

Product Verification

Sustainability

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

■ Product Systems

Fradiflex® coated metal waterstop system premium

Max Frank GmbH & Co. KG

All concrete structures in contact with the ground must be sealed against ground moisture, seepage water or pressurized water. Our Fradiflex® metal waterstop system meets all requirements for the secure sealing of water-impermeable structures. The flexible special coating bonds with the concrete, creating an adhesive barrier seal that prevents water from circulating. The system can be used for the reliable sealing of construction and predetermined crack joints in in-situ concrete construction and with element walls.

<https://www.maxfrank.com/intl-de/produkte/dichtungstechnik/o2-fugenblech-fradiflex/>



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	0 % 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)	No

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: 0 % 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
- The entire product contributes toward satisfying EQ Credit: Low-Emitting Materials: No

■ Product Properties

Ingredients:

Free of solvent according to VdL-RL01:	Yes
Free of plasticizer according to VdL-RL01:	Yes
Recycled content post-consumer:	25 wt%
Recycled content pre-consumer:	5 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 (< 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 solvents:	0 %



Free (< 0,1 %) of halogens:	Yes
Free (< 0,1 %) of hydrocarbon (KWS) plasticizer:	Yes
VOC content according 2004/42/EG:	0,0000000629 g/l
Percentage of the product's composition, that is known to the chemical ingredient level	100 wt%

Manufacturer:

Are reverse logistics in place for the product?	No
Environmental Management System according ISO 14001:	Yes

Emissions:

Formaldehyde emissions after 28 days according DIN EN 717-1:	0 mg/m ³
TVOC after 3 days according ISO 16000-3 / AgBB:	0,0000000629 mg/m ³
Carcinogens 1A and 1B after 3 days according ISO-16000 / AgBB:	0 mg/m ³
Carcinogens 1A and 1B after 28 days according ISO-16000 / AgBB:	0 mg/m ³

Life Cycle Assessment:

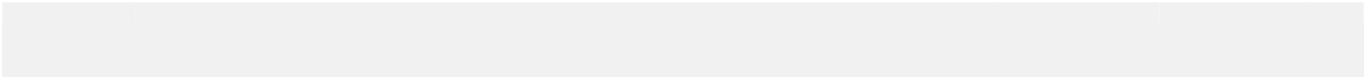
Functional use period	min. 50 a
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Circularity:

Has the product been designed for reuse, refurbishment or remanufacturing?	No
Is the product designed for a recycling of equal quality?	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 (%)
Hot-dip galvanised sheet	1.000		No	4.710	5 kg / m ²	97.72 %
Fradiflex® adhesive coating	2.000		No	0.110	0 kg / m	2.28 %



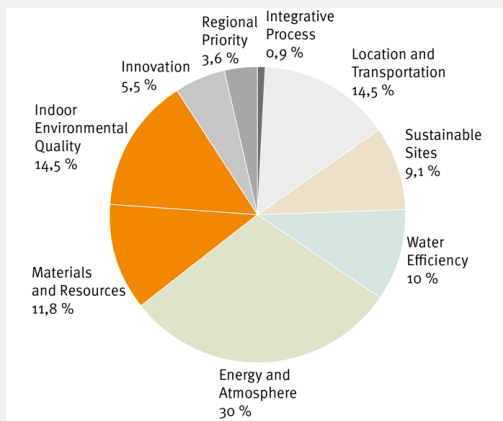
■ System description

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

■ 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 Reductions - Option 4: Whole-Building Life-Cycle Assessment:

Fradiflex® coated metal waterstop system premium	EPD available: No
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An environmental product declaration exists for the product:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

EPD Owner of the Declaration:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

EPD Publisher:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

EPD Programme holder:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

EPD Declaration number:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

EPD Issue date:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

EPD valid to:

Fradiflex® coated metal waterstop system premium	IBU
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

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:

Fradiflex® coated metal waterstop system premium	0 % weighted value
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An environmental product declaration exists for the product:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	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:

Fradiflex® coated metal waterstop system premium	0 % weighted value
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An environmental product declaration exists for the product:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	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:

Fradiflex® coated metal waterstop system premium	0 % weighted value
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There is a corporate sustainability reports (CSR) report from the manufacturer:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	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:

Fradiflex® coated metal waterstop system premium	0 % weighted value
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Extended producer responsibility

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

Fradiflex® coated metal waterstop system premium	0 %
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Do you want to enter the content of materials for a closed-loop recycling or take-back program 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 materials for the entire product:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Content of materials for a closed-loop recycling or take-back program:

Fradiflex® coated metal waterstop system premium	0 %
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

Bio-based materials

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

Fradiflex® coated metal waterstop system premium	0 %
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Wood products

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

Fradiflex® coated metal waterstop system premium	0 %
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Materials reuse

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

Fradiflex® coated metal waterstop system premium	0 %
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Recycled content

Creditable recycled content according to LEED for the entire product:

Fradiflex® coated metal waterstop system premium	0 %
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Postconsumer recycled content for the entire product:

Fradiflex® coated metal waterstop system premium	0 %
Hot-dip galvanised sheet	0 %
Fradiflex® adhesive coating	0 %

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:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Postconsumer recycled content of product (creditable):

Fradiflex® coated metal waterstop system premium	25 %
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

Recycled content post-consumer:

Fradiflex® coated metal waterstop system premium	25 wt%
Hot-dip galvanised sheet	N/A wt%
Fradiflex® adhesive coating	No Information

Postconsumer recycled content for steel according to LEED:

Fradiflex® coated metal waterstop system premium	0 %
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

The product is made of steel:

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	No

Recycled content pre-consumer:

Fradiflex® coated metal waterstop system premium	5 wt%
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

Preconsumer recycled content for the entire product:

Fradiflex® coated metal waterstop system premium	0 %
Hot-dip galvanised sheet	0 %
Fradiflex® adhesive coating	N/A %

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

Fradiflex® coated metal waterstop system premium	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:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	No

Certified according Product Lens:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	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:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Certified with Cradle to Cradle:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Cradle to Cradle Standard Version:

Fradiflex® coated metal waterstop system premium	no entry
Hot-dip galvanised sheet	no entry
Fradiflex® adhesive coating	no entry

Cradle to Cradle Level:

Fradiflex® coated metal waterstop system premium	no entry
Hot-dip galvanised sheet	no entry
Fradiflex® adhesive coating	no entry

Certified with Cradle to Cradle Material Health:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Cradle to Cradle Material Health Level:

Fradiflex® coated metal waterstop system premium	no entry
Hot-dip galvanised sheet	no entry
Fradiflex® adhesive coating	no entry

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

■ MR Credit BPDO - Material Ingredients - Option 2: Material Ingredient Optimization

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

Fradiflex® coated metal waterstop system premium	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 %):

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	Yes

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":

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	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":

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Certified with Cradle to Cradle:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Cradle to Cradle Standard Version:

Fradiflex® coated metal waterstop system premium	no entry
Hot-dip galvanised sheet	no entry
Fradiflex® adhesive coating	no entry

Cradle to Cradle Level:

Fradiflex® coated metal waterstop system premium	no entry
Hot-dip galvanised sheet	no entry
Fradiflex® adhesive coating	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:

Fradiflex® coated metal waterstop system premium	0 % weighted value
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Environmental Management System according ISO 14001:

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	Yes

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Location Valuation Factor

Information for Location Valuation Factor is available:

Fradiflex® coated metal waterstop system premium	No
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Place of raw material extraction (e.g D-70563 Stuttgart):

Fradiflex® coated metal waterstop system premium	No Information
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

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

Fradiflex® coated metal waterstop system premium	Leiblfing
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

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

Fradiflex® coated metal waterstop system premium	Leiblfing
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

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

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No Information
Fradiflex® adhesive coating	No Information

■ Indoor Environmental Quality

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

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

Fradiflex® coated metal waterstop system premium	No
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The product contributes toward satisfying EQ Credit 4: Low-Emitting Materials:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No Information

The product is an adhesive or sealant:

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	Yes

Ceilings, walls, thermal, and acoustic insulation

The entire product contributes toward satisfying EQ Credit 4: Low Emitting Materials, Category Ceilings, walls, thermal, and acoustic insulation:

Fradiflex® coated metal waterstop system premium	No
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The product contributes toward satisfying EQ Credit 4: Low Emitting Materials, Category Ceilings, walls, thermal, and acoustic insulation:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No Information

The product is a ceiling, wall, acoustic or thermal insulation material:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	No

TVOC after 14 days:

Fradiflex® coated metal waterstop system premium	≤ 0.0629 mg/m ³
Hot-dip galvanised sheet	≤ 0 mg/m ³
Fradiflex® adhesive coating	≤ 0.0629 mg/m ³

Formaldehyde emissions according DIN EN 717-1:

Fradiflex® coated metal waterstop system premium	≤ 0 mg/m ³
Hot-dip galvanised sheet	≤ 0 mg/m ³
Fradiflex® adhesive coating	≤ 0 mg/m ³

Emission testing method according CDPH Standard Method v1.1-2010:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Emission testing method according AgBB Testing and Evaluation Scheme (2010):

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Emission testing method according ISO 16000-3: 2010, ISO 16000-6: 2011, ISO 16000-9: 2006, ISO 16000-11:2006 either in conjunction with AgBB, or with French legislation on VOC emission class labeling:

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	Yes

Emission testing method according DIBt testing method (2010):

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	No
Fradiflex® adhesive coating	No

Inherently nonemitting sources

The entire product contributes toward satisfying EQ Credit 4: Low Emitting Materials, Category inherently nonemitting sources:

Fradiflex® coated metal waterstop system premium	Yes
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The product contributes toward satisfying EQ Credit 4: Low Emitting Materials, Category inherently nonemitting sources:

Fradiflex® coated metal waterstop system premium	Yes
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	No Information

The product is an inherently nonemitting source, like stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood flooring:

Fradiflex® coated metal waterstop system premium	No
Hot-dip galvanised sheet	Yes
Fradiflex® adhesive coating	No

■ Contact Details Manufacturer

Max Frank GmbH & Co. KG

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



■ Disclaimer

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.