

# Product Verification

## Sustainability

Self declared according to LEED Building Design and Construction V4 (2015)

### ■ 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

### Materials and Resources

Criteria	Product Verification
MR Credit Life-Cycle Impact Reduction - Option 4: Whole-Building Life-Cycle Assessment	EPD available: No
MR Credit BPDO - Environmental Product Declaration - Option 1: Environmental Product Declaration	0 % weighted value
MR Credit BPDO - Environmental Product Declaration - Option 2: Multi-Attribute Optimization	0 % weighted value
MR Credit BPDO - Sourcing of Raw Materials - Option 1: Raw Material Source and Extraction Reporting	0 % weighted value
MR Credit BPDO - Sourcing of Raw Materials - Option 2: Leadership Extraction Practices	30 % weighted value
MR Credit BPDO - Material Ingredients - Option 1: Material Ingredient Reporting	0 % weighted value
MR Credit BPDO - Material Ingredients - Option 2: Material Ingredient Optimization	100 % weighted value
MR Credit BPDO - Material Ingredients - Option 3: Product Manufacturer Supply Chain Optimization	0 % weighted value
Location Valuation Factor	No

### Indoor Environmental Quality

Criteria	Product Verification
EQ Credit Low-Emitting Materials (except Healthcare and Schools)	N/A

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 under LEED MR Building Life-Cycle Impact Reductions - Option 4: Whole-Building Life-Cycle Assessment: EPD available: No
- Weighted Product Value on Credit BPDO - Environmental Product Declaration - Option 1: Environmental Product Declaration: 0 % weighted value

- Weighted Product Value on Credit BPDO - Environmental Product Declaration - Option 2: Multi-Attribute Optimization: 0 % weighted value
- Weighted Product Value on Credit BPDO - Sourcing of Raw Materials - Option 1: Raw Material Source and Extraction Reporting: 0 % weighted value
- Weighted Product Value on Credit BPDO - Sourcing of Raw Materials - Option 2: Leadership Extraction Practices: 30 % weighted value
- Weighted Product Value on Credit BPDO - Material Ingredients - Option 1: Material Ingredient Reporting: 0 % weighted value
- Weighted Product Value on Credit BPDO - Material Ingredients - Option 2: Material Ingredient Optimization: 100 % weighted value
- Weighted Product Value on Credit BPDO - Material Ingredients - Option 3: Supply Chain Optimization: 0 % weighted value
- Information for Location Valuation Factor is available: No

## ■ 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
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### 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 / Function	DfD	Total Weight	Specific Weight	Portion (%)
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 %

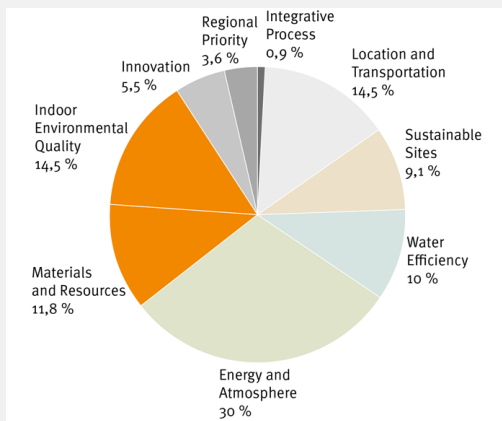
■ System description

This verification is the evaluation and ranking of products in terms of the certification system LEED version 4 (Building Design and Construction). The USGBC (U.S. Green Building Council) generally does not certify products. Therefore the project team or the manufacturer is responsible to declare compliance with respect to the LEED 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 LEED 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 LEED 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 LEED 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.

Source: [www.usgbc.org](http://www.usgbc.org)

■ System categories

Category Weighting



Category

Category considered in product verification

Integrative Process (IP)	No
Location and Transportation (LT)	No
Sustainable Sites (SS)	No
Water Efficiency (WE)	No
Energy and Atmosphere (EA)	No
Materials and Ressources (MR)	Yes
Indoor Environmental Quality (EQ)	Yes
Innovation (IN)	No
Regional Priority (RP)	No

Source: LEED v4 - New Construction

# Detailed Verification

Self declared according to LEED Building Design and Construction V4 (2015)

## Materials and Resources

### MR Credit Life-Cycle Impact Reduction - Option 4: Whole-Building Life-Cycle Assessment

The product has an Environmental Product Declaration (EPD), which can be used to calculate the building life cycle assessment under LEED MR Building Life-Cycle Impact Redcuts - Option 4: Whole-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

### MR Credit BPDO - Environmental Product Declaration - Option 1: Environmental Product Declaration

Weighted Product Value on Credit BPDO - Environmental Product Declaration - Option 1: Environmental Product Declaration:

Stay-in-place formwork for working joints Stremaform®	0 % weighted value
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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

### MR Credit BPDO - Environmental Product Declaration - Option 2: Multi-Attribute Optimization

Weighted Product Value on Credit BPDO - Environmental Product Declaration - Option 2: Multi-Attribute Optimization:

Stay-in-place formwork for working joints Stremaform®	0 % weighted value
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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

■ MR Credit BPDO - Sourcing of Raw Materials - Option 1: Raw Material Source and Extraction Reporting

Weighted Product Value on Credit BPDO - Sourcing of Raw Materials - Option 1: Raw Material Source and Extraction Reporting:

Stay-in-place formwork for working joints Stremaform®	0 % weighted value
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There is a corporate sustainability reports (CSR) report from the manufacturer:

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

■ MR Credit BPDO - Sourcing of Raw Materials - Option 2: Leadership Extraction Practices

Weighted Product Value on Credit BPDO - Sourcing of Raw Materials - Option 2: Leadership Extraction Practices:

Stay-in-place formwork for working joints Stremaform®	30 % weighted value
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Extended producer responsibility

Content of materials for a closed-loop recycling or take-back programm in the entire product:

Stay-in-place formwork for working joints Stremaform®	0 %
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Bio-based materials

Content of SAN-certified bio-based materials in the entire product:

Stay-in-place formwork for working joints Stremaform®	0 %
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Wood products

Content of FSC-certified wood-based materials in the entire product:

Stay-in-place formwork for working joints Stremaform®	0 %
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Materials reuse

Content of salvaged, refurbished, or reused products or materials in the entire product:

Stay-in-place formwork for working joints Stremaform®	15 %
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The product is made of salvaged, refurbished, or reused products:

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



Do you want to enter the content of FSC-certified materials for the entire product? Otherwise it will be automatically calculated from the components. If you do not have any components for your product, we recommend that you enter here the content of FSC certified materials for the entire product:

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

#### Reused content

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

#### Recycled content

Creditable recycled content according to LEED for the entire product:

Stay-in-place formwork for working joints Stremaform®	15 %
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Postconsumer recycled content for the entire product:

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

Do you want to enter the recycled content for the entire product? Otherwise it will be automatically calculated from the components. If you do not have components for your product, we recommend that you enter the recycling percentage for the entire product here:

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

Postconsumer recycled content of product (creditable):

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

Recycled content post-consumer:

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

**Postconsumer recycled content for steel according to LEED:**

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

**The product is made of steel:**

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

**Recycled content pre-consumer:**

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

**Preconsumer recycled content for the entire product:**

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

**MR Credit BPDO - Material Ingredients - Option 1: Material Ingredient Reporting**
**Weighted Product Value on Credit BPDO - Material Ingredients - Option 1: Material Ingredient Reporting:**

Stay-in-place formwork for working joints Stremaform®	0 % weighted value
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**A manufacturer inventory with all ingredients (to at least 0.1 %) identified by CASRN exists for the product:**

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

**A Health Product Declaration (HPD) exists for the product:**

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

Certified according Declare - all ingredients have been evaluated and disclosed down to 0,1 % = 1000 ppm:

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

Certified according Product Lens:

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

Certified according Cradle to Facts - NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric:

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

Assessed according ANSI/BIFMA e3 Furniture Sustainability standard - Product earned at least 3 points under 7.5.1.3 Advanced Level in e3-2014 or 3 points under 7.4.1.3 Advanced Level in e3-2012:

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

Certified with Cradle to Cradle:

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

Cradle to Cradle Standard Version:

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

Cradle to Cradle Level:

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

**Certified with Cradle to Cradle Material Health:**

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

**Cradle to Cradle Material Health Level:**

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

**For Cradle to Cradle Material Health are at least 90% of materials assessed by weight:**

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

**MR Credit BPDO - Material Ingredients - Option 2: Material Ingredient Optimization**
**Weighted Product Value on Credit BPDO - Material Ingredients - Option 2: Material Ingredient Optimization:**

Stay-in-place formwork for working joints Stremaform®	100 % weighted value
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The product contains no ingredients listed on the REACH Authorization list – Annex XIV, the Restriction list – Annex XVII and the SVHC candidate list. This is proved down to fully inventoried chemical ingredients to 100 ppm (0,01 %):

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

The Product have fully inventoried chemical ingredients to 100 ppm and no Benchmark 1 hazard according to GreenScreen v1.2 Benchmark. The product is assessed with "GreenScreen List Translator":

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

The Product have fully inventoried chemical ingredients to 100 ppm and no Benchmark 1 hazard according to GreenScreen v1.2 Benchmark. The product is assessed with "GreenScreen Assessment":

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

**Certified with Cradle to Cradle:**

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

**Cradle to Cradle Standard Version:**

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

**Cradle to Cradle Level:**

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

**MR Credit BPDO - Material Ingredients - Option 3: Product Manufacturer Supply Chain Optimization**
**Weighted Product Value on Credit BPDO - Material Ingredients - Option 3: Supply Chain Optimization:**

Stay-in-place formwork for working joints Stremaform®	0 % weighted value
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**Environmental Management System according ISO 14001:**

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

**Manufacturer is certified according OHSAS 18000 - Health and Safety Management System:**

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

**Location Valuation Factor**
**Information for Location Valuation Factor is available:**

Stay-in-place formwork for working joints Stremaform®	No
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**Place of raw material extraction (e.g D-70563 Stuttgart):**

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

Place of manufacture (e.g. D-70563 Stuttgart):

Stay-in-place formwork for working joints Stremaform®	D-96332 Pressig
Bewehrungsdraht	D-14770 Brandenburg
Streckmetall 16/6/1/1	Mergo - Italy

Place of purchase incl. distribution (e.g. D-70563 Stuttgart):

Stay-in-place formwork for working joints Stremaform®	D-96332 Pressig
Bewehrungsdraht	D-14770 Brandenburg
Streckmetall 16/6/1/1	Keine Angabe

The distance between place of raw material extraction and manufacture is less than 100 miles/160 km:

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

#### ■ Indoor Environmental Quality

#### ■ EQ Credit Low-Emitting Materials (except Healthcare and Schools)

The entire product contributes toward satisfying EQ Credit: Low-Emitting Materials:

Stay-in-place formwork for working joints Stremaform®	N/A
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#### ■ Contact Details Manufacturer

##### Max Frank GmbH & Co. KG

Mitterweg 1  
94339 Leiblfing  
DE  
<http://www.maxfrank.de/>



#### ■ Disclaimer

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