

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-20240379-IBA3-EN
Issue date	14.02.2025
Valid to	13.02.2030

HENSOTHERM® GM 2000
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-20240379-IBA3-EN

This declaration is based on the product category rules:

Mineral factory-made mortar, 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® GM 2000**Owner of the declaration**

Rudolf Hensel GmbH
Lauenburger Landstraße 11
21039 Börnsen
Germany

Declared product / declared unit

The declared product is HENSOTHERM® GM 2000. The declared unit refers to one kilogramme of product. Packaging is included in the calculation. The declared unit is given in [kg].

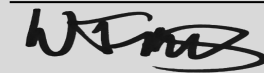
Scope:

This document refers to HENSOTHERM® GM 2000. 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® GM 2000 is a fire-resistant mineral gypsum mortar, consisting of expanded perlite and fibres, for the production of fire protection penetration seals for electrical cables as well as metal pipes, combustible pipes and aluminium composite pipes with all common insulations made of synthetic rubber, glass or mineral wool in order to restore the fire safety of solid ceiling constructions that are provided with openings for individual or mixed supply lines. HENSOTHERM® GM 2000 is non-toxic, has a low tendency to smoke, and contains no halogens.

This fire protection mortar 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® GM 2000 product in the EU / EFTA (with the exception of Switzerland). The product requires a Declaration of Performance in accordance with *ETA No. 22/0702* and the corresponding CE marking. The respective national regulations apply for use.

2.2 Application

HENSOTHERM® GM 2000 is a fire-resistant mineral gypsum mortar used to form a fire barrier for single or multiple penetrations to restore the fire resistance of rigid floor constructions when they are provided with openings penetrated by various services such as cables or pipe penetrations.

European Technical Assessment according to *EAD 350454-00-1104*: HENSOTHERM® GM 2000 is rated as a fire protection and sealing product penetration seal.

HENSOTHERM® GM 2000 is tested in accordance with *EN 1366-3* for a fire-resistance period of up to 120 minutes.

HENSOTHERM® GM 2000 is classified in accordance with *EN 13501-1* as Euroclass **E**.

HENSOTHERM® GM 2000 is classified in accordance with *EN 13501-2*.

2.3 Technical Data

HENSOTHERM® GM 2000 does not contain any hazardous substances above the limit values according to *REACH Regulation, Annex XVII*.

Structural data

Name	Value	Unit
Colour	white, RAL 9010	-
Mixing ratio with water	1.5 : 1.0 for pouring 2 : 1 as filler	-
Drying time	30 - 60	minutes
Processing temperature	5 - 30	°C
Storage temperature	5 - 40	°C
Fire behaviour acc. to EN 135011	Construction material class E	-
Fire resistance acc. to EN 1366-3	up to EI 120	-
Durability acc. to EAD 350454-00-1104	Y1, Y2, Z1 and Z2	-
Sound insulation acc. to DIN EN 10140-1 DIN EN 10140-2 DIN EN ISO 717-1	59	dB
Sound insulation acc. to DIN EN 10140-1 DIN EN 10140-2 DIN EN ISO 717-1	38 (-3; -5)	dB

HENSOTHERM® GM 2000 is an emission-rated mineral gypsum mortar. Sampling, testing and evaluation were carried out in accordance with *AgBB* and *Leed* in their respective current versions.

Product according to CPR with ETA:

Performance values of the HENSOTHERM® GM 2000 product correspond to the Declaration of Performance with regard to its essential characteristics according to *ETA No. 22/0702* for HENSOTHERM® GM 2000 and the corresponding CE marking. The respective national regulations apply for use. HENSOTHERM® GM 2000 is non-toxic, has a low tendency to smoke, and contains no halogens.

2.4 Delivery status

HENSOTHERM® GM 2000 is a fire-resistant, mineral gypsum mortar and is available in 22-kg paper bags.

2.5 Base materials/Ancillary materials

Name	Value	Unit
Stucco plaster	80 - 95	%
Perlite	1 - 10	%
Glass fibres	0,1 - 5,0	%

2.6 Manufacture

HENSOTHERM® GM 2000 is manufactured in a fully-automatically controlled dosing system. The powder raw materials are dosed automatically. The preliminary products required for production are made available after an incoming goods inspection.

After production of the batches, an in-house quality control is carried out.

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 raw materials that are automatically dosed, direct contact between workers and the preliminary products is avoided. Direct contact with the raw material is minimised when dosing the powdered raw materials manually.

In addition to sufficiently dimensioned extraction systems, workers are provided with protective clothing and dust masks. Suitable personal protective equipment is also provided.

HENSOTHERM® GM 2000 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® GM 2000 is used alone as a filler and in combination with min. 50 mm thick mineral fibre boards serving as lost formwork to achieve a fire barrier. The mineral fibre boards are cut to size and fitted into the component opening and around the supply lines.

HENSOTHERM® GM 2000 gypsum mortar is mixed with water and poured on top of the mineral fibre board in a minimum 50 mm thick layer. All cavities around and between the penetrating services must be completely filled with HENSOTHERM® GM 2000.

Details on substrate pre-treatment, application requirements, and drying behaviour can be found in the relevant technical data sheet (see www.rudolf-hensel.de).

2.9 Packaging

The gypsum mortar is filled into paper bags, which are recycled by the customer through a packaging return system. The paper bags are packed on pallets for shipping and protected with a shrink film made of low-density polyethylene (LDPE).

2.10 Condition of use

The construction product HENSOTHERM® GM 2000 is intended for use as a component with a fire protection effect in building elements, assembled systems or constructions that are subject to requirements related to fire protection. The mineral gypsum mortar is used as a penetration seal for single or multiple pipes in order to temporarily or permanently restore the fire resistance of solid ceilings and ceilings made of aerated concrete if these are provided with openings for the passage of various supply lines such as cables or pipes.

2.11 Environment and health during use

HENSOTHERM® GM 2000 is verifiably low-emission, environmentally- and user-friendly, and compliant with most common regulations or protocols for building materials.

2.12 Reference service life

The provisions made in this European Technical Assessment are based on an assumed working life of the HENSOTHERM® GM 2000 of 10 years, provided that the conditions for the packaging, transport, storage, installation, use, and repair are met.

The indications given on the service life cannot be interpreted

as a guarantee given by the manufacturer or the Technical Assessment Body, issued by the *ETA* on the basis of *EAD 350454-00-1104*, but are to be regarded only as a means for choosing the right product in relation to the anticipated economically reasonable service life.

2.13 Extraordinary effects

Fire

The reactive effect of HENSOTHERM® GM 2000 prevents heat transmission and fire spreading in the event of fire.

Fire protection

Name	Value
Construction material class acc. to EN 13501-1	E
Fire resistance acc. to EN 1366-3	up to EI 120

Water

HENSOTHERM® GM 2000 is a fire-resistant, mineral gypsum mortar for dry indoor areas / protected outdoor areas and must not be exposed to permanent wetness.

Mechanical destruction

All fire protection penetration seals that are subsequently damaged or modified must be refurbished exclusively with HENSOTHERM® GM 2000 and related individual products from this product system.

2.14 Re-use phase

The service life of a fire protection penetration seal manufactured with HENSOTHERM® GM 2000 generally ends with the service life of the building constructed with it. It is not possible to reuse the hard bulkhead after it has been dismantled. Mineral gypsum mortars can be recycled as normal building materials.

In the event that HENSOTHERM® GM 2000 is to be deposited separately, landfillability is guaranteed.

2.15 Disposal

The following waste code numbers must be taken into account:

AVV No. 170802 (recommended): Gypsum-based building materials with the exception of those referred to in 170801*

Uncleaned packaging: Non-contaminated packaging can be recycled.

AVV No. 150102 (recommended): 150102 Plastic packaging

2.16 Further information

Further product information is available at: www.rudolfhensel.de

3. LCA: Calculation rules

3.1 Declared Unit

The declared product is a gypsum mortar manufactured by Rudolf Hensel GmbH called HENSOTHERM® GM 2000. The declared unit refers to one kilogramme of fire protection mortar. The packaging, based on one kg mortar, is also included in the calculation at 0.006 kg.

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	kg
Apparent density	900 ± 400	kg/m ³

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:

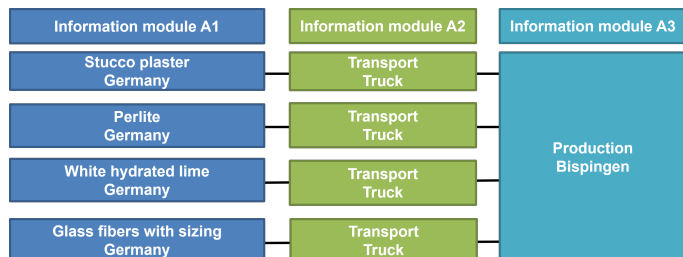
Production stage (A1-A3):
A1: Raw material extraction
A2: Transport to the manufacturer
A3: Production

End-of-Life (C1-C4):
C1: Dismantling/demolition
C2: Transport
C3: Waste treatment
C4: Disposal

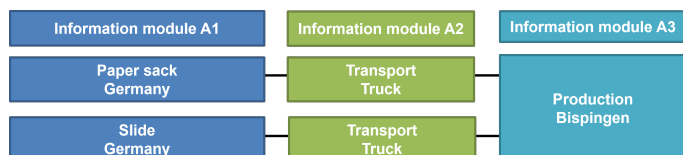
Reuse, recovery and recycling potential (D)

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 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. No

assumptions were made.

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

Data from the year 2022 is used as a basis, which 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 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. 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	0.00011	kg C

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

End of Life (C1-C4)

Demolition of the mortar from the building is calculated in information module C1. Demolition is carried out using an electric tool. The electrical energy consumption for the tool is assumed to be 0.05 MJ for the declared unit. The electricity consumption is calculated using a European electricity mix. Information module C2 describes the transport route of the declared unit's waste from demolition from the building to the waste treatment facility. The average transport distance is assumed to be 50 kilometres.

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

The material losses are landfilled.

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

Mineral gypsum mortars can be recycled as normal building materials.

5. 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 HENSOTHERM® GM 2000

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ eq	1.35E-01	7.08E-03	4.87E-03	2.8E-03	0	-1.93E-03
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ eq	1.35E-01	7.08E-03	4.79E-03	2.76E-03	0	-1.95E-03
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ eq	0	2.28E-06	0	0	0	3.91E-05
Global Warming Potential luluc (GWP-luluc)	kg CO ₂ eq	4.03E-04	1.04E-06	7.76E-05	3.63E-05	0	-1.54E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	1.12E-09	7.65E-14	4.65E-16	4.84E-15	0	-1.4E-14
Acidification potential of land and water (AP)	mol H ⁺ eq	6.51E-04	1.63E-05	2.34E-05	1.34E-05	0	-9.83E-06
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	1.56E-05	3.64E-09	1.97E-08	1.04E-08	0	-7.63E-09
Eutrophication potential aquatic marine (EP-marine)	kg N eq	1.58E-04	2.73E-06	1.13E-05	6.18E-06	0	-3.52E-06
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	1.76E-03	2.92E-05	1.26E-04	6.83E-05	0	-3.89E-05
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	4.84E-04	8.13E-06	2.27E-05	1.71E-05	0	-9.57E-06
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	1.1E-07	3.26E-10	3.9E-10	2.81E-09	0	-2.03E-10
Abiotic depletion potential for fossil resources (ADPF)	MJ	1.81E+00	1.29E-01	6.02E-02	5.02E-02	0	-2.9E-02
Water use (WDP)	m ³ world eq deprived	1.31E-02	3.98E-04	6.87E-05	5.13E-04	0	-2.31E-04

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 kg HENSOTHERM® GM 2000

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	1.9E-01	1.84E-02	5.09E-03	5.35E-03	0	-1.07E-02
Renewable primary energy resources as material utilization (PERM)	MJ	3.63E-03	0	0	0	0	0
Total use of renewable primary energy resources (PERT)	MJ	1.93E-01	1.84E-02	5.09E-03	5.35E-03	0	-1.07E-02
Non renewable primary energy as energy carrier (PENRE)	MJ	1.78E+00	1.29E-01	6.02E-02	5.02E-02	0	-2.9E-02
Non renewable primary energy as material utilization (PENRM)	MJ	3.16E-02	0	0	0	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	1.81E+00	1.29E-01	6.02E-02	5.02E-02	0	-2.9E-02
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	3.56E-04	2.59E-05	5.72E-06	1.49E-05	0	-9.44E-06

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 kg HENSOTHERM® GM 2000

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	2.75E-10	1.83E-11	1.95E-12	7.26E-12	0	-1.88E-11
Non hazardous waste disposed (NHWD)	kg	2.89E-03	3.2E-05	9.37E-06	1.38E-05	0	-4.04E-02
Radioactive waste disposed (RWD)	kg	1.58E-05	1.67E-05	7.79E-08	6.31E-07	0	-1.92E-06
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	0	0	0
Exported thermal energy (EET)	MJ	0	0	0	0	0	0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 kg HENSOTHERM® GM 2000

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

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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

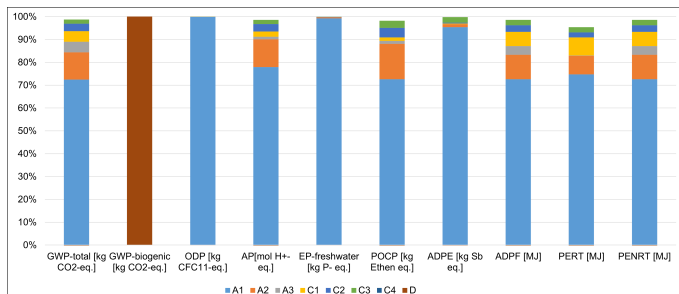
Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure 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

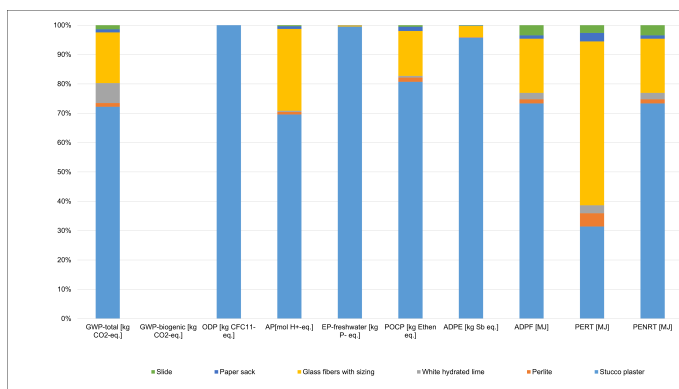
The dominance analysis shows that the main causes of the environmental impacts and indicators can be found in information module A1.

This shows the total global warming potential for material provision at approx. 72% and approx. 11% for production, based on all information modules.

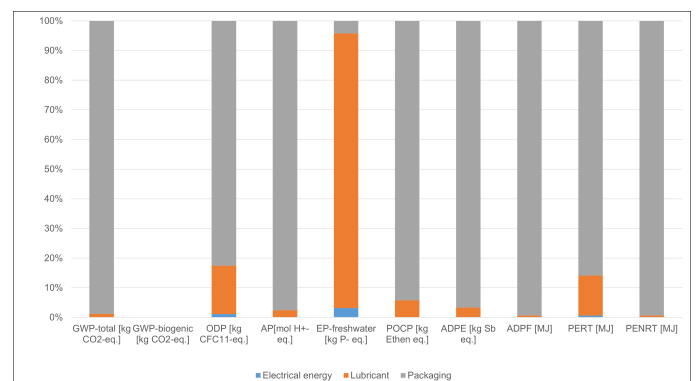


Looking at the material provision of the product and the packaging in detail, it becomes clear which raw materials make a decisive contribution to the respective environmental impacts and indicators.

The stucco plaster accounts for approx. 73% and the glass fibres for approx. 18% of the total global warming potential in information module A1. Approx. 6% is accounted for by white lime hydrate.



Information module A3 clearly shows that approx. 96% of the total global warming potential is caused by the preliminary production of packaging and approx. 2% is attributable to the lubricant.



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® GM 2000: Report no. 58089-007-AgBB-L dated 13 April 2023

HENSOTHERM® GM 2000 fulfils the requirements of the French VOC classification regulation *French VOC labelling regulation* with emission class A+.

HENSOTHERM® GM 2000 fulfils the criteria of the French *KMR emissions regulation*.

FIRE PROTECTION SYSTEMS

HENSOTHERM® GM 2000 fulfils the criteria of the *Belgian Royal Decree on the limit values for indoor emissions of construction products for specific uses*.

HENSOTHERM® GM 2000: *Report no. 58089-001-BVO-L* dated 13 April 2023 and *no. 58089-001-FVO-L* dated 13 April 2023

Test report from HFB Engineering GmbH:

Airborne sound insulation test in accordance with DIN EN 10140

Name	Value	Unit
Rw max	59	dB
Rw (C; Ctr)	38 (-3; -5)	dB
R (dimensionless)	0,01	-

HENSOTHERM® GM 2000: *Report no. 311002923/3/2022* dated 07 October 2021

8. References**DIN EN 10140**

DIN EN 10140-1:2021-9, Acoustics – Measurement of sound insulation of building elements on a test bench – Part 1: Application rules for certain products
DIN EN 10140-2:2021-9, Acoustics – Measurement of sound insulation of building elements on a test bench – Part 2: Airborne sound insulation

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 717

DIN EN ISO 717-1:2021-05, Acoustics – Evaluation of sound insulation in buildings and of building elements – Part 1

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 1366:2021, Fire resistance tests for service 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

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 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)

ETA No. 22/0702

European Technical Assessment dated 26 May 2023 for HENSOTHERM® GM 2000

French VOC classification regulation

'Décret n° 2011321' (Decree no. 2011321) and 'Arrêté relatif à l'étiquetage des produits de construction ou de revêtement de mur ou de sol et des peintures et vernis sur leurs émissions de polluants volatils' (Decree on the labelling of construction products, wall or floor coverings, and paints and varnishes on their emissions of volatile pollutants)

French KMR emissions regulation

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