

# Product Verification

## Sustainability

Self declared according to DGNB Neubau 2018

### ■ Product Systems

#### Permanent formwork Pecafil® VR6

#### Max Frank GmbH & Co. KG

Pecafil® formwork elements can be used universally for many purposes, above all as formwork for foundations and ribbed slabs as well as sheeting for building pits. It is also suitable in the transparent version for weather, dust and protection screens. The material is available in different thicknesses. Thanks to its light weight it is easy to carry and install. The units can be shortened and adapted on the building site using simple tools. Pecafil® can also be supplied as pre-formed sections. Pecafil® permanent formwork is environmentally friendly, groundwater-neutral and recyclable.



## Product Assessment

### Environmental Quality (ENV)

Criteria	Product Verification
ENV 1.1 LBuilding life cycle assessment (Updated on: 16.07.2018)	EPD available: No
ENV 1.2 Local environmental impact (Updated on: 05.01.2022)	Quality level 4 of 4
ENV1.3.1 Responsibly sourced raw materials	quality level 0 of 3
ENV1.3.2 Secondary raw materials	quality level 1 of 2

Legend: yes = Product contributes toward satisfying the credit, N/A = Product not relevant in the credit, no = Credit requirements are not proven

## Summary

### The product contributes to the certification:

- The product has an Environmental Product Declaration (EPD) which can be used to calculate the building life cycle assessment: EPD available: No
- Achieved quality level in DGNB 2018 Criteria ENV 1.2 Local environmental impact for the entire product: Quality level 4 of 4
- The product achieves the following quality level in criterion ENV1.3.1 (Responsibly sourced raw materials). quality level 0 of 3
- The product achieves the following quality level in criterion ENV1.3.2 (Secondary raw materials). quality level 1 of 2

## Product Properties

### Ingredients:

Reused content	92.86 wt%
VOC content according 2004/42/EG:	N/A
VOC content according 2004/42/EG:	N/A
Recycled content pre-consumer:	20.74 wt%
Recycled content post-consumer:	72.12 wt%
Percentage of the product's composition, that is known to the chemical ingredient level	N/A
To what level of detail is the product composition known?	N/A
Rapidly renewable content	95.55 wt%
Non renewable virgin raw material content	4.45 wt%
SVHC according REACH < 0,1 %:	Yes

Free (< 0,1 %) of biocidal:	Yes
Free (< 0,1 %) of chlorinated paraffins (= CP inkl. SCCP, MCCP, LCCP):	Yes
Free (< 0,1 %) of polybrominated diphenyl ethers (= PBDE):	Yes
Free (< 0,1 %) of polybrominated biphenyls (= PBB):	Yes
Free (< 0,1 %) of hexabromocyclododecane (= HBCD):	Yes
Free (< 0,1 %) of tris (2-carboxyethyl) phosphine (= TCEP):	Yes
Free (< 0,1 %) of lead:	Yes
Free (< 0,1 %) of cadmium:	Yes
Free (< 0,1 %) of chromium-VI compounds:	Yes
Free of solvent according to VdL-RL01:	Yes
Free (< 0,1 %) of aromatic compounds:	Yes
Free (< 0,1 %) from halogenated propellants:	Yes
Free (< 0,1 %) of tin:	Yes
Free (< 0,1 %) of halogenated flame retardants:	Yes
Content of VOC:	N/A
Content of solvents:	N/A
Free (< 0,1 %) of halogens:	Yes

### Manufacturer:

Are reverse logistics in place for the product?	No
Environmental Management System according ISO 14001:	Yes
Final manufacturing location of the product: latitude	N/A
Final manufacturing location of the product: longitude	N/A

### Emissions:

Formaldehyde emissions after 28 days according DIN EN 717-1:	N/A
R-Value according to AgBB:	N/A
TVOC after 3 days according ISO 16000-3 / AgBB:	N/A
TVOC after 28 days according ISO 16000-3 / AgBB:	N/A
SVOC after 3 days according ISO 16000-3 / AgBB:	N/A
SVOC after 28 days according ISO 16000-3 / AgBB:	N/A
Carcinogens 1A and 1B after 3 days according ISO-16000 / AgBB:	N/A
Carcinogens 1A and 1B after 28 days according ISO-16000 / AgBB:	N/A

### Life Cycle Assessment:

Functional use period 100 a

### Circularity:

Has the product been designed for reuse, refurbishment or remanufacturing? No

Is the product designed for a recycling of equal quality? Yes

Was the product designed for clean incineration? No

Product was designed with cycling in mind. No

Was the Product designed for emission or direct dispersal? No

Was the product specifically designed for clean and rapid disassembly? No

### Other:

test N/A

## Product Components

Name	Amount	Material type / Function	DfD	Total Weight	Specific Weight	Portion (%)
polyethylen foil	1.000	LDPE	No	0.111	0 kg / m <sup>2</sup>	5.49 %
-	1.000	LDPE	No	0.111	0 kg / m <sup>2</sup>	5.50 %
-	1.000	B500A+(G)	No	1.800	2 kg / m <sup>2</sup>	89.01 %

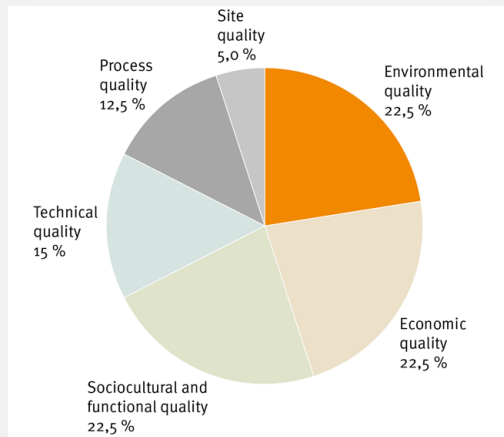
## System description

The DGNB certification system was founded by the "German Sustainable Building Council" and first appeared on the market in 2008. The DGNB system evaluates buildings holistically on the basis of individual criteria within the categories Ecological Quality, Economic Quality, Sociocultural and Functional Quality, Technical Quality, Process Quality and Location Quality. Different profiles allow the certification of new buildings and existing buildings, as well as of quarters in Germany and Internationally. Buildings can achieve a certification in Bronze, Silver, Gold and Platinum. Up to now, more than 3,500 projects have been awarded by the DGNB (as of June 2018).

Source: [www.dgnb.de](http://www.dgnb.de)

## System categories

### Category Weighting



Source: DGNB 2018

### Category

### Category considered in product verification

Environmental quality (ENV)	Yes
Economic quality (ECO)	No
Sociocultural and functional quality (SOC)	No
Technical quality (TEC)	No
Process quality (PRO)	Yes
Site quality (SITE)	No

# Detailed Verification

Self declared according to DGNB Neubau 2018

## ■ Environmental Quality (ENV)

### ■ ENV 1.1 LBuilding life cycle assessment (Updated on: 16.07.2018)

The product has an Environmental Product Declaration (EPD) which can be used to calculate the building life cycle assessment:

Permanent formwork Pecafil® VR6	EPD available: No
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An environmental product declaration exists for the product:

Permanent formwork Pecafil® VR6	No
polyethylen foil	No
Flachfolien aus Polyethylen	No
Betonstahl/ Betonstabstahl VR6	Yes

EPD Owner of the Declaration:

Permanent formwork Pecafil® VR6	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	Baustahlgewebe GmbH

EPD Publisher:

Permanent formwork Pecafil® VR6	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	Institut für Bauen und Umwelt e. V. (IBU)

EPD Programme holder:

Permanent formwork Pecafil® VR6	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	Institut für Bauen und Umwelt e. V. (IBU)

**EPD Declaration number:**

<b>Permanent formwork Pecafil® VR6</b>	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	EPD-BSW-20210265-CBA1-DE

**EPD Issue date:**

<b>Permanent formwork Pecafil® VR6</b>	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	02.03.2022

**EPD valid to:**

<b>Permanent formwork Pecafil® VR6</b>	No Information
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	01.03.2027

**■ ENV 1.2 Local environmental impact (Updated on: 05.01.2022)**
**Achieved quality level in DGNB 2018 Criteria ENV 1.2 Local environmental impact for the entire product:**

<b>Permanent formwork Pecafil® VR6</b>	Quality level 4 of 4
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**Achieved quality level in DGNB 2018 Criterion ENV 1.2 Local environmental impact:**

<b>Permanent formwork Pecafil® VR6</b>	Quality level 4
polyethylen foil	Quality level 4
Flachfolien aus Polyethylen	Quality level 4
Betonstahl/ Betonstabstahl VR6	Quality level 4

The product does not fall under any of the above listed product groups according to DGNB 2018 ENV 1.2

The entire product does not fall under a DGNB 2018 requirement in ENV 1.2 Local environmental impact. The product helps to achieve the following quality level:

<b>Permanent formwork Pecafil® VR6</b>	4
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The product does not fall under a DGNB 2018 requirement in ENV 1.2 Local environmental impact. The product helps to achieve the following quality level:

Permanent formwork Pecafil® VR6	Quality level 4
polyethylen foil	Quality level 4
Flachfolien aus Polyethylene	Quality level 4
Betonstahl/ Betonstabstahl VR6	Quality level 4

The product does not fall under any of the above listed product groups according to DGNB 2018 ENV 1.2 or the relevant product group is evaluated on the components:

Permanent formwork Pecafil® VR6	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

#### ■ ENV1.3.1 Responsibly sourced raw materials

The product achieves the following quality level in criterion ENV1.3.1 (Responsibly sourced raw materials).

Permanent formwork Pecafil® VR6	quality level 0 of 3
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The raw materials for the production of the product were extracted, mined or manufactured free of child and forced labor.

Permanent formwork Pecafil® VR6	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

For the raw materials used for the production of the product, illegal raw material mining / manufacturing can be excluded.

Permanent formwork Pecafil® VR6	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

Material extraction and further processing takes place entirely in Europe.

Permanent formwork Pecafil® VR6	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes



The product meets the requirements of quality level 1:

<b>Permanent formwork Pecafil® VR6</b>	quality level 0 of 1
polyethylen foil	quality level 0 of 1
Flachfolien aus Polyethylene	quality level 0 of 1
Betonstahl/ Betonstabstahl VR6	quality level 0 of 1

The manufacturer takes responsibility for responsible and transparent resource extraction and can demonstrate this through CSR reports and proof of origin of the raw materials.

<b>Permanent formwork Pecafil® VR6</b>	No
polyethylen foil	No
Flachfolien aus Polyethylene	No
Betonstahl/ Betonstabstahl VR6	No

### ■ ENV1.3.2 Secondary raw materials

The product achieves the following quality level in criterion ENV1.3.2 (Secondary raw materials).

<b>Permanent formwork Pecafil® VR6</b>	quality level 1 of 2
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The raw materials for the production of the product were extracted, mined or manufactured free of child and forced labor.

<b>Permanent formwork Pecafil® VR6</b>	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

For the raw materials used for the production of the product, illegal raw material mining / manufacturing can be excluded.

<b>Permanent formwork Pecafil® VR6</b>	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

Material extraction and further processing takes place entirely in Europe.

<b>Permanent formwork Pecafil® VR6</b>	Yes
polyethylen foil	Yes
Flachfolien aus Polyethylene	Yes
Betonstahl/ Betonstabstahl VR6	Yes

metal

The metal fraction in the product is obtained from secondary raw materials of the following quality level:

Permanent formwork Pecafil® VR6	1 of 1
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The product is mainly made of metal

Permanent formwork Pecafil® VR6	Yes
polyethylen foil	No
Flachfolien aus Polyethylen	No
Betonstahl/ Betonstabstahl VR6	Yes

Metal content in the product

Permanent formwork Pecafil® VR6	89.01 %
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	100 %

Proportion of secondary material in the metal (Recycled Content)

Permanent formwork Pecafil® VR6	96.5 %
polyethylen foil	No Information
Flachfolien aus Polyethylen	No Information
Betonstahl/ Betonstabstahl VR6	96.5 %

**othermaterials**

The product meets the quality level in the category of other material groups:

Permanent formwork Pecafil® VR6	No Information
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The product does not consist of any of these materials

Permanent formwork Pecafil® VR6	No
polyethylen foil	Yes
Flachfolien aus Polyethylen	Yes
Betonstahl/ Betonstabstahl VR6	No

Recycled content pre-consumer:

Permanent formwork Pecafil® VR6	20.74 wt%
polyethylen foil	0 wt%
Flachfolien aus Polyethylen	0 wt%
Betonstahl/ Betonstabstahl VR6	23.3 wt%

Recycled content post-consumer:

Permanent formwork Pecafil® VR6	72.12 wt%
polyethylen foil	30 wt%
Flachfolien aus Polyethylene	0 wt%
Betonstahl/ Betonstabstahl VR6	76.7 wt%

## ■ Contact Details Manufacturer

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## ■ Disclaimer

This verification is the evaluation and ranking of products in terms of the certification system DGNB 2018 (New construction building). The DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen) generally does not certify products. Therefore the project team or the manufacturer is responsible to declare compliance with respect to the DGNB criteria. Notice: This verification is generated by the Assessment Service of BMS. The distribution or publication by third parties is not permitted. The data sheet is not a DGNB certification document. The information is based on the manufacturer's specifications. Despite a diligent treatment of all information BMS can not make any warranties about the completeness, reliability and accuracy of this information. The requirements of DGNB can be interpreted differently and depend on the project and scope of application. Therefore, BMS cannot accept any liability for the evaluation in terms of the DGNB criteria. The user of the data sheet, the user / purchaser of the product and the consultant / planner, who is advising on this product has the duty to check the product for the intended application at their own responsibility. When a new version of this product verification is produced, the previous version loses its validity.