

Environmental Product Declaration

for

**MPC and MPR galvanized steel wall hanger
brackets for European Markets**

valid until

2031-03-09

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Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

MPC and MPR galvanized steel wall hanger brackets for European Markets



EPD-Global

Owner of the declaration:

GPA Flowsystem AS

Product:

MPC and MPR galvanized steel wall hanger brackets for European Markets

Declared unit:

1 kg

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 013:2021 Part B for Steel and aluminium construction products

Program operator:

EPD-Global

Declaration number:

NEPD-15109-17812

Issue date:

09.03.2026

Latest revision

v Date: 09.03.2026

Valid to:

09.03.2031

EPD software:

LCAno EPD generator ID: 1469000

General information

Product

MPC and MPR galvanized steel wall hanger brackets for European Markets

Program operator:

EPD-Global
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Phone: +47 977 22 020
web: www.epd-global.com

Declaration number:

NEPD-15109-17812

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 013:2021 Part B for Steel and aluminium construction products

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD-Global shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 kg MPC and MPR galvanized steel wall hanger brackets for European Markets

Declared unit (cradle to gate) with option:

A1-A3, A4, C1, C2, C3, C4, D

Functional unit:

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD-Global's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global's General Programme Instructions for further information on EPD tools

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPD-Global's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

GPA Flowsystem AS
Contact person: Aleksander Haugen Knutsen
Phone: 047 48133609
e-mail: info@gpa.no

Manufacturer:

MÜPRO Services GmbH
Borsigstraße 14
65205 Wiesbaden, Germany

Place of production:

UBB Umformtechnik GmbH
Im Grund 1
DE-91593 Burgbernheim, Germany

Management system:

ISO 9001 / 14001

Organisation no:

936 875 025

Issue date:

09.03.2026

Valid to:

09.03.2031

Year of study:

2024

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD-Global.

Developer of EPD: Aleksander Knutsen

Reviewer of company-specific input data and EPD: Stian Blænes

Approved:



Håkon Hauan, CEO EPD-Global

Product

Product description:

MÜPRO Services GmbH is an innovative company specializing in fixing technology, vibration control and fire protection technology with over 60 years of experience. Headquartered in Wiesbaden, Germany, and with a global network, MÜPRO Services GmbH offers high-quality products and services tailored to the needs of the construction and industrial sectors. The company is known for its customer-oriented approach, providing not only product delivery but also technical consulting, project management, and customized product solutions. With a strong commitment to quality and a global presence, MÜPRO Services GmbH ensures that its solutions are implemented efficiently and reliably worldwide.

MÜPRO Services GmbH has built a reputation for innovation, reliability, and delivering advanced technical solutions across diverse industries. For more information see <https://www.muepro.de/>.

Product specification

The product group includes Wall hanger brackets distributed under two brand names, indicating their distinct profile geometries. The MPC-Wall hanger brackets have a C profile and the MPR are toothed Wall hanger brackets.

They are ideal as cantilever support structure of multisection pipeways, applicable as cantilever bracket for air ducts and cable trays and in combination with saddle support and channel support brackets as a cross-beam for pipe attachments in shafts and ducts.

The strong base plate ensures a high load carrying capacity, the vertical and horizontal holes in the base plate allow easy height adjustment of the bracket.

Materials	kg	%
Metal - Steel	0.9958	99.58
Metal - Zinc	0.0042	0.42
Total	1.00	100.00

Technical data:

Zinc coating of 43 g/m² for corrosion resistance.

Market:

Europe

Reference service life, product

> 50 Years

Reference service life, building

> 50 Years

LCA: Calculation rules

Declared unit:

1 kg MPC and MPR galvanized steel wall hanger brackets for European Markets

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

Data quality:

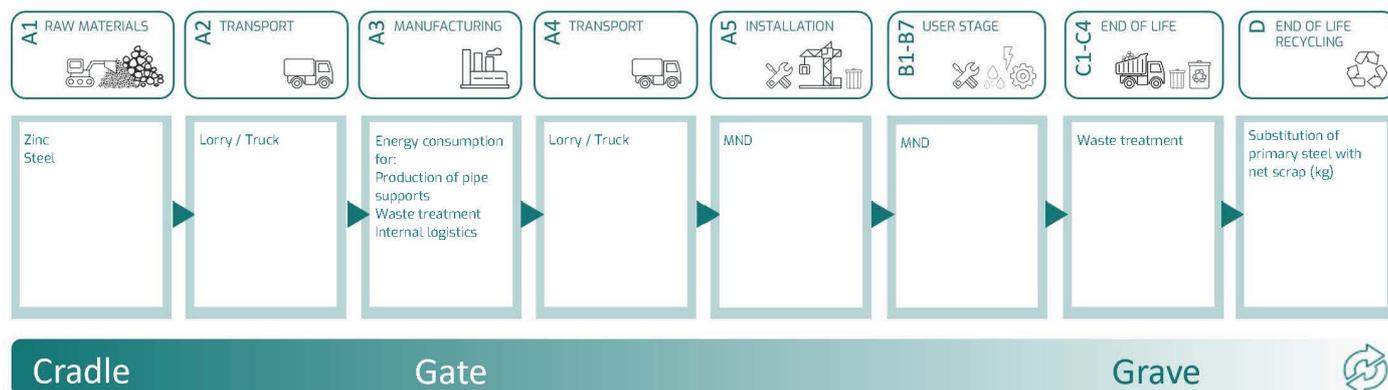
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Metal - Steel	Modified ecoinvent 3.6	Database	2019
Metal - Zinc	ecoinvent 3.10.1	Database	2023

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction installation stage	Use stage								End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	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	X	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

System boundary:



Additional technical information:

Packaging material is not included in this EPD, but can be provided for project specific EPD on request.

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

A5: Has not been included due to there being several ways of installation. Project specific EPDs available on request.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km) - Europe	53.3 %	786.00	0.023	l/tkm	18.08
De-construction demolition (C1)	Unit	Value			
Waste treatment of steel products (kg)	kg	1.00			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km) - Europe	53.3 %	85.00	0.023	l/tkm	1.96
Waste processing (C3)	Unit	Value			
Materials to recycling (kg)	kg	0.90			
Disposal (C4)	Unit	Value			
Waste, scrap steel, to landfill (kg)	kg	0.10			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	0.90			

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact									
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D	
 GWP-total	kg CO ₂ -eq	3.32E+00	6.85E-02	0.00E+00	7.41E-03	0.00E+00	4.29E-04	-9.91E-01	
 GWP-fossil	kg CO ₂ -eq	3.30E+00	6.85E-02	0.00E+00	7.40E-03	0.00E+00	4.28E-04	-9.90E-01	
 GWP-biogenic	kg CO ₂ -eq	1.74E-02	2.93E-05	0.00E+00	3.17E-06	0.00E+00	3.64E-07	-5.46E-04	
 GWP-luluc	kg CO ₂ -eq	1.90E-03	2.09E-05	0.00E+00	2.26E-06	0.00E+00	8.40E-08	-4.44E-04	
 ODP	kg CFC11 -eq	2.03E-07	1.65E-08	0.00E+00	1.79E-09	0.00E+00	2.09E-10	-3.14E-08	
 AP	mol H ⁺ -eq	1.32E-02	2.20E-04	0.00E+00	2.38E-05	0.00E+00	4.18E-06	-4.92E-03	
 EP-FreshWater	kg P -eq	2.73E-04	5.45E-07	0.00E+00	5.89E-08	0.00E+00	3.20E-09	-6.09E-05	
 EP-Marine	kg N -eq	2.55E-03	4.83E-05	0.00E+00	5.22E-06	0.00E+00	1.57E-06	-1.02E-03	
 EP-Terrestrial	mol N -eq	3.07E-02	5.38E-04	0.00E+00	5.82E-05	0.00E+00	1.73E-05	-1.04E-02	
 POCP	kg NMVOC -eq	1.21E-02	2.11E-04	0.00E+00	2.29E-05	0.00E+00	4.94E-06	-4.96E-03	
 ADP-minerals&metals ¹	kg Sb-eq	4.80E-05	1.22E-06	0.00E+00	1.32E-07	0.00E+00	3.79E-09	-1.71E-05	
 ADP-fossil ¹	MJ	3.97E+01	1.11E+00	0.00E+00	1.20E-01	0.00E+00	1.38E-02	-8.34E+00	
 WDP ¹	m ³	1.42E+02	8.53E-01	0.00E+00	9.22E-02	0.00E+00	2.91E-02	5.13E+01	

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Remarks to environmental impacts

Additional environmental impact indicators									
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D	
 PM	Disease incidence	1.99E-07	6.29E-09	0.00E+00	6.80E-10	0.00E+00	8.90E-11	-8.22E-08	
 IRP ²	kgBq U235 -eq	8.23E-02	4.86E-03	0.00E+00	5.26E-04	0.00E+00	6.00E-05	3.56E-03	
 ETP-fw ¹	CTUe	1.05E+02	8.13E-01	0.00E+00	8.79E-02	0.00E+00	6.83E-03	-5.52E+01	
 HTP-c ¹	CTUh	1.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.76E-09	
 HTP-nc ¹	CTUh	1.71E-07	7.86E-10	0.00E+00	8.50E-11	0.00E+00	4.00E-12	1.04E-07	
 SQP ¹	dimensionless	1.01E+01	1.27E+00	0.00E+00	1.38E-01	0.00E+00	5.04E-02	-6.23E-01	

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)

"Reading example: $9.0 \text{ E-}03 = 9.0 \cdot 10^{-3} = 0.009$ "

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Resource use									
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D	
 PERE	MJ	4.80E+00	1.40E-02	0.00E+00	1.51E-03	0.00E+00	2.13E-04	-6.76E-01	
 PERM	MJ	0.00E+00							
 PERT	MJ	4.80E+00	1.40E-02	0.00E+00	1.51E-03	0.00E+00	2.13E-04	-6.76E-01	
 PENRE	MJ	3.97E+01	1.11E+00	0.00E+00	1.20E-01	0.00E+00	1.38E-02	-8.33E+00	
 PENRM	MJ	0.00E+00							
 PENRT	MJ	3.97E+01	1.11E+00	0.00E+00	1.20E-01	0.00E+00	1.38E-02	-8.33E+00	
 SM	kg	2.97E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 RSF	MJ	7.01E-01	4.89E-04	0.00E+00	5.29E-05	0.00E+00	4.39E-06	3.58E-02	
 NRSF	MJ	1.66E-01	1.64E-03	0.00E+00	1.77E-04	0.00E+00	1.26E-05	1.04E+00	
 FW	m ³	3.03E-02	1.27E-04	0.00E+00	1.37E-05	0.00E+00	1.65E-05	-2.08E-03	

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

End of life - Waste									
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D	
	HWD	kg	2.21E-02	6.08E-05	0.00E+00	6.58E-06	0.00E+00	0.00E+00	-5.15E-03
	NHWD	kg	1.03E+00	9.67E-02	0.00E+00	1.05E-02	0.00E+00	1.00E-01	-4.05E-01
	RWD	kg	9.39E-05	7.59E-06	0.00E+00	8.21E-07	0.00E+00	0.00E+00	2.73E-06

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

End of life - Output flow									
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D	
	CRU	kg	0.00E+00						
	MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-01	0.00E+00	0.00E+00
	MER	kg	0.00E+00						
	EEE	MJ	0.00E+00						
	EET	MJ	0.00E+00						

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+00
Biogenic carbon content in accompanying packaging	kg C	0.00E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Source	Amount	Unit
Electricity, Germany (kWh)	ecoinvent 3.6	585.93	g CO ₂ -eq/kWh
Electricity production, photovoltaic, 3kWp slanted-roof installation, mounted (kWh)	ecoinvent 3.10.1	100.36	g CO ₂ -eq/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list.

Indoor environment

Not relevant

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products								
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	3.36E+00	6.85E-02	0.00E+00	7.41E-03	0.00E+00	4.29E-04	-9.91E-01

GWP-IOBC = Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Bibliography

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In correlation to EN 10346:2015 and EN 10143:2006

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