-3.91E-03
EET	MJ	4.12E-02	3.41E-05	5.83E-05	1.34E-06	9.53E-06	3.04E-05	4.72E-05	-1.73E-02

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 kg nail anchor FNA II – R and HCR

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	5.59E-07	1.58E-09	4.44E-09	3.39E-10	4.4E-10	6.51E-09	2.18E-10	-8.2E-08
IR	kBq U235 eq	4.31E-01	1.99E-04	1.13E-02	2.51E-05	5.57E-05	6.86E-04	2.3E-05	-6.17E-02
ETP-fw	CTUe	7.82E+01	5.36E-02	2.65E-01	6.09E-03	1.5E-02	1.34E-01	6.15E-03	-1.3E+01
HTP-c	CTUh	5.72E-09	3.86E-12	1.68E-11	2.14E-12	1.08E-12	1.12E-11	4.04E-13	-9.03E-10
HTP-nc	CTUh	1.26E-07	1.56E-10	9.24E-10	1.02E-11	4.35E-11	6.94E-10	1.41E-11	-2E-08
SQP	SQP	4.86E+01	1.83E-01	2.23E-01	4.15E-03	5.11E-02	4.07E-01	4.37E-02	-4.89E+00

PM = Potential incidence of disease due to PM emissions; IR = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans (carcinogenic); HTP-nc = Potential comparative toxic unit for humans (not carcinogenic); SQP = Potential soil quality index

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 – carcinogenic”, “Potential comparative toxic unit for humans - not carcinogenic”, “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.

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ISO 14040
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SVHC
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Web links

https://www.fischer-international.com/en
https://www.fischer.de

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