

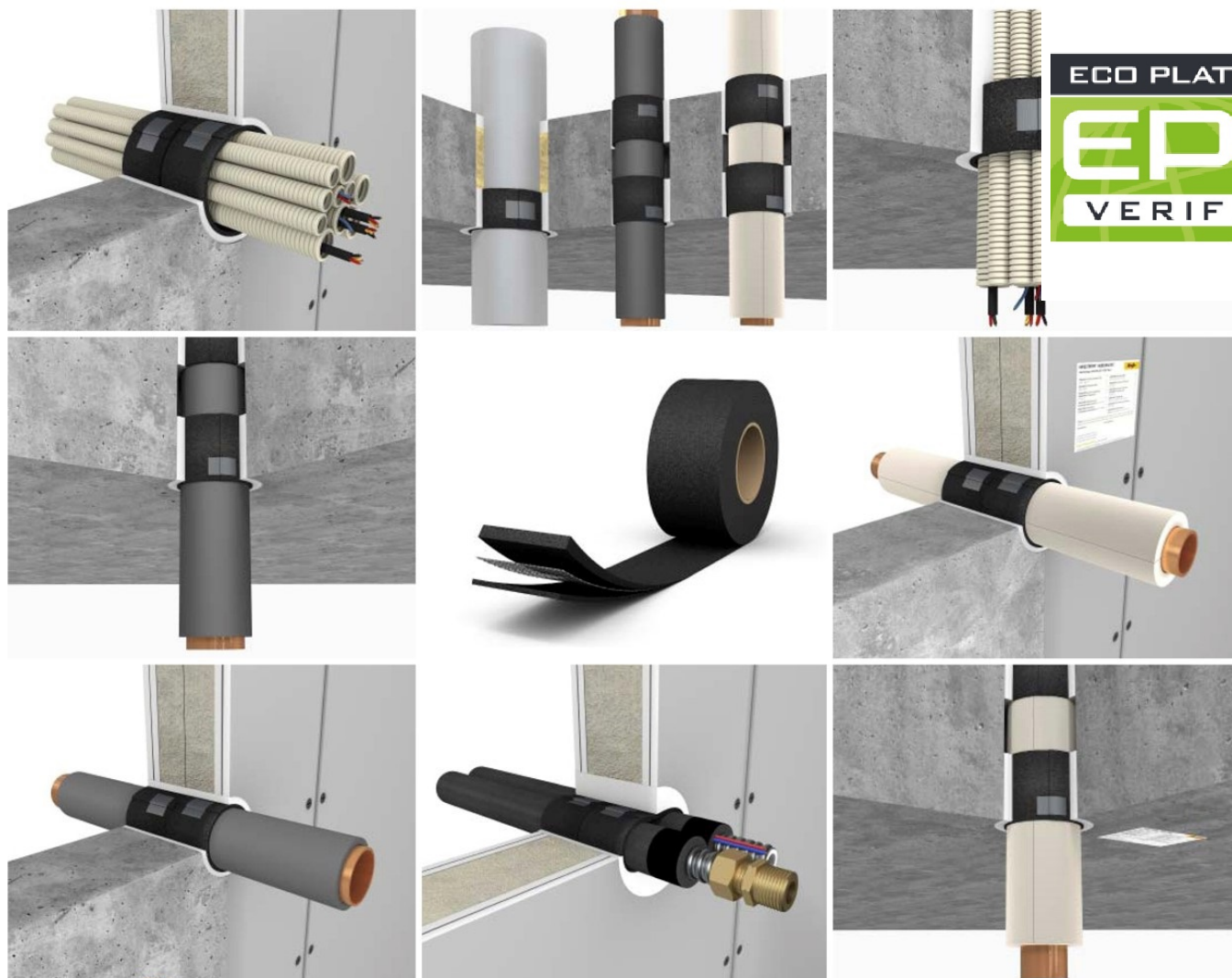
ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	Rudolf Hensel GmbH
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-RHG-20240375-IBA3-EN
Issue date	14.02.2025
Valid to	13.02.2030

HENSOTHERM® 7 KS Gewebe
Rudolf Hensel GmbH

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



1. General Information**Rudolf Hensel GmbH****Programme holder**

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

Declaration number

EPD-RHG-20240375-IBA3-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

14.02.2025

Valid to

13.02.2030



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



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

HENSOTHERM® 7 KS Gewebe**Owner of the declaration**

Rudolf Hensel GmbH
Lauenburger Landstraße 11
21039 Börnsen
Germany

Declared product / declared unit

The declared product is HENSOTHERM® 7 KS Gewebe. The declared unit refers to one square metre of product. Packaging is included in the calculation. The declared unit is given in [kg].

Scope:

This document refers to HENSOTHERM® 7 KS Gewebe. Specific data from the Börnsen manufacturing plant of Rudolf Hensel GmbH was collected for the preparation of the life cycle assessment (LCA). Data from the year 2022 is used as a basis, which corresponds to the annual average.

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



Dr.-Ing. Wolfram Trinius,
(Independent verifier)

2. Product

2.1 Product description/Product definition

HENSOTHERM® 7 KS Gewebe is a highly-flexible intumescent fabric tape based on expandable graphite. When exposed to high temperatures in the event of fire, it forms an insulating, compact carbon layer at high pressure and thus protects the component. The fabric tape is classified as low-emission and contains no asbestos, lead, mercury, solvents, silicones, halogens, or plasticisers.

The fabric tape is part of the Green Product line at Rudolf Hensel GmbH.

Products according to CPR with ETA:

Regulation (EU) No. 305/2011 (CPR) applies to the placing on the market of the HENSOTHERM® 7 KS Gewebe product in the EU / EFTA. The product requires a Declaration of Performance in accordance with *ETA Nos. 16/0369 | 20/1306 | 20/1309 | 20/1310 | 20/1307 | 22/0125 | 22/0702* and *aBG No. Z-19.53-2448 | aBG No. Z-19.53-2449 | aBG No. Z-19.53-2591 | aBG No. Z-19.53-2600* for HENSOTHERM® 7 KS Gewebe, and the corresponding CE marking. The respective national regulations apply for use.

2.2 Application

HENSOTHERM® 7 KS Gewebe is an intumescent fire protection fabric and is used to restore the fire safety of drywalls and solid wall and ceiling constructions that have openings for combustible pipes, cables and cable bundles in EIR / FLEX pipes.

HENSOTHERM® 7 KS Gewebe can also be used to sheathe cables, supporting and mounting structures, and as a room closure.

European Technical Assessment according to *EAD 350005-00-1104*: HENSOTHERM® 7 KS Gewebe is rated as a product that foams up in the event of fire for fire-sealing and fire-retardant applications.

European Technical Assessment according to *EAD 350454-00-1104*: HENSOTHERM® 7 KS Gewebe is rated as a fire protection and sealing product penetration seal.

HENSOTHERM® 7 KS Gewebe is classified in accordance with *EN 13501-1* as Euroclass **E** and **C-s2,d0**.

HENSOMASTIK® 7 KS Gewebe is classified in accordance with *EN 13501-2*.

HENSOTHERM® 7 KS Gewebe is tested in accordance with *EN 1366-3* for a fire-resistance period of up to 120 minutes.

2.3 Technical Data

HENSOTHERM® 7 KS Gewebe does not contain any hazardous substances above the limit values according to *REACH Regulation, Annex XVII*.

Structural data

Name	Value	Unit
Grammage	1,15 - 4,0	kg/qm
Processing temperature	+5 bis +40	°C
Temperature resistance	-40 bis -80	°C
First foaming	approx. +150	°C
Fire resistance acc. to EN 1366-3	EI 120	-
Weather resistance acc. to EAD 350005-00-1104 / EAD 350454-00-1104 / EOTA TR 024	X, Y1, Y2, Z1 and Z2	-

HENSOTHERM® 7 KS Gewebe is an emission-rated fire protection fabric. Sampling, testing and evaluation were carried out in accordance with *AgBB* and *LEED* in their respective current versions.

Product according to CPR with ETA:

The HENSOTHERM® 7 KS Gewebe product requires a Declaration of Performance in accordance with *ETA Nos. 16/0369 | 20/1306 | 20/1309 | 20/1310 | 20/1307 | 22/0125 | 22/0702* and *aBG No. Z-19.53-2448 | aBG No. Z-19.53-2449 | aBG No. Z-19.53-2591 | aBG No. Z-19.53-2600* for HENSOTHERM® 7 KS Gewebe, and the corresponding CE marking. The respective national regulations apply for use.

2.4 Delivery status

HENSOTHERM® 7 KS Gewebe is an intumescent fabric tape which is offered in rolls in cardboard packaging. The rolls are available in different lengths from 10 to 60 metres, different widths from 50 to 1000 mm, and different thicknesses from 1 to 3 mm. In addition, single and double-sided coated and single-sided self-adhesive versions are also available.

2.5 Base materials/Ancillary materials

Name	Value	Unit
HENSOTHERM® 7 KS	80 - 90	%
Glass fibre fabric	10 - 20	%

The backing material is a glass filament fabric A2.

2.6 Manufacture

HENSOTHERM® 7 KS Gewebe is manufactured fully automatically in a laminating system. A glass fibre fabric is laminated fully automatically with HENSOTHERM® 7 KS using a doctor blade system. The fabric tape is then dried in a drying oven before being cut to length and packaged.

After production of the batches, an in-house quality control is carried out. This includes product-related and fire protection-related quality features. In addition to the factory inspection, official external monitoring is carried out at regular intervals.

2.7 Environment and health during manufacturing

The preliminary products are stored in such a way that they cannot, according to human judgement, enter the environment. In the case of mixtures that are automatically dosed, direct contact between workers and the preliminary products is avoided. In addition to sufficiently dimensioned extraction systems, workers are provided with protective clothing and dust masks. Suitable personal protective equipment is also provided.

HENSOTHERM® 7 KS Gewebe does not contain any substances subject to declaration according to *REACH Regulation, Annex XVII*, and the *ECHA Candidate List*.

2.8 Product processing/Installation

HENSOTHERM® 7 KS Gewebe can be easily cut to the required size with a knife or scissors. Fastening is carried out

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with staples, tensioning straps or form-fit installation of the fabric tape. HENSOTHERM® 7 KS Gewebe can be painted over with all commercially available paints as well as on the basis of acrylic dispersion, alkyd resin, polyurethane acrylic and epoxy resin.

Details on substrate pre-treatment and installation requirements can be found in the applicable technical data sheet (see www.rudolf-hensel.de).

2.9 Packaging

The cut fabric tape is rolled up and packed in a paper box.

2.10 Condition of use

HENSOTHERM® 7 KS Gewebe is a highly-flexible intumescent fabric tape based on expandable graphite. It is used for sheathing cables, supporting and mounting structures, and as a room closure. After application of the fabric tape, it can be painted over immediately with all commercially available paints as well as on the basis of acrylic dispersion, alkyd resin, polyurethane acrylic and epoxy resin.

2.11 Environment and health during use

HENSOTHERM® 7 KS Gewebe is a fabric tape with extremely low emissions and is considered to be harmless to human health.

Emission tests - carried out in independent laboratories - confirmed that the fire protection coatings fulfil the requirements of various national and international emission standards, with classification in the lowest emission class (see section 7). The fabric tape contains no asbestos, lead, mercury, solvents, silicones, halogens, or plasticisers.

2.12 Reference service life

The provisions made in this European Technical Assessment are based on an assumed intended working life of the HENSOTHERM® 7 KS Gewebe of 10 years, provided the manufacturers conditions laid down in the manufacturers data sheet for the packaging, transport, storage, installation, use, maintenance and repair are met.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by the Technical Assessment Body issuing an *ETA* based on the *EAD No. 350005-00-1104* and *EAD No. 350454-00-1104* but are regarded only as means for expressing the expected economically reasonable working life of the product.

2.13 Extraordinary effects

Fire

HENSOTHERM® 7 KS Gewebe is a highly-flexible intumescent fabric tape based on expandable graphite.

Intumescent materials such as expandable graphite, also known as 'intumescent agents', expand when exposed to heat and increase greatly in volume, forming a protective insulating layer that delays the passage of heat and can also seal cavities.

Fire protection

Name	Value
Building material class acc. to EN 13501-1	E and C-s2,d0
Fire resistance acc. to EN 1366-3	EI 120

Water

HENSOTHERM® 7 KS Gewebe is an intumescent fabric tape for dry indoor areas / open halls and must not be exposed to permanent wetness.

Mechanical destruction

Minor damage to the HENSOTHERM® 7 KS Gewebe can be ignored. In the event of major damage, the damaged area must be covered with HENSOTHERM® 7 KS Gewebe.

There are no known consequences for the environment due to unforeseen mechanical destruction.

2.14 Re-use phase

HENSOTHERM® 7 KS Gewebe can be reused at the end of its service life. The installed fabric tape can be removed after the period of use of the protected component and used for a new application.

Due to the organic content, HENSOTHERM® 7 KS Gewebe has a substance-inherent energy content that can be recovered in incineration plants.

In the event that the fabric tape is to be deposited separately, landfillability is guaranteed.

2.15 Disposal

The following waste code numbers must be taken into account:

AVV No. (recommended): 080199 Waste not otherwise specified

AVV No. (recommended): 150102 Plastic packaging

2.16 Further information

Further product information is available at: www.rudolf-hensel.de

3. LCA: Calculation rules

3.1 Declared Unit

The declared product is a fire protection fabric tape manufactured by Rudolf Hensel GmbH called HENSOTHERM® 7 KS Gewebe. The declared unit refers to one square metre of fabric tape. The packaging, based on one square metre of fabric tape, is also included in the calculation at 0.036 kg.

Declared unit and mass reference

Name	Value	Unit
Declared unit	1,2	kg/m ²

3.2 System boundary

Type of EPD: Cradle to gate with modules C1-C4 and module 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

End of Life (C1-C4):

C1: Dismantling/demolition
C2: Transport
C3: Waste treatment C4: Disposal

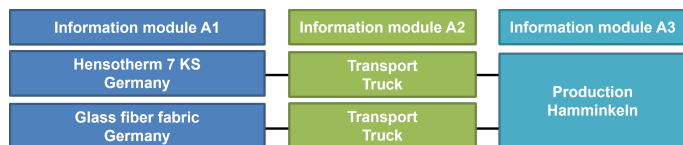
Reuse, recovery and recycling potential (D)

In order to accurately record the indicators and environmental impacts of the declared unit, a total of 8 information modules are analysed. Information modules A1 to A3 describe the

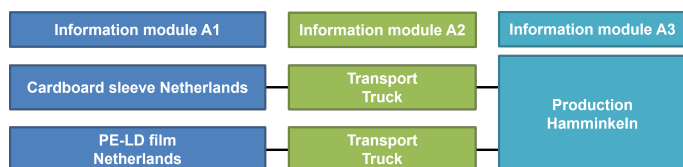
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provision of materials, transport to the production site, and the production processes for the product itself.

The preliminary products are sourced from the European Union. Transportation is carried out by truck. The following flow charts illustrate the underlying production process.



1 Information modules A1 to A3 of the product



2 Information modules A1 to A3 of the packaging

Information modules C1 to C4 cover the dismantling or demolition of the building, transport for waste disposal, waste treatment, and disposal of the product. Furthermore, reuse, recovery and recycling potential is shown in information module D.

3.3 Estimates and assumptions

The electricity mixes and underlying data are calculated on a country-specific basis for the production processes. An assumption was made for the calculation of xanthan. No assumptions were made for other substances.

3.4 Cut-off criteria

The cut-off criterion according to *EN 15804+A2* is applied. All energy and mass inputs were taken into account.

3.5 Background data

The databases used in this study are *LCA for Experts* and *Ecoinvent 3.9.1*.

3.6 Data quality

The assessment of the data quality is classified as appropriate, as the relevant data sets used to calculate the material provision of the declared unit are up to date. Data is provided in *LCA for Experts* under Data documentation with the respective reference year. Despite the use of different databases (*Sphera*, *Ecoinvent 3.9.1*), a consistent data basis is available, as all requirements for calculating the indicators in accordance with *EN 15804+A2* are met.

3.7 Period under review

Specific data from the Hamminkeln manufacturing plant in Germany was collected for the preparation of the life cycle assessment (LCA). The data for input and output flows is from 2022 and corresponds to the annual average.

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: Global

3.9 Allocation

The co-products are allocated in information modules A1-A3. The production waste from the injection-moulded components is thermally recycled. The ensuing electrical and thermal energy credits are offset 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. The databases used in this study are *LCA for Experts* and *Ecoinvent 3.9.1*.

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

No renewable raw materials are used in the product or the packaging. Biogenic carbon is therefore recognised as zero. The cardboard sleeve in the packaging contains biogenic carbon.

Information describing the biogenic carbon content at the plant gate

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.0022	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 fire protection fabric tape from the building is calculated in information module C1. The fire protection fabric tape can be removed by hand. A transport distance of 50 km to the nearest waste treatment plant is assumed.

Name	Value	Unit
Collected separately waste type	1	kg
Energy recovery	0.97	kg

The material lost during the process is shredder light fraction and is disposed of.

Reuse, recovery and recycling potential (D), relevant scenario information

No reuse, recovery and recycling potentials arise in this calculation. The information module D is therefore declared and shown as zero.

5. LCA: Results

The thermal and electrical energy credits are recognised in C3.

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 m² HENSOTHERM® 7 KS Gewebe

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ eq	1.93E+00	0	5.84E-03	1.52E-01	0	0
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ eq	1.93E+00	0	5.75E-03	1.52E-01	0	0
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ eq	0	0	0	0	0	0
Global Warming Potential luluc (GWP-luluc)	kg CO ₂ eq	1.74E-03	0	9.31E-05	1.05E-04	0	0
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	6.38E-09	0	5.58E-16	1.56E-12	0	0
Acidification potential of land and water (AP)	mol H ⁺ eq	7.14E-03	0	2.81E-05	3E-04	0	0
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	1.74E-04	0	2.36E-08	9.61E-08	0	0
Eutrophication potential aquatic marine (EP-marine)	kg N eq	1.4E-03	0	1.36E-05	2.04E-04	0	0
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	1.49E-02	0	1.51E-04	2.54E-03	0	0
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	4.85E-03	0	2.72E-05	4.8E-04	0	0
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	7E-06	0	4.68E-10	5.87E-09	0	0
Abiotic depletion potential for fossil resources (ADPF)	MJ	3.74E+01	0	7.23E-02	6.21E+00	0	0
Water use (WDP)	m ³ world eq deprived	6.98E-01	0	8.25E-05	1.72E-01	0	0

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m² HENSOTHERM® 7 KS Gewebe

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	2.74E+00	0	6.11E-03	2.47E-01	0	0
Renewable primary energy resources as material utilization (PERM)	MJ	4.5E-01	0	0	0	0	0
Total use of renewable primary energy resources (PERT)	MJ	3.19E+00	0	6.11E-03	2.47E-01	0	0
Non renewable primary energy as energy carrier (PENRE)	MJ	1.75E+01	0	7.23E-02	-2.52E+01	0	0
Non renewable primary energy as material utilization (PENRM)	MJ	1.99E+01	0	0	1.9E+01	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	3.74E+01	0	7.23E-02	-6.21E+00	0	0
Use of secondary material (SM)	kg	0	0	0	0	0	0
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	1.71E-02	0	6.86E-06	3.63E-03	0	0

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m² HENSOTHERM® 7 KS Gewebe

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	5.23E-09	0	2.34E-12	2.2E-11	0	0
Non hazardous waste disposed (NHWD)	kg	5.7E-02	0	1.12E-05	8.6E-02	0	0
Radioactive waste disposed (RWD)	kg	3.79E-04	0	9.34E-08	-4.3E-04	0	0
Components for re-use (CRU)	kg	0	0	0	0	0	0
Materials for recycling (MFR)	kg	0	0	0	0	0	0
Materials for energy recovery (MER)	kg	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	0	1.35E+00	0	0
Exported thermal energy (EET)	MJ	0	0	0	3.15E+00	0	0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 m² HENSOTHERM® 7 KS Gewebe

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

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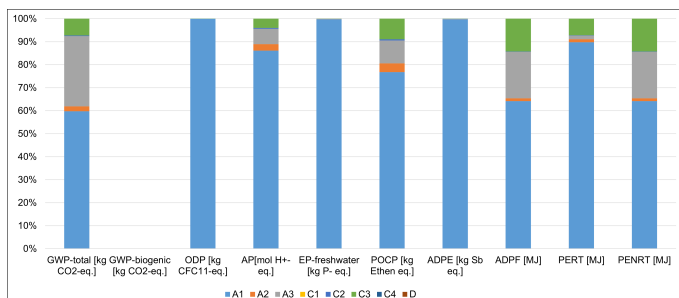
Comparative toxic unit for humans (carcinogenic) (HTP-c)	CTUh	ND	ND	ND	ND	ND	ND
Comparative toxic unit for humans (noncarcinogenic) (HTP-nc)	CTUh	ND	ND	ND	ND	ND	ND
Soil quality index (SQP)	SQP	ND	ND	ND	ND	ND	ND

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.

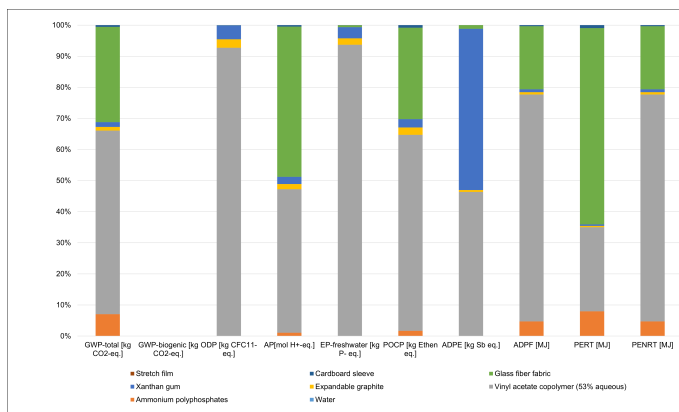
6. LCA: Interpretation

The dominance analysis shows that the main causes of the environmental impacts and indicators can be found in information module A1. This shows the total global warming potential for material provision at approx. 59% and approx. 30% for production, based on all information modules.

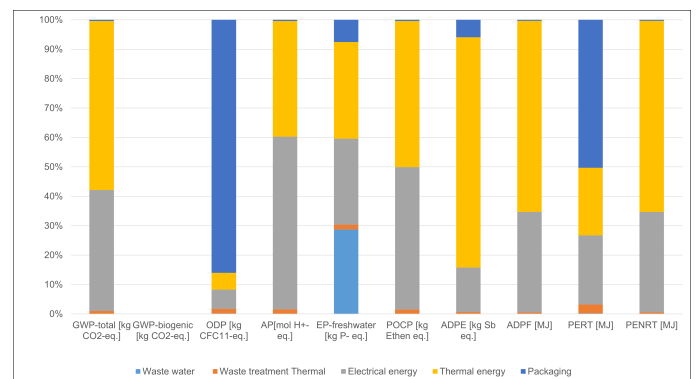


Looking at the material provision of the fire protection fabric and the packaging in detail, it becomes clear which raw materials make a decisive contribution to the respective environmental impacts and indicators.

The vinyl acetate copolymer (53% aqueous) accounts for approx. 66% and the glass fibre fabric tape for approx. 31% of the total global warming potential in information module A1. Approx. 6% is attributable to the ammonium polyphosphate.



Information module A3 clearly shows that approx. 57% of the total global warming potential is caused by the thermal energy and approx. 40% by the electrical energy.



The dimensions 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.

7. Requisite evidence

Test report from Eco-Institut Germany GmbH:

AgBB result overview (28 days [µg/m³])

Name	Value	Unit
SVOC without LCI	< 5,0	µg/m³
VOC	< 5,0	µg/m³

HENSOTHERM® 7 KS Gewebe: Report no. B53008-001 dated 30.05.2018 and no. 53008-001/II dated 09.04.2018.

The emission values were determined directly after application of the coating materials.

French VOC labelling regulation. Emission class **A**

French KMR emissions regulation. Criteria fulfilled: yes

8. References

DIN 4102

DIN 4102-1:1998-05, Fire behaviour of building materials and building components – Part 1: Building materials; concepts, requirements and tests

EN 15804

EN 15804:2019-04+A2+AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

DIN EN ISO 14025

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

DIN EN ISO 14040

DIN EN ISO 14040:2021-02, Environmental management – Life cycle assessment – Principles and framework

DIN EN ISO 14044

DIN EN ISO 14044:2021-02, Environmental management – Life cycle assessment – Requirements and guidelines

EN 1366

EN 1366-3:2022-05, Fire resistance tests for installations – Part 3: Penetration seals

EN 13501

EN 13501-1:2019, Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests

EN 13501-2:2016, Fire classification of construction products and building elements – Part 2: Classification using data from fire resistance and/or smoke control tests, excluding ventilation services

ISO 16000

ISO 16000-3:2023, Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air – Active sampling method

ISO 16000-6:2022, Indoor air – Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA sorbent, thermal desorption and gas chromatography using MS or MS-FID

ISO 16000-9: 2006, Indoor air – Part 9: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method

ISO 16000-11:2006, Indoor air – Part 11: Determination of the emission of volatile organic compounds from building products and furnishing – Sampling, storage of samples and preparation of test specimens

aBG no. Z-19.53-2448

General construction technique permit dated 02 March 2020 for HENSOTHERM® 7 KS Gewebe

Fire-resistant penetration sealing for plastic or metal pipes 'HENSOMASTIK EI 90 combustible pipes'

aBG no. Z-19.53-2449

General construction technique permit dated 01 July 2020 for HENSOTHERM® 7 KS Gewebe

Fire-resistant penetration sealing for electrical cables and pipes made of metal or plastic 'HENSOMASTIK EI 90 2x50 mm'

aBG no. Z-19.53-2591

General construction technique permit dated 18 March 2022 for HENSOTHERM® 7 KS Gewebe

Fire-resistant penetration sealing for electrical cables 'HENSOTHERM 7 KS fabric system for electrical installation pipes'

aBG no. Z-19.53-2600

General construction technique permit dated 05 July 2023 for HENSOTHERM® 7 KS Gewebe

Fire-resistant penetration sealing for plastic pipes 'HENSOTHERM 7 KS fabric system for combustible pipes'

AgBB

Committee for Health-related Evaluation of Building Products (AgBB) Evaluation scheme for VOC emissions from indoor-relevant building products (2021)

AVV

Ordinance on the European Waste Catalogue (Waste Catalogue Ordinance, AVV) – Date of issue: 10 December 2001

EAD 350005-00-1104

EAD no. 350005-00-1104, May 2015: Products that foam up in the event of fire for fire-sealing and fire-retardant applications

EAD 350454-00-1104

EAD no. 350454-00-1104, Fire protection and fire sealing products – Penetration seals

ECHA Candidate List

European Chemical Agency (ECHA), Candidate List: Candidate List of Substances of Very High Concern for Authorization (published in accordance with Article 59(10) of the REACH Regulation)

Ecoinvent 3.9.1

Background data: ecoinvent 3.9.1, Zurich: [ecoinventhttp://www.ecoinvent.org](http://www.ecoinvent.org) (05 March 2024)

EOTA TR 024

Technical description and assessment of reactive products effective in case of fire

ETA-16/0369

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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**

Rudolf Hensel GmbH
Lauenburger Landstraße 11
21039 Börnsen
Germany

+49 (0)40 7210 6210
info@rudolf-hensel.de
www.rudolf-hensel.de