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-20240056-IBA1-EN
Issue date	12.12.2024
Valid to	11.12.2029

Speed Sleeve

Hilti AG

Institut Bauen und Umwelt e.V.

ECO PLATFORM EPD VERIFIED

www.ibu-epd.com | https://epd-online.com

1. General Information

Hilti AG

Programme holder

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

Declaration number

EPD-HIL-20240056-IBA1-EN

This declaration is based on the product category rules:

Pre-formed fire protection systems for cable and duct insulation , 01.08.2021
(PCR checked and approved by the SVR)

Issue date

12.12.2024

Valid to

11.12.2029

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

Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Speed Sleeve

Owner of the declaration

Hilti Aktiengesellschaft
Feldkircher Strasse 100
9494 Schaan
Liechtenstein

Declared product / declared unit

The declared product is Hilti Firestop Speed Sleeve (CP 653 / CFS-SL GA). The declared unit is one unit of the HIlti Firestop Speed Sleeve CP 653 / CFS-SL GA weighing 1,608kg and with an estimated volume of 0,0003242m³.
The packaging is also included in the calculation. The declared unit is indicated in kg. This product is used as reference for a product family as it has the highest product weight of all.

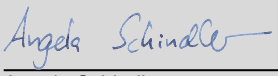
Scope:

This document refers to the Hilti Firestop Speed Sleeve CP 653 / CFS-SL GA. Specific data from the Hilti manufacturing plant in Malaysia was used for generating the Life Cycle Assessment. It is based on data from 2022 which corresponds to the annual average.
This is a manufacturer's declaration. The declaration refers to a specific product from one of the manufacturer's factories.
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
☐ internally ☒ externally



Angela Schindler,
(Independent verifier)

2. Product

2.1 Product description/Product definition

The Hilti Firestop Speed Sleeve CP 653 / CFS-SL GA is a fire protection sleeve for wall and floor/ceiling applications.
This document refers to the entire CP 653 / CFS-SL GA product family. The variant with the highest mass (CFS-SL GA L) was used as a basis for the calculation.
Product description:
· Fully functional immediately after installation
· Easy penetration of cables
· Quick and easy to install and inspect
· Rubber smoke gaskets eliminate the need for sealant or putty
· Individual sleeves can be ganged (using the Hilti "Gangplate" CFS-SL GP).

For the placing of the product on the market in the European Union/European Free Trade Association /EU/EFTA) (with the exception of Switzerland) the Regulation (EU) No. 305/2011(CPR) applies. The product needs a declaration of performance taking into consideration ETA no. 20/1234:2024/02/19, Hilti Firestop Sleeve CFS-SL GA and the CE marking. For the application and use the respective national provisions apply.

2.2 Application

Firestop for penetrations of single cables and cable bundles.

· Suitable for small to medium-sized circular openings in walls, ceilings and floors.

· For use on drywall, concrete, masonry, sandwich panels, wood substrate.

· Ideal solution when cable configurations are regularly changed, such as in Data Centers, Server Rooms, Hospitals, Event Halls and Production Plants.

2.3 Technical Data

Products for use at temperatures between -5 and +50 °C.
Indoor Use Only.

Constructional data

Name	Value	Unit
Density Estimated weighted average	4,96	g/cm³
Application temperature	-5 - 50	°C
Storage temperature	-5 - 50	°C
Temperature resistance	-30 - 75	°C
Reaction to fire EN 13501-1	Class E	-
Halogenated flame retardants	No	-
Mold growth acc. to ASTM G 21 and ISO 846 (inlay)	No	-

Product performance values corresponding to the Declaration of Performance in terms of its essential characteristics according to ETA-20/1234 of 2024/02/19 Hilti Firestop Sleeve CFS-SL GA.

2.4 Delivery status

This document refers to the entire CP 653 / CFS-SL GA product family. The variant with the highest mass (CFS-SL GA L) was used as a basis for the calculation.

Overview of product variants:

Firestop Speed Sleeve - S

(CFS-SL S, CFS-SL GA S, CP 653 2"):

- Diameter: 63 mm
- Length of metal sleeve: 266 mm
- Total length: 327 mm

Firestop Speed Sleeve - M

(CFS-SL M, CFS-SL GA M, CFS-SL GA M ILS, CP 653 4"):

- Diameter: 113 mm
- Length of metal sleeve: 266 mm
- Total length: 359 mm

Firestop Speed Sleeve - L

(CFS-SL L, CFS-SL GA L):

- Diameter: 113 mm
- Length of metal sleeve: 366 mm
- Total length: 461 mm

2.5 Base materials/Ancillary materials

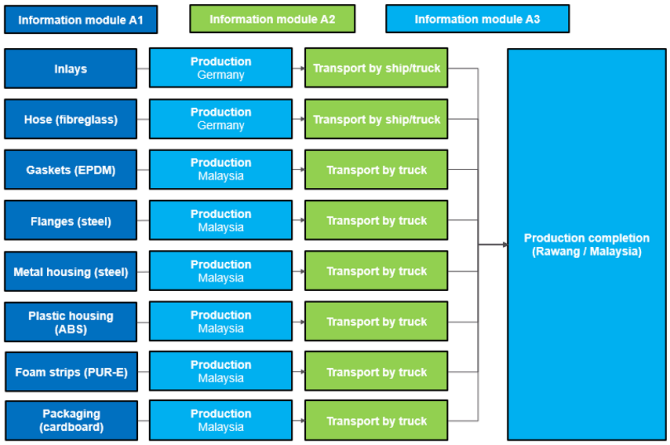
Material distribution

Designation	Value	Unit
Fibreglass, hose	62.4	g
EPDM, gaskets	72.0	g
Steel, flange	308.4	g
ABS, plastic housing	355.6	g
Steel, metal housing	610.6	g
PUR-E, foam strips	2.7	g
Inlays	196.3	g
Cardboard, packaging	232.0	g
Total	1.84	g

Contains substances on the candidate list (date: 27.06.2024) exceeding 0.1 mass percentage in at least one partial product: no
Contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 mass percentage in at least one partial product: 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 Ordinance on Biocide Products): no

2.6 Manufacture

The plastic parts of the housing are manufactured by injection moulding of ABS granulate. The fibreglass hose and the inlays are then fixed inside the plastic housing. The adhesive foam strips are glued to the plastic housing. The pre-assembled plastic housing and its internal components are then pushed fully inside the cylindrical metal housing. The final sleeve is packed into a cardboard box along with 2 metal flanges and 2 rubber gaskets.
The inlays and the fibreglass hose are produced in Germany and transported to Malaysia by ship. Onward transport is by truck. All other components are exclusively transported by truck. Country-specific power mixes are considered for the production processes.
The following process diagram depicts the production process on which this is based.



2.7 Environment and health during manufacturing

The plant in which the firestop sleeve is produced falls under Hilti's Code of Conduct (CoC) for Suppliers.

This is a public and binding document (part of the contract with the supplier) which outlines the following environmental requirements:

- The supplier-/-manufacturing plant must strive to avoid/minimize harmful emissions (waste, air, soil, water).

- The supplier-/-manufacturing plant must contribute to recycling and reusing materials and products

- The supplier-/-manufacturing plant must continuously improve energy efficiency (in production processes and in handling materials / during transport).

- The supplier-/-manufacturing plant must meet the requirements in the CRC Questionnaire.

Suppliers may not handle chemicals in a way that has a negative impact on the environment.

The injection moulding process is the most energy-consuming step during production at this manufacturing plant. As most steps are carried out manually, energy consumption is low during the manufacturing process.

Environmental and health impacts in the plant are evaluated during recurring audits and site inspections.

2.8 Product processing/Installation

The product is delivered with an Instruction for Use outlining the basic steps for installation:

1) Drilling/Preparing the opening

2) Inserting and positioning the sleeve

3) Applying the EPDM gaskets on both sides and using the metal flanges to fix them to the substrate (wall/ceiling)

4) Open/Close function for inserting cables

As the firestop elements are integrated in the sleeve no additional wet-applied products (e.g. sealant) are required for installation.
Firestop sleeves must always be installed in accordance with Hilti specifications and approvals (taking into consideration the substrate, annular gap size, cable types, etc.).

2.9 Packaging

The Firestop Sleeves are packed individually into cardboard boxes.
These cardboard boxes are not a component of the product and can be recycled.
The packaging size varies depending on the size of the product in an effort to reduce materials and waste.
The firestop sleeves are supplied in export boxes and on reusable pallets

2.10 Condition of use

The Firestop sleeve can remain in the firestop opening if there is a change of use and cables can be added as required. Cables can also be removed retrospectively at any time.

2.11 Environment and health during use

No environmental or health risks for users of buildings are expected during use.

2.12 Reference service life

Since Module B the Use Phase is not considered, a Reference Service Life is not required.

2.13 Extraordinary effects

Fire

Building materials classification E in accordance with EN 13501-1.

Fire protection

Name	Value
Building material class	E
Burning droplets	Not applicable in class E
Smoke gas development	Not applicable in class E

Water

The firestop sleeves should not be exposed to water.

Mechanical destruction

In the event of a mechanical destruction of the firestop sleeves, the firestop opening must be resealed or repaired.

2.14 Re-use phase

The firestop Speed sleeves can be reused for filling other firestop openings at any time. The firestop sleeves can remain in the firestop opening if there is a change of use and cables can be added as required. Cables can also be removed retrospectively at any time.

2.15 Disposal

The firestop sleeves are not made from hazardous materials and can be disposed of as household waste - waste code: 20 03 01 01.
The Steel Flange may be recovered for recycling.

2.16 Further information

Further information is available on the Hilti website: www.hilti.group

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is one Hilti Firestop Speed Sleeve CP 653/ CFS-SL GA weighing 1.608 kg with an estimated, calculated

volume of 0,0003242 m³. The packaging is also included in the calculation at 0.232 kg.
According to the PCR, the declared unit is to be stated in m³. However, as this is a product that is used for cable insulation, this information does not make sense for technical reasons according to the manufacturer. However, the above volume has been calculated. The following table shows the data of the declared unit.

Name	Value	Unit
Declared Unit	1	piece
Declared Unit Weight	1,608	kg
Declared Unit Volume Calculated, estimated volume	3,24E-4	m³
Average Density	4960	kg/m³

3.2 System boundary

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

Production stage (A1- A3):
- A1, raw material extraction,
- A2, transport to the manufacturer,
- A3, production.

In the production stage, the provision of materials, transportation to the production site and the production of the individual components and the product itself are mapped. In the case of the Speed Sleeve product, the inlay and the hose are pre-produced in Germany and transported by truck and container ship to the Rawang site in Malaysia for finalization of the product. The seal, flange, metal housing and foam strips are pre-produced in Ma-laysia and transported to Rawang by truck. The plastic housing is injection molded at the production plant in Rawang and finalized together with the other components.

End of life (C1- C4):
- C1, dismantling/demolition,
- C2, transport,
- C3, waste treatment ,
- C4, disposal.

The dismantling from the building is calculated in C1. As this is a modular design, the speed sleeves can be removed from the building manually. In C2, the construction waste is transported 50 km by truck to the nearest waste treatment plant. In the waste treatment plant, the construction waste is crushed, resulting in a mass loss of 3%. Following waste treatment, the inlay, the plastic housing, the foam strip and the seal are thermally recycled in a waste incineration plant and the hose is landfilled in C4. The metal housing and the flange of the product are recycled.

Reuse, recovery and recycling potential (D)

Module D shows the recycling potential of the steel scrap from the housing and flange via the 'Value of Scrap'. The thermal and electrical energy credits from thermal recycling in the waste incineration plant are also shown.

In order to accurately record the indicators and environmental impacts of the declared unit, a total of 8 information modules are considered. The information modules A1 to A3 describe the provision of materials, transport to the production site and the production processes of the product itself.

The primary products are sourced from the European Union and South East Asia. They are transported by lorry and ship.

3.3 Estimates and assumptions

The electricity mixes and other background data are calculated country-specifically for the production processes. No assumptions or restrictions were made for recipe contents or processes

3.4 Cut-off criteria

All energy and mass inputs were taken into account.
The cut-off criterion according to EN15804+A2 is not applied.

3.5 Background data

The background data base of the LCA for Expert and ecoinvent 3.9.1 databases, to which this study also refers, is documented under the following link (Sphera).
https://lcadatabase.sphera.com

3.6 Data quality

Specific data from the HILTI AG plant in Malaysia was collected for the preparation of the LCA.
The background data from the LCA for Experts database originates from the year 2023 and is therefore highly relevant.
The data quality is classified as sufficient.

3.7 Period under review

The input and output flows used in this calculation are based on the annual average for 2022.

3.8 Geographic Representativeness

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

3.9 Allocation

The allocation of co-products takes place in the information modules A1-A3.
The production waste from the injection moulded components is thermally utilised. The resulting electrical and thermal energy credits are fully charged in the in modules A1-A3.
No further allocations are made.

3.10 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. *LCA for Experts and ecoinvent 3.9.1 Databases.*

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

No renewable raw materials are used in the product. Therefore, the biogenic carbon is shown as zero.

Information on describing the biogenic carbon content at factory gate

The values for biogenic carbon are not shown in the results, as A5 is not declared. The biogenic carbon is released in A3 and thus considered CO^2 neutral.

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.0955	kg C

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

End of life (C1-C4)

Speed Sleeve can be removed from the building by hand, as it is a modular construction that requires no additional energy supply or machinery. Module C1 is therefore declared as 0. The construction waste is transported 50 km by truck to the waste treatment plant.
The rubble is crushed at the waste treatment plant.
A material loss of 3 % is assumed. Following the waste treatment plant, the inlay, hose, housing, foam strips and the seal are thermally combusted. As the hose is made of glass fibers and does not burn, it is then landfilled. Landfilling was modeled after waste treatment so that the mass fraction of the hose is not charged to the incineration plant.

Name	Value	Unit
Collected separately waste type waste type	1.608	kg
Recycling	0.891	kg
Energy recovery	0.609	kg
Landfilling	0.06	kg

Wiederverwendungs- Rückgewinnungs- und Recyclingpotential (D), relevante Szenarioangaben

Module D shows the substitution potential of primer steel through a recycling scenario. The plastic components are thermally combusted, which generates thermal and electrical energy

Name	Value	Unit
Waste for recycling the declared unit (net flow)	0,789	kg
Electrical energy	2,611	MJ
Thermal energy	4,859	MJ

5. LCA: Results

The impact assessment of environmental loads is carried out in accordance with EN 15804+A2 (EF 3.1) .The characterization factors are selected in accordance with PCR

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 Piece CFS-SL GA / CP 653

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO_2 eq	8.78E+00	0	8.21E-03	1.1E+00	9.22E-04	-1.99E+00
Global Warming Potential fossil fuels (GWP-fossil)	kg CO_2 eq	8.76E+00	0	7.88E-03	1.01E+00	9.22E-04	-1.99E+00
Global Warming Potential biogenic (GWP-biogenic)	kg CO_2 eq	9.48E-03	0	3.29E-04	9.12E-02	-5.53E-06	5.13E-03
Global Warming Potential luluc (GWP-luluc)	kg CO_2 eq	9.61E-03	0	1.04E-06	8.05E-05	5.4E-06	-2.33E-04
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	4.33E-09	0	1E-15	1.85E-13	2.43E-15	-3.08E-12
Acidification potential of land and water (AP)	mol H^+ eq	3.06E-02	0	3.84E-05	7.16E-04	6.39E-06	-3.93E-03
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	1.88E-05	0	2.11E-09	6.81E-08	2.05E-09	-1.24E-06
Eutrophication potential aquatic marine (EP-marine)	kg N eq	8.61E-03	0	1.88E-05	3.39E-04	1.65E-06	-7.16E-04
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	9.21E-02	0	2.06E-04	3.91E-03	1.81E-05	-6.73E-03
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	2.52E-02	0	3.85E-05	8.74E-04	5.03E-06	-2.69E-03
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	2.67E-06	0	2.15E-10	5.89E-09	5.74E-11	-7.79E-06
Abiotic depletion potential for fossil resources (ADPF)	MJ	1.24E+02	0	1.07E-01	4.48E-01	1.19E-02	-2.35E+01
Water use (WDP)	m^3 world eq deprived	4.58E-01	0	2.01E-05	1.4E-01	1.03E-04	-1.53E-01

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 Piece CFS-SL GA / CP 653

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	5.86E+00	0	7.81E-04	1.04E-01	2.07E-03	-2.76E+00
Renewable primary energy resources as material utilization (PERM)	MJ	3.9E+00	0	0	0	0	0
Total use of renewable primary energy resources (PERT)	MJ	9.76E+00	0	7.81E-04	1.04E-01	2.07E-03	-2.76E+00
Non renewable primary energy as energy carrier (PENRE)	MJ	1.07E+02	0	1.07E-01	1.72E+01	1.19E-02	-2.35E+01
Non renewable primary energy as material utilization (PENRM)	MJ	1.73E+01	0	0	-1.68E+01	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	1.24E+02	0	1.07E-01	4.48E-01	1.19E-02	-2.35E+01
Use of secondary material (SM)	kg	1.76E-01	0	0	0	0	7.89E-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	1.74E-01	0	8.53E-07	3.3E-03	3.15E-06	-1.41E-01

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 Piece CFS-SL GA / CP 653

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	8.81E-06	0	3.88E-12	2.24E-10	2.96E-12	-1.09E-07
Non hazardous waste disposed (NHWD)	kg	6.67E-02	0	1.11E-05	3.97E-02	6.02E-02	1.6E-01
Radioactive waste disposed (RWD)	kg	5.32E-04	0	1.7E-07	1.43E-05	1.25E-07	-7.26E-04
Components for re-use (CRU)	kg	0	0	0	0	0	0
Materials for recycling (MFR)	kg	0	0	0	8.91E-01	0	0
Materials for energy recovery (MER)	kg	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	0	2.61E+00	0	0
Exported thermal energy (EET)	MJ	0	0	0	4.86E+00	0	0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 Piece CFS-SL GA / CP 653

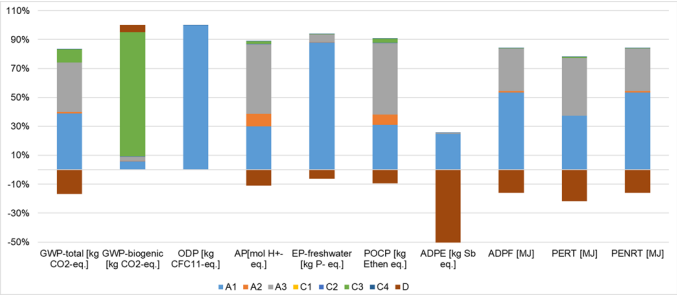
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Incidence of disease due to PM emissions (PM)	Disease incidence	ND	ND	ND	ND	ND	ND
Human exposure efficiency relative to U235 (IR)	kBq U235 eq	ND	ND	ND	ND	ND	ND

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. This EPD was created using a software tool.

6. LCA: Interpretation

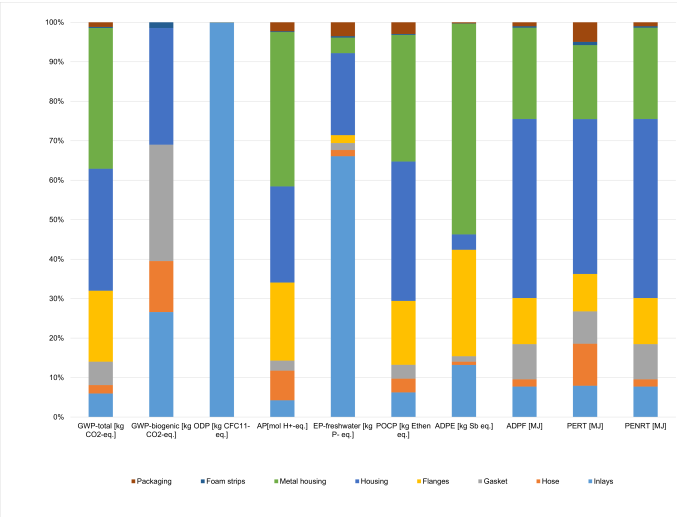
The dominance analysis shows that the main causes of the environmental impacts and indicators are to be found in information module A1. This shows the total global warming potential for material provision at approx. 38% and approx. 33% for production, based on all information modules.



Dominance analysis information modules per declared unit.

If we look at the material supply of the fire protection sleeve and the packaging in detail, it becomes clear which raw materials make a decisive contribution to the respective environmental impacts and indicators.

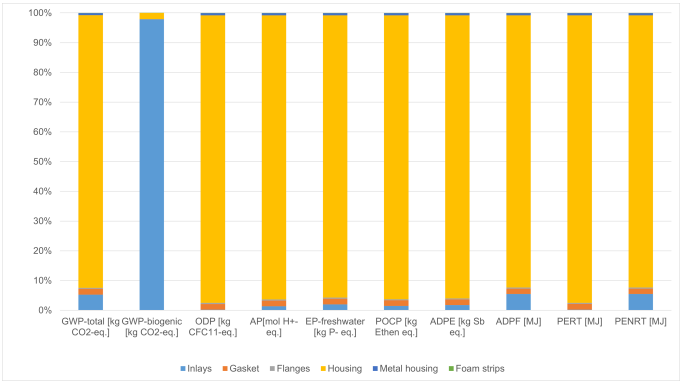
The metal housing accounts for approx. 36% and the casing for approx. 31% of the total global warming potential in information module A1. The flanges account for approx. 18%.



Dominance analysis information module A1 per declared unit.

In information module A3 it becomes clear that approx. 92% of the total global warming potential comes from the production of the housing and the composition of the product and approx. 5% from the pre-production of the inlay in Germany.

The masses of the raw materials and packaging are taken from the manufacturer's specifications. According to the manufacturer, this information can be assumed to be highly accurate.



Dominance analysis information module A3 per declared unit.

7. Requisite evidence

Due to the identical composition and identical manufacturing process for the CFS-SL GA and CP 653 firestop sleeves from the plant in Malaysia, all of the data and evidence provided in the EPD applies to both product lines. **7.1 Antimicrobial Assessment**

Institut Fresenius GmbH customer service report 4509175917
Determining mould growth in inlays acc.to ASTM G 21 and ISO 846 (03.11.2006)

Institut Fresenius GmbH customer service report 4509175917 Investigation on Antimicrobial effects according to ASTM G 21-96 (2002) and EN ISO 846 (EPDM) (03.11.2006)

7.2 Fire Resistance Classification Report
Fire Resistance Classification Report No. 18115B 30.09.2013 Testing according to EN 13501-2:2016 Classification of products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services.

7.3 Thermal conductivity

Thermal conductivity to EN 12667
7.4 VOC Emissions Testing

CFS-SL VOC Emissions According to
AgBB: Test Certificate 53824-A0001 II 25.02.2019
French VOC Klasse A+ Labelling: Test Certificate 53824-A0001 III 25.02.2019
Belgian Royal Decree: Test Certificate 53824-A0001 IV 25.02.2019

CFS-S SL GA

VOC Product Emissions acc. To California Department of Public Health (CDPH) Standard Method V1.2-2017 (California Specification 01350 (01/2017)

Test Certificate: 58762-A003-CS-K 09.04.2024

CP 653
VOC Product Emissions acc. To California Department of Public Health (CDPH) Standard Method V1.2-2017 (California Specification 01350 (01/2017)

Test Certificate: 58762-A003-CS-L 09.04.2024
7.5 ETA 20-1234 of 2024/02/19 Hilti Firestop Sleeve CFS-SL GA (according to EU Construction Products Regulation No. 305/2011). **7.6 FM and UL Approvals CP 653**UL Certificate of Compliance 20171019-R15431

Certificate of Compliance FM Approvals Class: 4990

8. References

Standards and Further References:

ASTM G21
ASTM G 21:2015-00, Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

ISO 846
ISO 846:2019-03, Plastics – Evaluation of the action of microorganisms

EN 13501-1
EN 13501-1:2018-12, Fire Classification of Construction Products and Building Elements

ISO 14025
DIN EN ISO 14025:2011-10, Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14044
DIN EN ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines.

EN 15804
EN 15804:2019-04+A2, Sustainability of construction works Environmental Product Declarations - Core rules for the product category of construction products.

AgBB-Scheme
Commmittee for the Health Evaluation of Construction Products (2018)

Belgian Royal Decree establishing threshold levels for the emissions to the indoor environment from construction products for specific purposes.

Calculation rules: PCR - Part A

Institut Bauen und Umwelt e.V. (IBU), 2022. Product CategoryRules for Building-Related Products and Services. Part A:Calculation rules for the life cycle assessment andrequirements on the project report. Version 1.3 (08.2022)

CDPH Testing Standard v1.2-2017
Standard method for VOC emissions –
Method for evaluating and assessing volatile organic compounds from indoor sources using climate chambers, one of the most widely distributed standards for evaluating building and indoor products for their compliance with chemical emission limits

Class A+
French VOC Labelling Regulation

Ecoinvent 3.9.1
Background data: ecoinvent 3.9.1Zürich: ecoinvent http://www.ecoinvent.org (07.08.2024)

ETA-20-1234 of 19.02.2024 Hilti Firestop Sleeve CFS-SL GA

FM Approvals Class: 4990

Hilti Code of Conduct for suppliers
https://www.hilti.group/content/dam/documents/Media-Release/supplier_documents/en/CoCfS_EN.pdf (14.11.2018)

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

Product Category Rules Part B

Preformed fire protection systems for cable and duct insulation, 01.08.2021

Regulation No. 305/2011 (Construction Products Regulation (CPR)) (EU)

Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878: REACH Candidate List (SVHC) https://echa.europa.eu/de

Sphera
LCA for Experts: Ganzheitliche Bilanzierung Leinfelden-Echterdingen; Sphera Solution GmbH (Hrsg.) Sphera (GaBi) (07.08.2024)

https://lcadatabase.sphera.com

UL
ANS/UL 1479 'Fire Tests of Through-Penetration Firestops' CAN/ULC-S115 'Standard Method of Fire Tests of Firestop Systems'

Waste Code: 20 03 01
Waste code 20 03 01: Mixed municipal solid waste acc. to the European Waste Catalogue (EWC)

Worldsteel Association
https://www.worldsteel.org/ (12.12.2018)
The literature referred to in the Environmental Product Declaration must be listed in full.Standards already fully quoted in the EPD do not need to be listed here again.
The current version of PCR Part A and PCR Part B of the PCR document on which they are based must be referenced.

Publisher

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

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Programme holder

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

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Author of the Life Cycle Assessment

FIT-Umwelttechnik GmbH
Westerstr. 13
38442 Wolfsburg
Germany

05362 72 69 474
bertram@fit-umwelttechnik.de
www.fit-umwelttechnik.com

Owner of the Declaration

Hilti Aktiengesellschaft
Feldkircher Strasse 100
9494 Schaan
Liechtenstein

+423 234 2111
HAGHSE@hilti.com
www.hilti.com