

ENVIRONMENTAL PRODUCT DECLARATION

as per /ISO 14025/ and /EN 15804/

Owner of the Declaration	Hilti AG
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-HIL-20210127-IAA1-EN
Issue date	27.08.2021
Valid to	26.08.2026



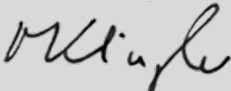
Hilti HIT-HY 200-R
Hilti AG

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



SAFEset

1. General Information

<p>Hilti AG</p> <p>Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany</p> <hr/> <p>Declaration number EPD-HIL-20210127-IAA1-EN</p> <hr/> <p>This declaration is based on the product category rules: Reaction resin products, 01.2019 (PCR checked and approved by the SVR)</p> <hr/> <p>Issue date 27.08.2021</p> <hr/> <p>Valid to 26.08.2026</p> <hr/> <p> Dipl. Ing. Hans Peters (President of Institut Bauen und Umwelt e.V.)</p> <hr/> <p> Dr. Alexander Röder (Head of Board IBU)</p>	<p>Hilti HIT-HY 200-R</p> <p>Owner of the declaration Hilti AG Feldkircher Str. 100 FL-9494 Schaan Liechtenstein</p> <hr/> <p>Declared product / declared unit The declared product is a HILTI injectable mortar HIT-HY 200-R. The declared unit is one kilogram of reaction resin product in the mixing ratio of the two components necessary for processing. The packaging is also included in the calculation. The declared unit is stated in [kg].</p> <hr/> <p>Scope: This document refers to the injectable mortar HIT-HY 200-R with its packaging. For the compilation of the life cycle assessment, specific data were collected from the factory Kaufering, in Germany, of the HILTI AG. Data from the year 2018 are used, which correspond to the annual average.</p> <p>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.</p> <hr/> <p>Verification</p> <table border="1"> <tr> <td colspan="2">The standard /EN 15804/ serves as the core PCR</td> </tr> <tr> <td colspan="2">Independent verification of the declaration and data according to /ISO 14025:2010/</td> </tr> <tr> <td><input type="checkbox"/> internally</td> <td><input checked="" type="checkbox"/> externally</td> </tr> </table> <hr/> <p> Matthias Klingler (Independent verifier appointed by SVR)</p>	The standard /EN 15804/ serves as the core PCR		Independent verification of the declaration and data according to /ISO 14025:2010/		<input type="checkbox"/> internally	<input checked="" type="checkbox"/> externally
The standard /EN 15804/ serves as the core PCR							
Independent verification of the declaration and data according to /ISO 14025:2010/							
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2. Product

2.1 Product description / Product definition

The declared product of HIT-HY 200-R is a two-component system. The resin component (component A) comprises a resin based on methacrylates as well as mineral and cement-like fillers. The curing agent component (component B) comprises of peroxide hardener, water and mineral fillers. Mixing the two components A and B in the static mixer initiates the curing (hardening) reaction of both binder systems. During the curing phase, a very strong bond is formed between the organic and inorganic binder matrix. The hybrid system formed during cement and resin curing results in a cross-linked duomer with desired design properties (high bond strengths within short curing time) and particular long-term stability. Composite foils are used for the two-component foil pack of HIT-HY 200-R. This kind of packaging serves the following purposes: waste volume reduction, easy storage and transport, less packaging material.

Through legislation and increased public awareness users have increasingly become discerned towards the use of styrene and other highly volatile components with their resulting unpleasant odour and low flash point (flammability).

The reaction resins used in all Hilti hybrid adhesives contain no styrene, are practically odorless and have a considerably higher flash point, i.e. higher than 100 °C in comparison to 34 °C for styrene-based products. HIT-HY 200 is the ultimate performance injectable hybrid short-cure mortar with approvals for rebar connections and heavy duty anchoring.

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 the following European Technical Approvals

/ETA 12/0083/ Injection System Hilti HIT-HY 200-R for rebar connection



/ETA 12/0084/ Injection system Hilti HIT-HY 200-R

/ETA 12/0028/ Injection system Hilti HIT-HY 200-R

/ETA 15/0419/ Injection system Hilti HIT-HY 200-A, Hilti HIT-HY 200-R with HIT-Z / HIT-Z-R

/ETA 15/0195/ Injection system Hilti HIT-HY 200-A and Hilti HIT-HY 200-R

/ETA 18/0837/ Injection System Hilti HIT-HY 200 with roughening tool

/ETA 18/0972/ Injection System Hilti HIT-HY 200 with HAS-D

/ETA 18/0978/ Injection system Hilti HIT-HY 200 with HAS-D

and the CE-marking. For the application and use the respective national provisions apply.

2.2 Application

Hilti HIT-HY 200-R serves for safely securing of threaded rods and post-installed rebar connections in cracked and uncracked concrete C20/25 to C50/60. HIT-HY 200-R is European Technical Assessment (ETA) and International Code Council (ICC) approved for seismic C1 and C2 category for anchoring and C1 category for rebar

Rebar connections of up to 32 mm can be carried out.

Hilti HIT-HY 200-R is a component of the Hilti SAFEset concept. Hilti SAFEset is an approved system that significantly improves the robustness of fastenings and dramatically reduces the possibilities of error during installation. As part of SAFEset HIT-HY 200-R can be installed with Hilti Hollow Drill bits and vacuum cleaners that drill and clean the hole in one step for virtually dust-free installation. When use with Hilti HIT-Z rod as part of the SAFEset, no cleaning of the borehole is required.

2.3 Technical Data

Bautechnische Daten

2

Name	Value	Unit
Density /EN ISO 1183-1/	1830	kg/m ³
Elastic modulus (pressure) /EN ISO 604 /	2800	N/mm ²
Compressive strength (T _{cure} = 120h) /EN ISO 604 /	92	N/mm ²

Hilti HIT-HY 200-R displays the following characteristics:

Performance and technical data as per

/ETA 12/0083/

/ETA 12/0084/

/ETA 12/0028/

/ETA 15/0419/

/ETA 15/0195/

/ETA 18/0837/

/ETA 18/0972/

/ETA 18/0978/ (European Technical Approvals)

/ICC ESR-3963/

/ICC ESR-3187/ (International Code Council Evaluation Service)

Shelf life of 12 months:

Substrate temperature during installation

-10 to +40 °C (internal method)

Working time:

-10 to -5 °C 180 min

-4 to 0 °C 120 min

+1 to +5 °C 60 min

+6 to +10 °C 40 min

+11 to +20 °C 15 min

+21 to +30 °C 9 min

+31 to +40 °C 6 min

Curing time:

-10 to -5 °C 20 h

-4 to 0 °C 8 h

+1 to +5 °C 4 h

+6 to +10 °C 2,5 h

+11 to +20 °C 1,5 h

+21 to +30 °C 1 h

+31 to +40 °C 1 h

2.4 Delivery status

The product Hilti HIT-HY 200-R is available in foil-packages with a total of 330 ml and 500 ml injectable mortar in the corresponding mixing ratio.

2.5 Base materials / Ancillary materials

Hilti HIT-HY 200-R is supplied in the form of a dual component film-wrapped pack comprising a resin component and a curing agent component at a volume ratio of 5:1. The mixing ratio of resin and curing agent components is automatically set during the injection process. Product curing commences directly after the components are mixed.

The product reviewed in this EPD contains the following component volumes:

Resin component:

Vinyl ester resin mixture: 30 to 40% by weight

Mineral fillers: 40 to 50% by weight

Cement: 10 to 20% by weight

Other: < 5% by weight

Curing agent component:

Mineral fillers: 40 to 50% by weight

Aluminium oxide: 15 to 25% by weight

Water: 15 to 25% by weight

Dibenzoyl peroxide: 10 to 15% by weight

Other: < 5% by weight

This product article contains substances listed in the candidate list (date: 22.04.2021) 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, 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) Ordinance on Biocide Products No. 528/2012): no

2.6 Manufacture

All raw materials are sourced from Europe. The transport is exclusively by truck.

Chemical mortars are usually two-component systems consisting of a binder and a hardener. One of the base components of the binder is the reactive resin which in the case of HIT-HY 200-R is produced in Kaufering. The resin production process is a chemical reaction of the corresponding educts to a basic resin with subsequent mixing of the basic resin with different reactive diluents to a reactive resin. This process is controlled and monitored by process control technology.

The production of chemical mortars consists of a mixing process and a filling process of the respective single components (binder and hardener) and their subsequent union to a two-component system

(container). Here as well process control technology is used to weigh and mix solid and liquid compounds according to specification. In the next step both wellmixed components run through an automatized filling line in which each of the processed masses is filled into a tubular foil bag. Finally the single components are united in one container. The two-pack foil bags are packed into cardboard boxes and then finally shipped.

The manufacturing plant of HIT-HY 200-R, Hilti GmbH Industriegesellschaft für Befestigungstechnik, Hiltistr. 6, 86916 Kaufering, Germany, is certified according to *ISO 9001*. The guideline defines international standards for quality and process management.

The following flowcharts illustrate the underlying production process.

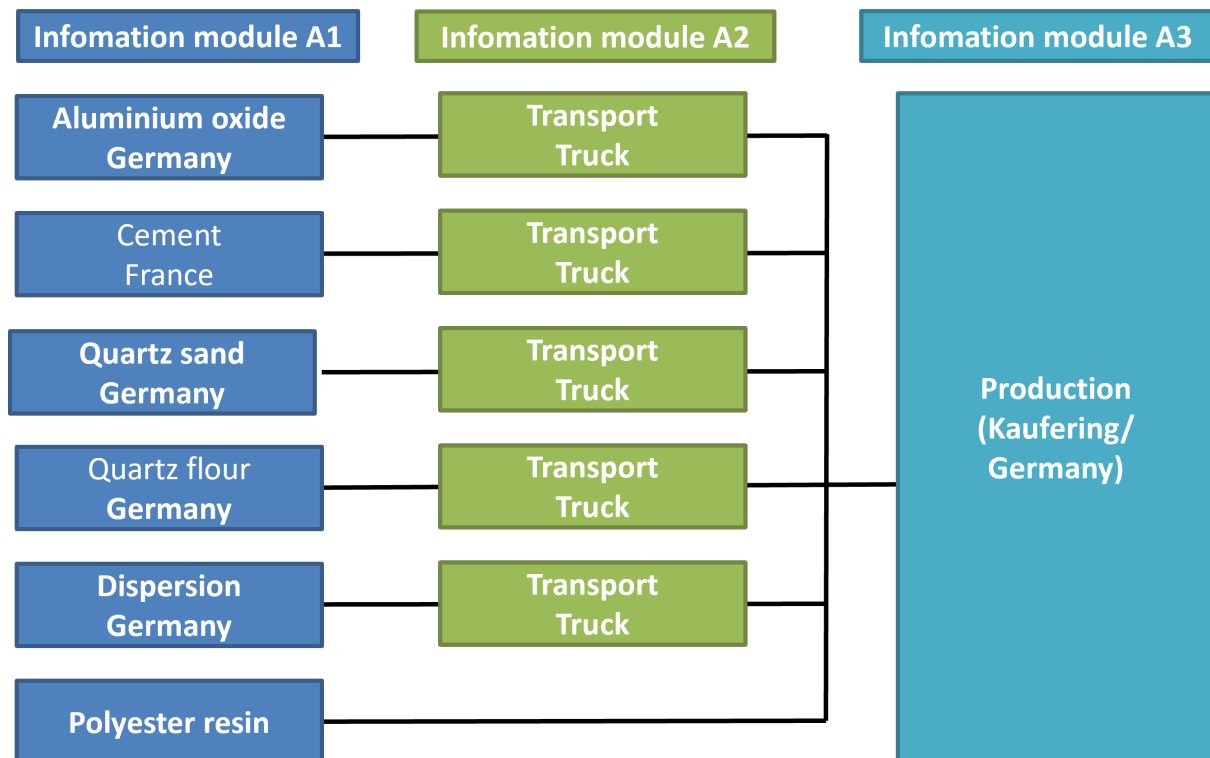


Illustration: Production process of the reaction resin mixture

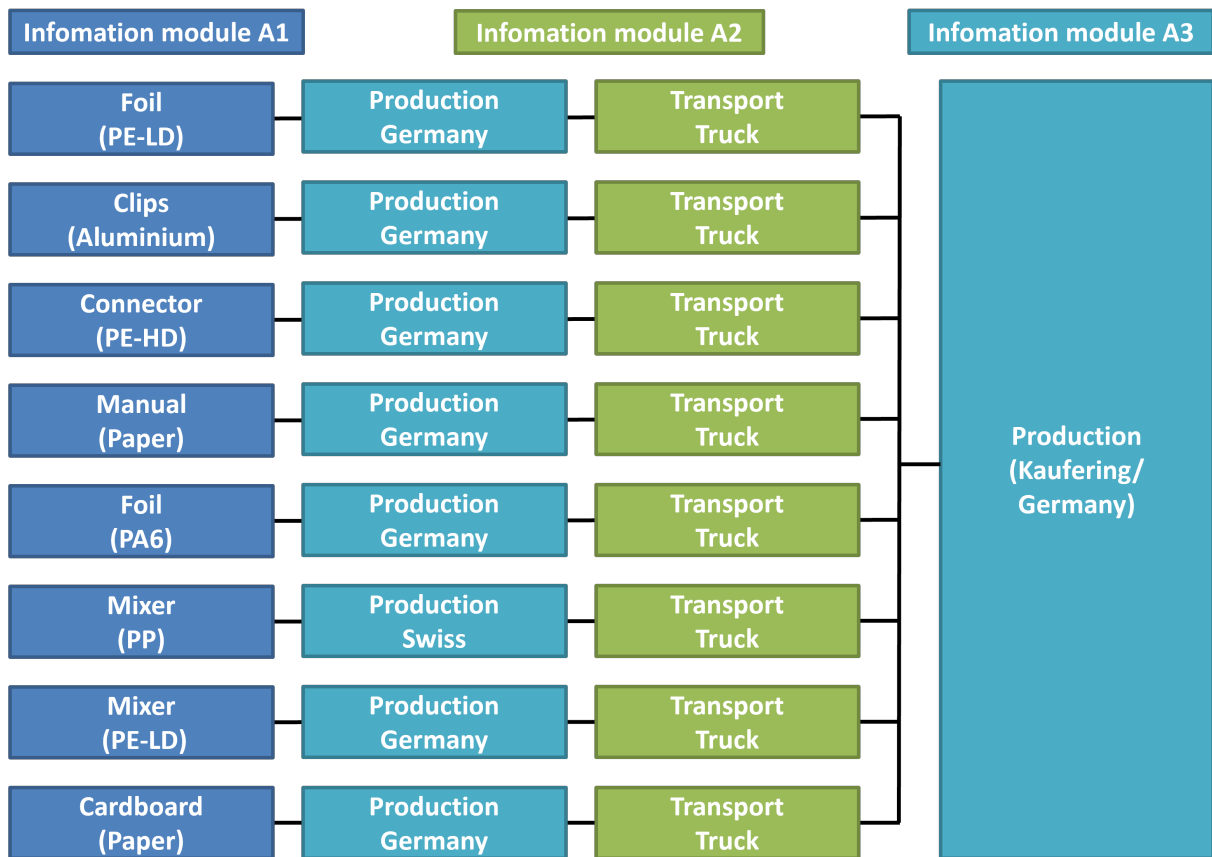


Illustration: Production process of the packaging

2.7 Environment and health during manufacturing

The manufacturing plant of HIT-HY 200-R, Hilti GmbH Industriegesellschaft für Befestigungstechnik, Hiltistr. 6, 86916 Kaufering, Germany, is certified according to *ISO 14001* which defines international standards for sustainable environmental management. The production site is also certified in accordance with *DIN EN ISO 50001* Energy Management Systems.

2.8 Product processing/Installation

During the installation the temperature of the base material must be between -10°C and $+40^{\circ}\text{C}$. The temperature of the product should be between $5 - 25^{\circ}\text{C}$ during storage and $0 - 40^{\circ}\text{C}$ during usage. Hilti literature and official approvals must always be considered. The two components of HIT-HY 200-R are only for use in combination with the defined volume ratio and under these conditions mentioned above to build up a cross-linked filled duomer.

The product is delivered with Instructions for Use explaining the basic steps for installation:

- 1) For safe handling the precautionary measures described in the Safety Data Sheet (SDS) (e.g. hand and eye protection) must be adhered to
- 2) Insert the cartridge into the red cassette
- 3) Screw on the mixing nozzle
- 4) Put the cassette into the dispenser system
- 5) Discard the first trigger pulls
- 6) Fill 2/3 of the borehole with mortar
- 7) Set the fixing element

After mixing the components and squeezing the mortar into the borehole the fixing element has to be

set within the working time mentioned in the instructions for use. After the curing time, described as well in the instructions for use, the mortar is ready to take up loads.

Refer to the Safety Data Sheet (SDS) for detailed information on handling, storage as well as first aid, firefighting and accidental release measures and disposal considerations. Following the given instructions helps to minimize the risk for health and the environment.

2.9 Packaging

Hilti HIT-HY 200-R is supplied in the form of a 2-foilpack system and thus leads to very little waste remaining after use on the construction site. After curing, the product can be disposed of with household waste. Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

The outer packaging consisting of PE foil and cardboard boxes designed according to the product size can be recycled. Packaging contaminated by the product must be disposed in a safe manner in accordance with local/national regulations.

2.10 Condition of use

The verifications and assessment methods on which the European Technical Assessments are based, lead to the assumption of the anchor's working life of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works. Regarding changes of the material during lifetime due to mechanical or chemical influences no effects are known.

2.11 Environment and health during use

The effects on indoor air are described by the Volatile Organic Compound (VOC) data mentioned in paragraph 7. Information regarding contact with drinking water further information can be obtained from paragraph 2.13. No further data is available for the effects during the use phase for indoor or outdoor use.

2.12 Reference service life

Hilti HIT-HY 200-R is exposed to a wide variety of environmental factors during the use phase. The anticipated Reference Service Life depends on the specific installation situation and the exposure associated with the product. The main factors influencing the period of use involve weathering as well as mechanical and chemical loads.

2.13 Extraordinary effects

Fire

Even without any special fire safety features the Injection Systems comply with at least the requirements of the *DIN EN 13501-1* standard for fire classes E and Efl. As cross-linked methacrylate resins do not melt or drip, the resins do not contribute towards spreading fire. Apart from the common combustion products carbon monoxide and carbon dioxide, fire gases can contain traces of methyl methacrylate, esters, alcohol, and hydrocarbons. Due to the quantities used, they only have a subordinate influence on the fire characteristics of a building structure in which they have been installed.

Brandschutz

Name	Value
Building material class	E/Efl
Burning droplets	No performance

	assessed
Smoke gas development	No performance assessed
Reaction to fire	Anchorage systems satisfy requirements for class A1
Reaction to fire	No performance assessed

Water

The cured product is chemically inert and insoluble in water. HIT-HY 200-R is certified for use as an anchoring adhesive in concrete for water treatment applications according to National Sanitation Foundation (US) /NSF/.

Mechanical destruction

It is recommended to use dust protection during demolition of the cured chemical anchor.

2.14 Re-use phase

The product cannot be re-used. After usage the product can be removed by demolition.

2.15 Disposal

Uncured Hilti HIT-HY 200-R can be disposed according to the *European waste code* 08 04 09* or 20 01 27*. The built-in cured anchor can be disposed as construction waste for which the European waste code 17 01 01 applies.

2.16 Further information

Further information is available on request under anchor.hse@hilti.com and on the Hilti website: www.hilti.group

3. LCA: Calculation rules

3.1 Declared Unit

The declared product is a HILTI injection mortar HIT-HY 200-R. The declared unit refers to one kilogram of reaction resin product in the required mixing ratio of the two components. The packaging of 0,1242 kg is also included in the calculation. The following table shows the data of the declared unit.

Angabe der deklarierten Einheit

Name	Value	Unit
Declared unit	1	kg

3.2 System boundary

Type of EPD is cradle to gate. The following information modules are defined as system boundaries in this study:

A1- A3 product stage:

- A1 Raw material supply,
- A2 Transport to the manufacturer,
- A3 Production.

In order to grasp exactly the indicators and environmental impacts of the declared unit, a total of three information modules are considered. The information modules A1 to A3 describe the material supply, the transport to the production site, as well as the production process of the product itself.

3.3 Estimates and assumptions

The electricity mixes and other background data are calculated country-specifically for the production processes.

3.4 Cut-off criteria

All information modules considered were included in the calculation in such detail that all requirements of */EN 15804/* are met. The material consumption of the Euro pallets used for transport is less than 5% by weight due to their re-use and therefore falls below the cut-off criterion of the total calculation.

3.5 Background data

The following link documents the background data of the */GaBi 10 databases/* (SP 40), to which this study also refers. */Sphera/*

3.6 Data quality

For the compilation of the life cycle assessment, specific data were collected from the factory Kaufering, in Germany, of the HILTI AG from the year 2018. The background data from the */GaBi 10 database/* used is from the year 2018 and thus of high relevance. The mass of the different components of the reactive resin mixture come from the information to the recipe. The data quality is classified as appropriate.

3.7 Period under review

Data from the year 2018 are used, which correspond to the annual average.

3.8 Allocation

Allocation of co-products takes place in the information modules A1-A3.

The production waste of the injection-moulded components is thermally recovered. The electrical and thermal energy credits resulting therefrom are completely charged in module A3.

3.9 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 used background database has to be mentioned. The background data is given by GaBi 10 databases (SP 40) to which this study refers. */Sphera/*

4. LCA: Scenarios and additional technical information

Since the information modules A1 to A3 are considered in this study, no information is provided on LCA scenarios and other technical information.

5. LCA: Results

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

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	MND	MND	MND	MND	MND

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 kg HIT-HY 200-R

Parameter	Unit	A1-A3
Global warming potential	[kg CO ₂ -Eq.]	1.39
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.76E-9
Acidification potential of land and water	[kg SO ₂ -Eq.]	2.18E-3
Eutrophication potential	[kg (PO ₄) ³⁻ -Eq.]	4.01E-4
Formation potential of tropospheric ozone photochemical oxidants	[kg ethene-Eq.]	3.94E-4
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	1.60E-6
Abiotic depletion potential for fossil resources	[MJ]	31.20

RESULTS OF THE LCA - RESOURCE USE: 1 kg HIT-HY 200-R

Parameter	Unit	A1-A3
Renewable primary energy as energy carrier	[MJ]	2.04
Renewable primary energy resources as material utilization	[MJ]	1.04
Total use of renewable primary energy resources	[MJ]	3.08
Non-renewable primary energy as energy carrier	[MJ]	22.75
Non-renewable primary energy as material utilization	[MJ]	9.54
Total use of non-renewable primary energy resources	[MJ]	32.30
Use of secondary material	[kg]	0.01
Use of renewable secondary fuels	[MJ]	0.00
Use of non-renewable secondary fuels	[MJ]	0.00
Use of net fresh water	[m ³]	6.18E-3

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES:

1 kg HIT-HY 200-R

Parameter	Unit	A1-A3
Hazardous waste disposed	[kg]	7.33E-8
Non-hazardous waste disposed	[kg]	2.53E-2
Radioactive waste disposed	[kg]	4.25E-4
Components for re-use	[kg]	0.00
Materials for recycling	[kg]	0.00
Materials for energy recovery	[kg]	0.00
Exported electrical energy	[MJ]	0.00
Exported thermal energy	[MJ]	0.00

All indicators are collected in accordance with /EN 15804/. The impact assessment of environmental categories is carried out according to /CML 2001 Apr. 2015/. The SM is the use of secondary material in paper production. GWP is given without biogenic CO₂.

6. LCA: Interpretation

The dominance analysis shows that the main causes of environmental impacts and indicators can be found in the information module A1. This shows the global warming potential for the provision of material with about 90%, based on all information modules.

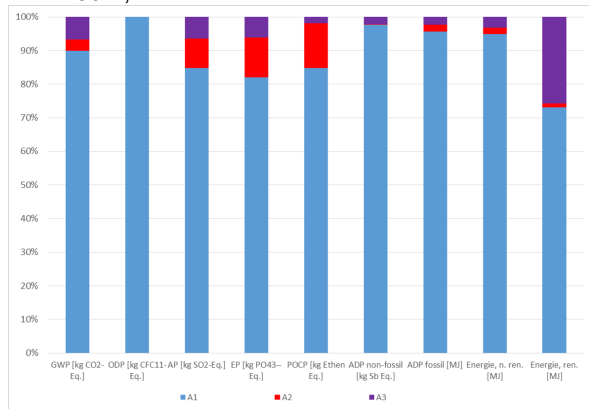


Illustration: Dominance analysis A1- A3

In the information module A1, the material supply of the reaction resin mixture causes about 84% of the global warming potential. Approx. 6% of the greenhouse gas emissions occur with PA6 (packaging). Despite its low mass, aluminum (packaging) has a share of about 5% in AP.

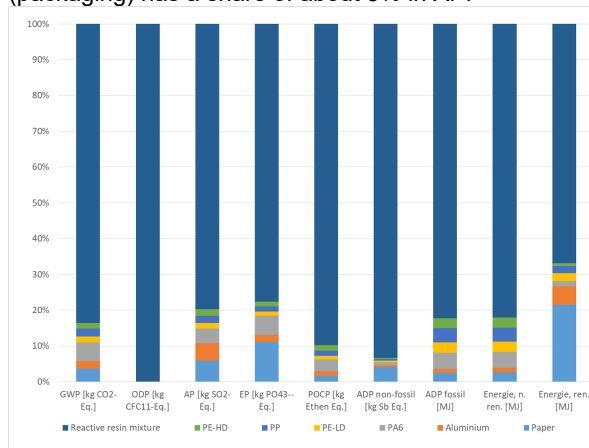


Illustration: Dominance analysis A1

Considering the material supply for the reaction resin mixture in detail, it becomes clear that two raw materials of the reaction resin mixture contribute decisively to the respective environmental effects and indicators. The material supply of the polyester resin generates about 76% of the greenhouse gas emissions. For cement, it is about 13% greenhouse gas emissions. With aluminum oxide, it is particularly striking that almost 100% of the ODP is produced.

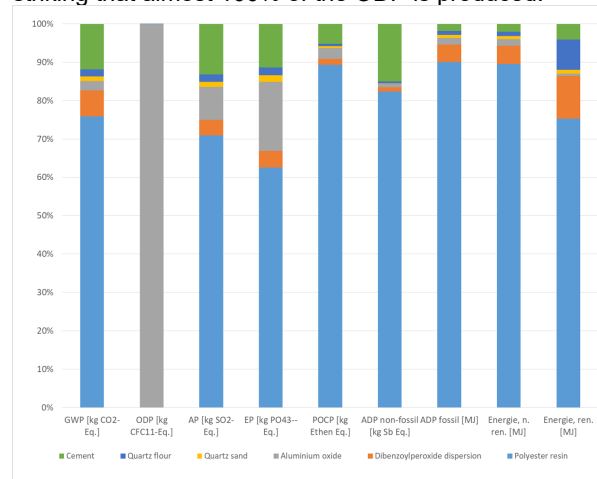


Illustration: Dominance analysis A1, reaction resin mixture

The mass of the individual components of the reaction resin mixture come from the recipe information provided by the manufacturer. According to the manufacturer, this information can be assumed to be highly accurate.

The relevant datasets used to calculate the material availability of the product are highly topical (DE: polyester resin: /Sphera/, year: 2018, EU-28: cement: source: /Sphera/, year: 2018).

Since these datasets strongly influence the results, as shown by the dominance analysis, so does the overall computation.

7. Requisite evidence

Hilti HIT-HY 200-R complies with the requirements of

- /DIBt (2010)/ in combination with the NIK values from /AgBB (2015)/ for applications in interior areas,
- emission class A+ outlined in the /French VOC Directives/ in accordance with the /Eurofins attestation/,
- /CDPH/EHLB/Standard Method V1.1/

in accordance with /Eurofins attestation, No. G03373H/, /Eurofins test report, No. G03810F/ and

/Eurofins test report, No. 392-2016-00118501/ respectively.

VOC Emissionen

Name	Value	Unit
TVOC (C6 - C16)	< 1000	µg/m ³
Sum SVOC (C16 - C22)	< 100	µg/m ³
R (dimensionless)	< 1	-
VOC without NIK	< 100	µg/m ³
Carcinogenic Substances	< 1	µg/m ³

AgBB overview of results (3 days [µg/m³])

Name	Value	Unit
TVOC (C6 - C16)	< 10000	µg/m ³
Carcinogenic Substances	< 10	µg/m ³

8. References

/IBU 2016/

IBU (2016): General Programme Instructions for the Preparation of EPDs at the Institut Bauen und Umwelt e.V., Version 1.1 Institut Bauen und Umwelt e.V., Berlin.

www.ibu-epd.de

/ISO 14025/

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

/EN 15804/

/EN 15804:2012-04+A1 2013/, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

/AgBB (2015)/

Vorgehensweise bei der gesundheitlichen Bewertung der Emissionen von flüchtigen organischen Verbindungen (VOC, VOC und SVOC) aus Bauprodukten (Februar 2015)

/CDPH/EHLB/Standard Method V1.1/

California CDPH Standard Method is a US standard for evaluating and restricting VOC emissions to indoor air. Developed in California as "Section 01350" Specification, several systems in the US refer to CDPH Standard Method

/DIBt (2010)/

Grundsätze zur gesundheitlichen Bewertung von Bauprodukten in Innenräumen (Oktober 2010)

/DIN EN 13501-1/

Klassifizierung von Bauprodukten und Bauarten zu ihrem Brandverhalten

/DIN EN 14293/

Klebstoffe - Klebstoffe für das Kleben von Parkett auf einen Untergrund - Prüfverfahren und Mindestanforderungen

/DIN EN ISO 50001/

DIN EN ISO 50001: 2018 Energy management systems - Requirements with guidance for use

/EN ISO 1183-1/

DIN 51757:2011-01: Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method

/EN ISO 604/

DIN EN ISO 604:2003-12: Determination of compressive properties

/ETA 12/0083/

European Technical Approval Hilti HIT-HY 200-R

/ETA 12/0084/

European Technical Approval Hilti HIT-HY 200-R

/ETA 12/0028/

European Technical Approval Hilti HIT-HY 200-R

/ETA 15/0419/

European Technical Approval Hilti HIT-HY 200-R

/ETA 15/0195/

European Technical Approval Hilti HIT-HY 200-R

/ETA 18/0837/

European Technical Approval Hilti HIT-HY 200-R

/ETA 18/0972/

European Technical Approval Hilti HIT-HY 200-R

/ETA 18/0978/

European Technical Approval Hilti HIT-HY 200-R

/ICC ESR-3963/

International Code Council Evaluation Service

/ICC ESR-3187/

International Code Council Evaluation Service

/Eurofins attestation, No. G03373H/

VOC test attestation for verification of compliance with DIBt(2010)/AgBB(2015) from May 2015

/Eurofins test report, No. G03810F/

VOC test report for verification of compliance with the French VOC directive from March 2011

/Eurofins test report, No. 392-2016-00118501/

VOC test report for verification of compliance with CDPH/EHLB/Standard Method V1.1 from March 2016

/European Waste code/

in accordance with the European Waste Catalogue (EWC) (EWC 2014/955/EU) Commission Decision amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council

/French VOC Directives/

Décret no 2011-321 du 23 mars 2011 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

Arrêté du 19 avril 2011 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

/GaBi 10 Software Ganzheitliche Bilanzierung/

<http://www.gabi-software.com/deutsch/index/> (29.04.2021)

/ICC ESR-3187/

International Code Council Evaluation Service

/ICC ESR-3963/

International Code Council Evaluation Service

/ISO 14001/

ISO 14001:2015 Environmental management systems - Requirements with guidance for use



/ISO 9001/
ISO 9001:2015 Quality management systems -
Requirements

/NSF/
NSF/ANSI/CAN 61 Drinking Water System
Components - Health Effects

/PCR Part A/
Product Category Rules for Building-Related Products
and Services - Calculation rules for the life cycle
assessment and

requirements for the background report V2.0, Institut
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