

# Product Verification

## Sustainability

Self declared according to DGNB Neubau 2018

### Product Systems

#### Stay-in-place formwork for working joints Stremaform®

Max Frank GmbH & Co. KG

Stremaform® formwork is the leading product of ready-to-install formwork systems for working joints. The formwork elements are used as permanent formwork in floor slabs, ceilings and walls. Stremaform® products for working joints have been developed and constructed in Germany by MAX FRANK for more than 30 years.



## 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	15 wt%
Recycled content post-consumer:	15 wt%
Recycled content pre-consumer:	0 wt%
VOC content according 2004/42/EG:	0 g/l
VOC content according 2004/42/EG:	0 g/m <sup>2</sup>
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	100 wt%
Non renewable virgin raw material content	0 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
Free of plasticizer according to VdL-RL01:	Yes
Free (< 0,1 %) of hydrocarbon (KWS) plasticizer:	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 50 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

## Product Components

Name	Amount	Material type		Total Weight	Specific Weight	Portion (%)
		/ Function	DfD			
Bewehrungsdraht	1.000	B500A	No	3.270	3 kg / m <sup>2</sup>	56.67 %
Streckmetall 16/6/1/1	1.000	DC 04	No	2.500	3 kg / m <sup>2</sup>	43.33 %

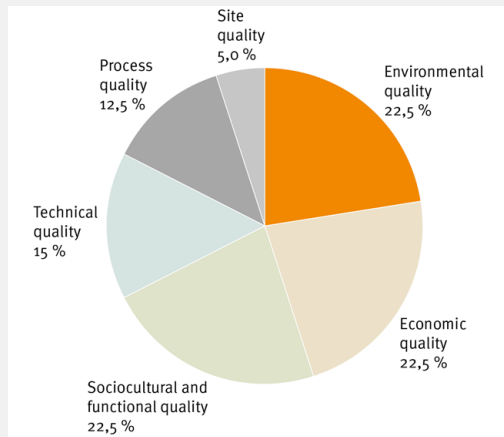
## System description

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:

Stay-in-place formwork for working joints Stremaform®	EPD available: No
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An environmental product declaration exists for the product:

Stay-in-place formwork for working joints Stremaform®	No
Bewehrungsdraht	No
Streckmetall 16/6/1/1	No

### ■ 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:

Stay-in-place formwork for working joints Stremaform®	Quality level 4 of 4
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Achieved quality level in DGNB 2018 Criterion ENV 1.2 Local environmental impact:

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	Quality level 4
Streckmetall 16/6/1/1	Quality level 4

Coatings - on NON-mineral interior sub-surfaces (DGNB ENV1.2 Row 1):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No
Streckmetall 16/6/1/1	No

Coatings - on mineral interior sub-surfaces (DGNB ENV1.2 Row 2):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings - on mineral interior sub-surfaces (DGNB ENV1.2 Row 3):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coating materials and insulation adhesives - on exterior mineral surfaces (DGNB ENV1.2 Row 5):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings (fire protection coatings) - on load-bearing metal components (DGNB ENV1.2 Row 15):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings (corrosion protection coatings C2) - on load-bearing metal components (DGNB ENV1.2 Zeile 16 / BNB BN 2015 1.1.6 Zeile 13):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings (corrosion protection coatings C3) - on load-bearing metal components (DGNB ENV1.2 Row 17 / BNB BN 2015 1.1.6 Row 14):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings (corrosion protection coatings > C3) - on load-bearing metal components (DGNB ENV1.2 Row 18):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**Coatings (corrosion protection coatings and effect coatings) - on NON-load-bearing metal components (DGNB ENV1.2 Row 19 / BNB BN 2015 1.1.6 Row 16):**

<b>Stay-in-place formwork for working joints Stremaform®</b>	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings (reactive PU products) - on mineral floor, ceiling and wall surfaces (DGNB ENV1.2 Row 20 / BNB BN 2015 1.1.6 Row 17):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings - for wooden surface (DGNB ENV1.2 Row 21):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings (PMMA/EP) and liquid plastics - for industrial floors, parking areas, underground car parks, as well as for sealing building components or kitchens (DGNB ENV1.2 Row 22):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings (EP-product)s - on mineral surfaces of floors, ceilings and walls (DGNB ENV1.2 Row 23 / BNB BN 2015 1.1.6 Row 19):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings (PU/EP) - for industrial floorings, parking areas and underground car parks for OS8 and OS11 (DGNB ENV1.2 Row 24):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Passivating agents - on aluminium and stainless steel components of the facade and roof (DGNB ENV1.2 Row 32):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

Coatings - factory coated metal components (DGNB ENV1.2 Row 33):

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	No Information
Streckmetall 16/6/1/1	No

**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:

Stay-in-place formwork for working joints Stremaform®	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:

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	Quality level 4
Streckmetall 16/6/1/1	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:

Stay-in-place formwork for working joints Stremaform®	No Information
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

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

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

Stay-in-place formwork for working joints Stremaform®	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.

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

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

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

Material extraction and further processing takes place entirely in Europe.

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	No

The product meets the requirements of quality level 1:

Stay-in-place formwork for working joints Stremaform®	quality level 0 of 1
Bewehrungsdraht	quality level 0 of 1
Streckmetall 16/6/1/1	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.

Stay-in-place formwork for working joints Stremaform®	No
Bewehrungsdraht	No
Streckmetall 16/6/1/1	No

### ■ ENV1.3.2 Secondary raw materials

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

Stay-in-place formwork for working joints Stremaform®	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.

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

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

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

Material extraction and further processing takes place entirely in Europe.

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	No

metal

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

Stay-in-place formwork for working joints Stremaform®	1 of 1
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**The product is mainly made of metal**

Stay-in-place formwork for working joints Stremaform®	Yes
Bewehrungsdraht	Yes
Streckmetall 16/6/1/1	Yes

**Metal content in the product**

Stay-in-place formwork for working joints Stremaform®	100 %
Bewehrungsdraht	100 %
Streckmetall 16/6/1/1	100 %

**Proportion of secondary material in the metal (Recycled Content)**

Stay-in-place formwork for working joints Stremaform®	15 %
Bewehrungsdraht	0 %
Streckmetall 16/6/1/1	15 %

## ■ 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.