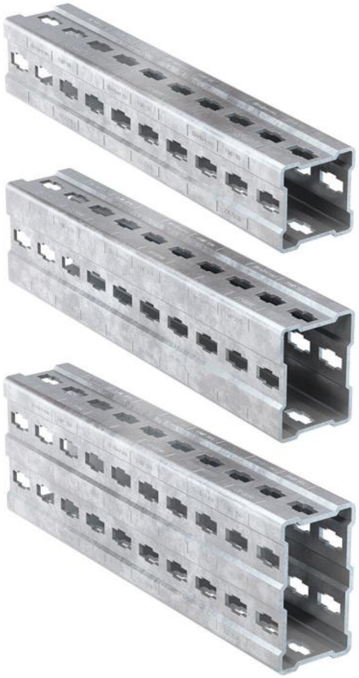
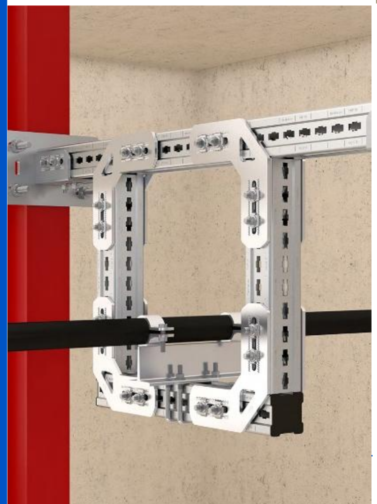
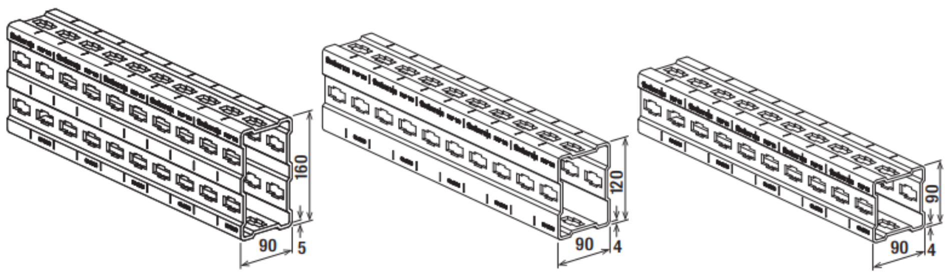
Environmental Product Declaration (EPD)
According to ISO 14025 and EN 15804+A2

# fischer
# FMP massive profile





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|---|---|
| Registration number: | EPD-Kiwa-EE-000489-EN |
| Issue date: | 14.04.2026 |
| Valid until: | 14.04.2031 |
| Declaration owner: | fischerwerke GmbH & Co. KG |
| Publisher: | Kiwa-Ecobility Experts |
| Program operator: | Kiwa-Ecobility Experts |
| Status: | verified |

# 1 General information

## 1.1 PRODUCT

The fischer FMP massive profiles are the optimal basic elements of the fischer FMS massive channel system for fastening heavy--duty pipelines and solid constructions. The FMP massive profiles comprise square profiles in 3 heights.

This document relates to the fischer FMP 160 8m, which is used as a representative product for the product group of FMP massive profiles in different shapes and lengths. The declared unit is 1kg.

## 1.2 REGISTRATION NUMBER

EPD-Kiwa-EE-000489-EN

## 1.3 VALIDITY

Issue date: 14.04.2026

Valid until: 14.04.2031

## 1.4 PROGRAM OPERATOR

Kiwa-Ecobility Experts
Wattstraße 11-13
13355 Berlin
Germany

Raoul Mancke

*(Head of program operations, Kiwa-Ecobility Experts)*

*(Verification body, Kiwa-Ecobility Experts)*

## 1.5 OWNER OF THE DECLARATION

**Declaration owner:** fischerwerke GmbH & Co. KG

**Address:** Klaus-Fischer-Straße 1, 72178 Waldachtal, Germany

**E-mail:** info@fischer.de

**Website:** www.fischer-international.com

**Production location:** Germany

## 1.6 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804:2012+A2:2019 serves as the core PCR.

☐ Internal ☒ External

Anastasiia Huk

(Third party verifier)

## 1.7 STATEMENTS

The owner of this EPD shall be liable for the underlying information and evidence. The program operator Kiwa-Ecobility Experts shall not be liable with respect to manufacturer data, life cycle assessment data and evidence.

## 1.8 PRODUCT CATEGORY RULES

**General Product Category Rules:** Product Category Rules for Building-Related Products and Services, from the Environmental Product Declaration of the Institute Construction and Environment e. V. (IBU), Part A: Calculation Rules for the Life Cycle Assessment and Requirements for the Project Report according to EN 15804+A2:2019

**Specific Product Category Rules:** PCR Guidance-Texts for Building-Related Products and

Services, from the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU), Part B: Requirements on the EPD for connection, assembly and installation systems, Institut Bauen und Umwelt e.V., 17.07.2023, v8.

## 1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPDs programs may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2 (5.3 Comparability of EPD for construction products) and ISO 14025 (6.7.2 Requirements for comparability).

## 1.10 CALCULATION BASIS

**LCA method:** EN15804+A2

**LCA software:** LCA software Umberto 11.16.1

**Characterization method:** EN 15804 +A2 Method v1.0

**LCA database profiles:** ecoinvent EN15804 3.10

**Version database:** 3.10

## 1.11 PROJECT REPORT

This EPD is generated on the basis of the following report: LCA-Declaration-FMP-R01_en.pdf

## 1.12 GEOGRAPHICAL SCOPE

The results presented in this EPD are valid for Europe and the Middle East.

# 2 Product

## 2.1 PRODUCT DESCRIPTION

The fischer FMP massive profiles are the optimal basic elements of the fischer FMS massive channel system for fastening heavy duty pipelines and solid constructions. The FMP massive profiles comprise of square profiles in 3 heights. The shaped holes on all sides of the massive profile allow the mounting of construction elements on all sides as a basis for form-fit fastening. The stamped scaling simplifies the cutting to length of the FMP massive profile and ensures the correct installation of the construction elements. The hot-dip galvanisation provides high layer thickness and is suitable for outdoor installations and in corrosive environments.

The fischer FMP 160 8m (Item No. 547800) was selected as the representative product for this EPD because it represents the worst-case scenario within the product group, being the largest and heaviest profile with the greatest mass. The life cycle assessment of this profile provides a conservative basis for all other massive profiles in this product group, which are made from the same materials and components but have lower masses.

The FMP massive profile is made of strip steel that undergoes several processes: splitting, punching, profiling, welding and hot-dip galvanisation. For transport and storage, the profiles are placed on wooden supports and secured with steel strapping.

The representative product covers several products that are manufactured in the same production facilities and on the same production workstations in Germany.

For the placing on the market in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) the following legal provisions apply:

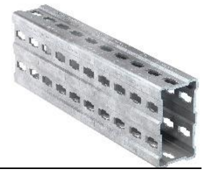
Pressure Equipment Directive
Directive 2014/68/EU of the European Parliament and of the Council of 15 May 2014

DIN EN 13480-2:2017-12
Metallic industrial piping – Part 2: Materials
Edition 12.2017

DIN EN 13480-3:2017-12
Metallic industrial piping – Part 3: Design and calculation
Edition 12.2017

For the application and use the respective national provisions apply.

The individual items in the FMP massive profile product group are listed below:

| Item No. | Description | Length | Profile weight [kg/m] | Image |
|---|---|---|---|---|
| 547797 | FMP 120 3m massive profile | 3m | 11,85 |  |
| 547798 | FMP 120 6m massive profile | 6m | 11,85 | |
| 547799 | FMP 160 6m massive profile | 6m | 16,86 |  |
| 547800 | FMP 160 8m massive profile | 8m | 16,86 | |
| 547795 | FMP 90 3m massive profile | 3m | 9,68 |  |
| 547796 | FMP 90 6m massive profile | 6m | 9,68 | |
| 560562 | FMP 90/2,5 3m massive profile | 3m | 6,33 |  |
| 560563 | FMP 90/2,5 6m massive profile | 6m | 6,33 | |

## 2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

The product range of FMP massive profiles and other associated construction elements enables on-site assembly for the secure fastening of heavy-duty pipelines and safe construction of solid supporting structures. The construction with the fischer massive channel system also generates a fixing basis for dynamic loads and makes the system universally applicable. The thick coating of the hot-dip galvanisation is suitable for outdoor installations and in corrosive environments.

## 2.3 TECHNICAL DATA

| Name | Value | Unit |
|---|---|---|
| Thickness of material | 2,5 - 5 | mm |
| Height of profile | 90 - 160 | mm |
| Width of profile | 90 | mm |
| Length of profile | 3.000 - 8.000 | mm |

## 2.4 DELIVERY STATUS

The fischer massive profile FMP 160 8m is packaged in standard bundles of four. For transport and handling, the profiles are fixed to a wooden frame and secured with steel straps. The minimum order quantity is one piece.

## 2.5 BASE MATERIALS / ANCILLARY MATERIALS

| Name | Value | Unit |
|---|---|---|
| Hot-dip galvanised steel, low alloyed | 100 | % |

This product contains substances listed in the REACH / SVHC candidate list (date: 27.10.2025) exceeding 0.1 percentage by mass: NO.

This product contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 percentage by mass: NO.

Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Ordinance on Biocide Products No. 528/2012): NO.

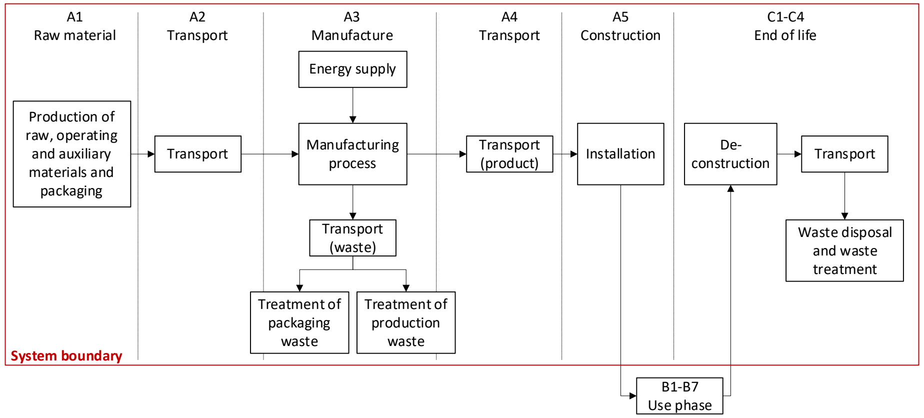
## 2.6 MANUFACTURE

The raw material for the FMP massive profile originates in Germany, and all subsequent manufacturing processes are likewise carried out in Germany.

As the manufacturing processes are carried out by external partners, the production steps in module A3 were modelled using representative ecoinvent datasets. The inputs of electricity contained therein are detailed in chapter 4.

For transport between the individual production stages, the use of a >32 metric ton freight lorry EURO3 is assumed as a worst-case scenario.

**Product flow diagram**




## 2.7 ENVIRONMENT AND HEALTH DURING MANUFACTURING

The fischer group ensures that environmental and health aspects are systematically taken into account and continuously improved. This is based on an ISO 14001-certified environmental management system. fischer requires its suppliers to comply with the company's internal environmental and occupational health and safety standards as well as the respective human rights and ecological due diligence obligations. This is ensured through qualified selection processes, regular assessments and the further development of suppliers in partnership.

## 2.8 PRODUCT PROCESSING / INSTALLATION

The fischer massive profile can be processed exclusively by cutting at right angles. The stamped scaling simplifies the cutting to length and ensures the correct installation of the construction elements. The prefabricated construction elements do not require on-site welding or extensive prefabrication. It is possible to completely construct the required structure on the construction site. The hot-dip galvanised product range guarantees on-site processing without subsequent coating. A complementary static software reliably and securely supports planning and calculation of all types of constructions on the basis of valid standards.

## 2.9 PACKAGING

The fischer FMP 160 8m is packaged in standard bundles of four. For transport and handling, the profiles are fixed to a wooden frame and secured with steel straps. The minimum order quantity is one piece. Both wooden frame and steel straps are not intended for reuse but can be recycled in the standard process.

## 2.10 CONDITION OF USE

The FMP massive profile is intended for both indoor and outdoor applications. The thick coating of the hot-dip galvanising is designed to be suitable for outdoor installations and even in corrosive environments. No changes in material composition are to be expected during the usage phase.

## 2.11 ENVIRONMENT AND HEALTH DURING USE

When used as intended, no effects on the environment or health are to be expected.

## 2.12 REFERENCE SERVICE LIFE

No modules from the use phase have been declared. No reference service life is stated for this reason.

## 2.13 EXTRAORDINARY EFFECTS

**Fire**

The FMP massive profile is classified as A1 (non-combustible).

| Name | Value |
|---|---|
| Building material class | Class A1 |

**Water**

The FMP massive profile is made of hot-dip galvanised steel. No relevant impacts on water are expected, even in the case of unforeseeable water exposure such as flooding.

**Mechanical destruction**

In the event of unforeseeable mechanical destruction, no relevant environmental impacts are expected, as the FMP massive profile does not contain hazardous substances.

## 2.14 RE-USE PHASE

A reutilization of the FMP massive profile is not foreseen. The entire product is fully recyclable.

## 2.15 DISPOSAL

The FMP massive profile can be dismantled separately and recycled in established systems. The steel is fully recyclable without quality loss. Disposal shall be carried out in compliance with all applicable national and local regulations. Landfilling is not intended.

The following waste code according to the European Waste Catalogue (EWC) applies: 17 4 05 – Iron and steel

## 2.16 FURTHER INFORMATION

Further information is available on www.fischer-international.com

# 3 LCA: Calculation rules

## 3.1 DECLARED UNIT

The declared unit is 1 kg of FMP 160 8m as a representative product for the FMP massive profile product group. The declaration includes both the profile itself and the proportionate packaging weight of 0.011 kg based on 1 kg declared unit.

## 3.2 CONVERSION FACTORS

| Name | Value | Unit |
|---|---|---|
| Declared unit | 1 | kg |
| Mass reference | 18,73 | kg/m |
| Gross density | 7850 | kg/m³ |

## 3.3 SYSTEM BOUNDARIES

The system boundary was chosen "from the cradle to the factory gate with options". The LCA considers the product stage (A1-A3), the construction stage (A4-A5), the disposal stage (C1-C4) and benefits and loads outside the system boundary (Module D). Modules A1 (provision of raw materials), A2 (transportation) and A3 (production) are aggregated in the assessment as modules A1-A3. The life cycle is modular in accordance with EN 15804.

The life cycle stages included are as shown below:

(X = module declared, ND = module not declared)

| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | X | X | X | ND | ND | ND | ND | ND | ND | ND | X | X | X | X | X |

The modules of the EN15804+A2 contain the following:

Module A1 = Raw material supply

Module A2 = Transport

Module A3 = Manufacturing

Module A4 = Transport

Module A5 = Construction - Installation process

Module C1 = De-construction / Demolition

Module C2 = Transport

Module C3 = Waste Processing

Module C4 = Disposal

Module D = Benefits and loads beyond the product system boundaries

## 3.4 ESTIMATES AND ASSUMPTIONS

Transport (A2, A3, A4, C2):

The transport distances for A2 and A3 were calculated based on the exact site locations. For transport to the construction site (A4), a worst-case average distance of 1.000 km is considered, while for transport to waste processing (C2), a distance of 100 km is taken into account. Emissions are allocated proportionally by weight, with a truck meeting the EURO 3 emission standard used as the worst-case scenario.

Assembly (A5):

For installation (A5), it is assumed that the profile is cut to length using an electric saw and that holes are drilled into the substructure to fix the profile, using standard electric tools.

De-construction, demolition (C1):

A cordless screwdriver is used for de-installing the fixing anchors.

## 3.5 CUT-OFF CRITERIA

All relevant inputs and outputs with significant contributions to the environmental impacts have been included in the model. No recycling scenario was calculated for the packaging material, as its weight share is only 1%.

## 3.6 BACKGROUND DATA

The EPD of the upstream supplier was used for the raw material, EPD-SAL-20230556-IBA1-EN. Otherwise, background data was taken from the ecoinvent EN15804 database Version 3.10.

## 3.7 DATA QUALITY

Data quality is assessed in accordance with EN 15804, Annex E, and EN 15941, Chapter 7. The foreground data used in this study, based on EPD-SAL-20230556-IBA1-EN, are considered of very good quality. It is up to date (2024), supplier-specific, and verified by Institut Bauen und Umwelt e.V. (IBU). All quantities and transport routes have been calculated based on 2024 data.

The background data are sourced from the 2024 version of the ecoinvent database, ecoinvent 3.10, ensuring a good to very good level of temporal, geographical relevance and consistency, depending on the module. The manufacturing processes are fully defined and take place exclusively in Germany. ecoinvent datasets are used due to the lack of primary data. Where ecoinvent datasets are used due to missing primary data, their geographical and technological representativeness is rated as good.

No data assessed as poor or very poor quality according to EN 15804+A2, Section 6.3.8.3 and Table E.1/E.2 has been used in this EPD.

## 3.8 PERIOD UNDER REVIEW

All internal technical data used is current as of 2024, and quantities and transport routes have been calculated based on 2024 data. The EPD data used from the upstream supplier is likewise dated 2024.

## 3.9 GEOGRAPHIC REPRESENTATIVENESS

The raw material production and all manufacturing processes for the FMP massive profile take place in Germany. Distribution is dedicated to Europe and the Middle East.

## 3.10 ALLOCATIONS

No co-products are produced during the manufacture. Therefore, no co-product allocation is necessary.

Transport emissions are allocated proportionally by weight.

The end-of-life modelling and the calculation of Module D follow the allocation procedures defined in EN 15804+A2 and the IBU PCR Part A.

Background data is based on ecoinvent 3.10 (system model: EN15804, allocation cut-off by classification).

## 3.11 COMPARABILITY

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to EN 15804 and the building context, respectively the product-specific characteristics of performance, are taken into account. The database referred to in this study is ecoinvent EN15804 database Version 3.10.

# 4 Scenarios and additional technical information

## 4.1 RAW MATERIAL SUPPLY (A1)

This module covers the extraction and processing of all raw materials required for the production, including steel components for the profile as well as packaging materials.

## 4.2 TRANSPORT (A2)

Module A2 accounts for the transportation of all raw materials and packaging components to the manufacturing facilities. Transport distances are based on supplier information.

## 4.3 MANUFACTURING (A3)

The manufacturing phase includes all production steps, including cutting of the steel sheet, profiling, stamping, welding and coating of the profile. Energy consumption and processing of waste materials during production are accounted for within this module.

All manufacturing processes in module A3 were modelled using representative ecoinvent datasets. No primary data on energy consumption are available as production takes place at external partners. The electricity inputs are not modelled separately but are inherently contained within these datasets. No contractual instruments such as Guarantees of Origin are held for these processes. The electricity mixes and geographies reported below reflect the default compositions of the underlying ecoinvent datasets.

| Process step | Energy source | Geography | Unit | Emission factors of carbon footprint | Data source |
|---|---|---|---|---|---|
| Cutting steel sheet | electricity, low voltage | GLO | kWh/kg | 7,41E-01 kg CO2Eq/kWh | ecoinvent 3.10 |
| Profiling, stamping | electricity, medium voltage | RER | kWh/kg | 3,37E-01 kg CO2Eq/kWh | ecoinvent 3.10 |
| Welding | electricity, medium voltage | GLO | kWh/kg | 7,26E-01 kg CO2Eq/kWh | ecoinvent 3.10 |
| Coating | electricity, medium voltage | RER | kWh/kg | 3,37E-01 kg CO2Eq/kWh | ecoinvent 3.10 |
| Warehouse | electricity, medium voltage | RER | kWh/kg | 3,37E-01 kg CO2Eq/kWh | ecoinvent 3.10 |

## 4.4 TRANSPORT TO CONSTRUCTION SITE (A4)

| Name | Value | Unit |
|---|---|---|
| Transport distance | 100 | km |

## 4.5 ASSEMBLY (A5)

In phase A5, the FMP massive profile is unpacked, the packaging material is disposed of, and the profile is installed.

| Name | Value | Unit |
|---|---|---|
| Electricity consumption | 0,0007 | kWh |
| Material loss | 0,0003 | kg |
| Output substances following waste treatment on site | 0,0107 | kg |

The electrical energy required for installation is modeled using the global data set "market group for electricity, low voltage, GLO", from the ecoinvent database.

| Process step | Energy source | Geography | Unit | Emission factors of carbon footprint | Data source |
|---|---|---|---|---|---|
| Installation on site | electricity, low voltage | GLO | kWh/kg | 7,41E-01 kg CO2Eq/kWh | ecoinvent 3.10 |

## 4.6 DE-CONSTRUCTION, DEMOLITION (C1)

In C1, dismantling is carried out using a cordless screwdriver. The electricity required for demolition is modeled using the global data set "market group for electricity, low voltage" from the ecoinvent database.

| Process step | Energy source | Geography | Unit | Emission factors of carbon footprint | Data source |
|---|---|---|---|---|---|
| Demolition on site | electricity, low voltage | GLO | kWh/kg | 7,41E-01 kg CO2Eq/kWh | ecoinvent 3.10 |

## 4.7 TRANSPORT END-OF-LIFE (C2)

For the transport of the demolition waste, an average transport distance of 100 km is assumed.

| Name | Value | Unit |
|---|---|---|
| Transport distance | 100 | km |

## 4.8 END OF LIFE (C3, C4)

In C3, a steel sorting process is considered. It is assumed that 95 % of the steel scrap is sent to recycling and 5 % to landfill (C4).
Packaging waste from A5 is treated as follows (worst-case scenario): wood packaging, stretch film and labels are fully sent to municipal incineration; metal straps are landfilled.

| Name | Value | Unit |
|---|---|---|
| Collected separately waste type steel | 0,99 | kg |
| Collected separately waste type packaging | 0,01 | kg |
| Recycling | 0,95 | kg |
| Energy recovery | 0,01 | kg |
| Landfilling | 0,05 | kg |

## 4.9 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY (D)

In module D, which explores benefits and loads beyond the system boundary, focuses on the reuse, recovery and recycling potential.

| Name | Value | Unit |
|---|---|---|
| Recycling of steel scrap | 0,95 | kg |

No carbon offsetting or compensation measures are included in the calculations.

# 5 Results

For the impact assessment, the characterization factors of the LCIA method EN 15804 +A2 Method v1.0 are used. Long-term emissions (>100 years) are not considered in the impact assessment. The results of the impact assessment are only relative statements that do not make any statements about endpoints of the impact categories, exceedance of threshold values, safety margins or risks. The following tables show the results of the indicators of the impact assessment, of the use of resources as well as of waste and other output flows. The results represent the calculation of the representative product (see chapter 2.1).

## 5.1 ENVIRONMENTAL IMPACT INDICATORS PER 1 KG OF FMP MASSIVE PROFILE

### CORE ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

| Abbreviation | Unit | A1 | A2 | A3 | A1 - A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AP | mol H+ eqv. | 4,58E-03 | 1,51E-04 | 3,44E-03 | 8,17E-03 | 5,84E-04 | 4,38E-06 | 2,72E-08 | 5,78E-05 | 5,57E-04 | 2,12E-06 | -3,44E-03 |
| GWP-total | kg CO2 eqv. | 2,17E+00 | 2,72E-02 | 6,11E-01 | 2,81E+00 | 1,05E-01 | 1,56E-02 | 5,27E-06 | 1,04E-02 | 6,29E-02 | 3,00E-04 | -1,75E+00 |
| GWP-b | kg CO2 eqv. | -3,76E-02 | 1,36E-05 | 3,87E-02 | 1,13E-03 | 5,26E-05 | 1,49E-02 | 6,44E-09 | 5,20E-06 | 9,66E-06 | 3,86E-08 | 5,47E-04 |
| GWP-f | kg CO2 eqv. | 2,21E+00 | 2,72E-02 | 5,69E-01 | 2,81E+00 | 1,05E-01 | 7,04E-04 | 5,26E-06 | 1,04E-02 | 6,28E-02 | 3,00E-04 | -1,75E+00 |
| GWP-luluc | kg CO2 eqv. | 6,00E-04 | 9,26E-06 | 3,99E-03 | 4,60E-03 | 3,57E-05 | 7,52E-07 | 7,14E-09 | 3,53E-06 | 8,81E-06 | 1,56E-07 | -3,74E-04 |
| EP-m | kg N eqv. | 1,04E-03 | 6,32E-05 | 8,14E-04 | 1,91E-03 | 2,44E-04 | 1,40E-06 | 5,17E-09 | 2,41E-05 | 2,55E-04 | 8,09E-07 | -7,50E-04 |
| EP-fw | kg P eqv. | 1,65E-06 | 1,84E-06 | 3,46E-04 | 3,50E-04 | 7,08E-06 | 3,08E-07 | 2,39E-09 | 7,01E-07 | 2,96E-06 | 2,49E-08 | 3,08E-06 |
| EP-T | mol N eqv. | 1,14E-02 | 6,90E-04 | 8,93E-03 | 2,10E-02 | 2,66E-03 | 1,37E-05 | 5,24E-08 | 2,63E-04 | 2,78E-03 | 8,84E-06 | -8,22E-03 |
| ODP | kg CFC 11 eqv. | 7,69E-11 | 5,51E-10 | 1,12E-08 | 1,18E-08 | 2,12E-09 | 5,45E-12 | 3,57E-14 | 2,10E-10 | 9,39E-10 | 8,67E-12 | 5,50E-10 |
| POCP | kg NMVOC eqv | 3,01E-03 | 2,33E-04 | 2,59E-03 | 5,83E-03 | 9,00E-04 | 3,74E-06 | 1,56E-08 | 8,90E-05 | 8,30E-04 | 3,16E-06 | -2,13E-03 |
| ADP-f | MJ | 2,11E+01 | 3,96E-01 | 7,38E+00 | 2,88E+01 | 1,53E+00 | 8,27E-03 | 6,80E-05 | 1,51E-01 | 8,22E-01 | 7,35E-03 | -1,64E+01 |
| ADP-mm | kg Sb-eqv. | 2,03E-07 | 7,44E-08 | 9,72E-05 | 9,75E-05 | 2,87E-07 | 3,27E-09 | 2,95E-11 | 2,84E-08 | 3,69E-08 | 4,75E-10 | -4,37E-08 |
| WDP | m3 world eqv. | 2,90E-02 | 1,97E-03 | 5,83E-01 | 6,14E-01 | 7,60E-03 | 4,50E-04 | 1,17E-06 | 7,52E-04 | 2,52E-03 | 2,05E-05 | -1,93E-02 |

**AP**=Acidification (AP) | **GWP-total**=Global warming potential (GWP-total) | **GWP-b**=Global warming potential - Biogenic (GWP-b) | **GWP-f**=Global warming potential - Fossil (GWP-f) | **GWP-luluc**=Global warming potential - Land use and land use change (GWP-luluc) | **EP-m**=Eutrophication marine (EP-m) | **EP-fw**=Eutrophication, freshwater (EP-fw) | **EP-T**=Eutrophication, terrestrial (EP-T) | **ODP**=Ozone depletion (ODP) | **POCP**=Photochemical ozone formation - human health (POCP) | **ADP-f**=Resource use, fossils (ADP-f) | **ADP-mm**=Resource use, minerals and metals (ADP-mm) | **WDP**=Water use (WDP)

### ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

| Abbreviation | Unit | A1 | A2 | A3 | A1 - A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ETP-fw | CTUe | 9,99E-02 | 9,30E-02 | 3,06E+01 | 3,08E+01 | 3,59E-01 | 3,59E-03 | 1,56E-05 | 3,55E-02 | 1,20E-01 | 1,00E-03 | 2,32E-01 |
| PM | Disease incidence | 2,03E-10 | 3,35E-09 | 3,59E-08 | 3,95E-08 | 1,29E-08 | 4,21E-11 | 2,31E-13 | 1,28E-09 | 1,55E-08 | 4,83E-11 | 3,54E-09 |
| HTP-c | CTUh | 3,01E-10 | 1,72E-10 | 7,92E-09 | 8,39E-09 | 6,62E-10 | 3,55E-12 | 6,40E-15 | 6,55E-11 | 2,41E-10 | 1,35E-12 | 2,19E-10 |
| HTP-nc | CTUh | 3,35E-11 | 3,14E-10 | 2,56E-08 | 2,60E-08 | 1,21E-09 | 2,52E-11 | 5,03E-14 | 1,20E-10 | 1,33E-10 | 1,32E-12 | 3,32E-10 |
| IR | kBq U-235 eqv. | 2,39E-04 | 4,77E-04 | 7,90E-02 | 7,97E-02 | 1,84E-03 | 7,33E-05 | 7,18E-07 | 1,82E-04 | 7,11E-04 | 4,68E-06 | 5,41E-04 |
| SQP | Pt | 2,68E-01 | 3,93E-01 | 3,65E+00 | 4,31E+00 | 1,52E+00 | 1,74E-03 | 1,21E-05 | 1,50E-01 | 7,55E-02 | 1,45E-02 | 3,60E-01 |

**ETP-fw**=Ecotoxicity, freshwater (ETP-fw) | **PM**=Particulate Matter (PM) | **HTP-c**=Human toxicity, cancer (HTP-c) | **HTP-nc**=Human toxicity, non-cancer (HTP-nc) | **IR**=Ionising radiation, human health (IR) | **SQP**=Land use (SQP)

### CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

| ILCD classification | Indicator | Disclaimer |
|---|---|---|
| ILCD type / level 1 | Global warming potential (GWP) | None |
| | Depletion potential of the stratospheric ozone layer (ODP) | None |
| | Potential incidence of disease due to PM emissions (PM) | None |
| ILCD type / level 2 | Acidification potential, Accumulated Exceedance (AP) | None |
| | Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater) | None |
| | Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine) | None |
| | Eutrophication potential, Accumulated Exceedance (EP-terrestrial | None |
| | Formation potential of tropospheric ozone (POCP) | None |
| | Potential Human exposure efficiency relative to U235 (IRP) | 1 |
| ILCD type / level 3 | Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | 2 |
| | Abiotic depletion potential for fossil resources (ADP-fossil) | 2 |
| | Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | 2 |
| | Potential Comparative Toxic Unit for ecosystems (ETP-fw) | 2 |
| | Potential Comparative Toxic Unit for humans (HTP-c) | 2 |
| | Potential Comparative Toxic Unit for humans (HTP-nc) | 2 |
| | Potential Soil quality index (SQP) | 2 |

**Disclaimer 1** – 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.

**Disclaimer 2** – 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.

## 5.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI) PER 1 KG OF FMP MASSIVE PROFILE

### PARAMETERS DESCRIBING RESOURCE USE

| Abbreviation | Unit | A1 | A2 | A3 | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERE | MJ | 9,56E-02 | 6,22E-03 | 9,83E-01 | 1,08E+00 | 2,40E-02 | 9,88E-04 | 9,55E-06 | 2,37E-03 | 9,60E-03 | 6,81E-05 | -2,49E-02 |
| PERM | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 9,56E-02 | 6,22E-03 | 9,83E-01 | 1,08E+00 | 2,40E-02 | 9,88E-04 | 9,55E-06 | 2,37E-03 | 9,60E-03 | 6,81E-05 | -2,49E-02 |
| PENRE | MJ | 2,12E+01 | 3,96E-01 | 7,38E+00 | 2,89E+01 | 1,53E+00 | 8,27E-03 | 6,80E-05 | 1,51E-01 | 8,22E-01 | 7,35E-03 | -1,65E+01 |
| PENRM | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PENRT | MJ | 2,12E+01 | 3,96E-01 | 7,38E+00 | 2,89E+01 | 1,53E+00 | 8,27E-03 | 6,80E-05 | 1,51E-01 | 8,22E-01 | 7,35E-03 | -1,65E+01 |
| SM | kg | 2,41E-01 | 1,69E-04 | 1,12E-02 | 2,53E-01 | 6,53E-04 | 4,51E-06 | 9,63E-09 | 6,46E-05 | 3,35E-04 | 1,85E-06 | 7,41E-01 |
| RSF | MJ | 2,03E-05 | 2,13E-06 | 3,63E-05 | 5,87E-05 | 8,23E-06 | 1,48E-08 | 6,10E-11 | 8,14E-07 | 8,87E-07 | 3,82E-08 | 2,59E-06 |
| NRSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| FW | m3 | 1,20E-03 | 5,70E-05 | 1,42E-02 | 1,55E-02 | 2,20E-04 | 5,49E-06 | 3,36E-08 | 2,18E-05 | 6,81E-05 | 7,62E-06 | -8,61E-04 |

**PERE**=renewable primary energy ex. raw materials | **PERM**=renewable primary energy used as raw materials | **PERT**=renewable primary energy total | **PENRE**=non-renewable primary energy ex. raw materials | **PENRM**=non-renewable primary energy used as raw materials | **PENRT**=non-renewable primary energy total | **SM**=use of secondary material | **RSF**=use of renewable secondary fuels | **NRSF**=use of non-renewable secondary fuels | **FW**=use of net fresh water

### OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

| Abbreviation | Unit | A1 | A2 | A3 | A1 - A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HWD | kg | 3,04E-03 | 5,69E-04 | 1,05E-01 | 1,09E-01 | 2,20E-03 | 1,12E-04 | 4,58E-07 | 2,17E-04 | 1,12E-03 | 8,16E-06 | -1,03E-03 |
| NHWD | kg | 1,75E-01 | 1,14E-02 | 1,39E+00 | 1,57E+00 | 4,40E-02 | 1,17E-02 | 1,16E-05 | 4,36E-03 | 1,79E-02 | 1,87E-04 | -1,07E-01 |
| RWD | kg | 1,43E-05 | 1,18E-07 | 2,03E-05 | 3,48E-05 | 4,55E-07 | 1,79E-08 | 1,75E-10 | 4,50E-08 | 1,74E-07 | 1,14E-09 | -1,14E-05 |

**HWD**=hazardous waste disposed | **NHWD**=non-hazardous waste disposed | **RWD**=radioactive waste disposed

### ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

| Abbreviation | Unit | A1 | A2 | A3 | A1 - A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRU | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| MFR | kg | 9,77E-07 | 2,97E-06 | 7,21E-03 | 7,21E-03 | 1,15E-05 | 2,72E-05 | 5,25E-09 | 1,13E-06 | 4,75E-06 | 3,20E-08 | 6,97E-06 |
| MER | kg | 7,94E-09 | 1,71E-08 | 1,68E-05 | 1,68E-05 | 6,60E-08 | 5,18E-10 | 3,31E-12 | 6,53E-09 | 1,25E-08 | 1,44E-10 | 3,82E-08 |
| EET | MJ | 1,26E-01 | 7,24E-05 | 9,78E-02 | 2,24E-01 | 2,79E-04 | 5,06E-06 | 3,93E-09 | 2,76E-05 | 2,08E-05 | 2,87E-07 | -1,02E-01 |
| EEE | MJ | 3,97E-01 | 5,90E-05 | 1,29E-02 | 4,10E-01 | 2,28E-04 | 2,80E-05 | 6,46E-08 | 2,25E-05 | 6,80E-05 | 4,48E-07 | -3,20E-01 |

**CRU**=Components for re-use | **MFR**=Materials for recycling | **MER**=Materials for energy recovery | **EET**=Exported Energy Thermic | **EEE**=Exported Energy Electric

## 5.3 INFORMATION ON BIOGENIC CARBON CONTENT PER 1 KG OF FMP MASSIVE PROFILE

The following information describes the biogenic carbon content in (the main parts of) the product at the factory gate per kilogram:

| Biogenic carbon content | Amount | Unit |
|---|---|---|
| Biogenic carbon content in the product | 0,0002 | kg C |
| Biogenic carbon content in accompanying packaging | 0,0019 | kg C |

### UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount carbon dioxide uptake is taken into account. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results. One kilogram of biogenic carbon content is equivalent to 44/12 kg of biogenic carbon dioxide uptake.

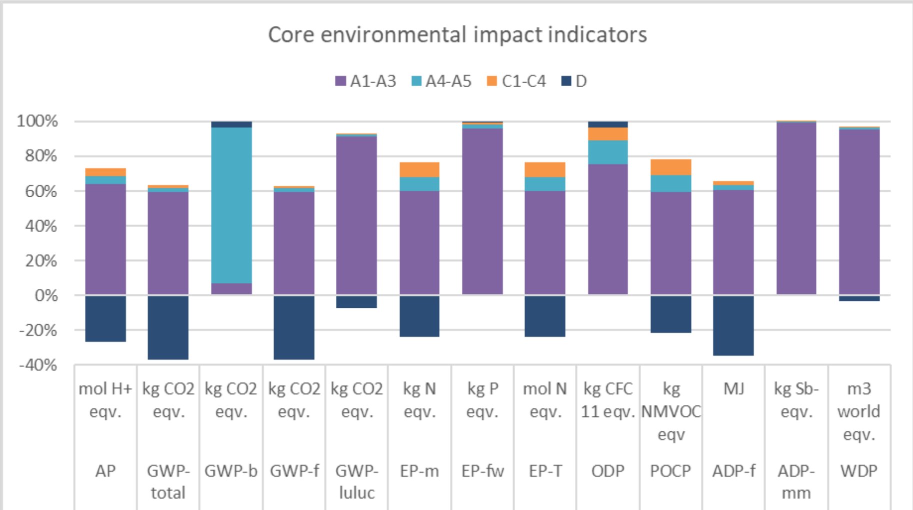
| Uptake biogenic carbon dioxide | Amount | Unit |
|---|---|---|
| Product | 0,0006 | kg $CO_2$ (biogenic) |
| Packaging | 0,0071 | kg $CO_2$ (biogenic) |

# 6 Interpretation of results

## 6.1 CONTRIBUTION ANALYSIS

Many of the indicators on environmental impact and resource use are dominated by the production phase A1-A3. To a lesser extent, transport (A4) also contributes to the indicators. Furthermore, recovery potentials result in benefits outside the system boundaries (Module D).

The following graph shows the relative shares of the modules in the indicator results of the declared product (based on 1 kg FMP 160 8m). The values are scaled in such a way that all bars are the same height.

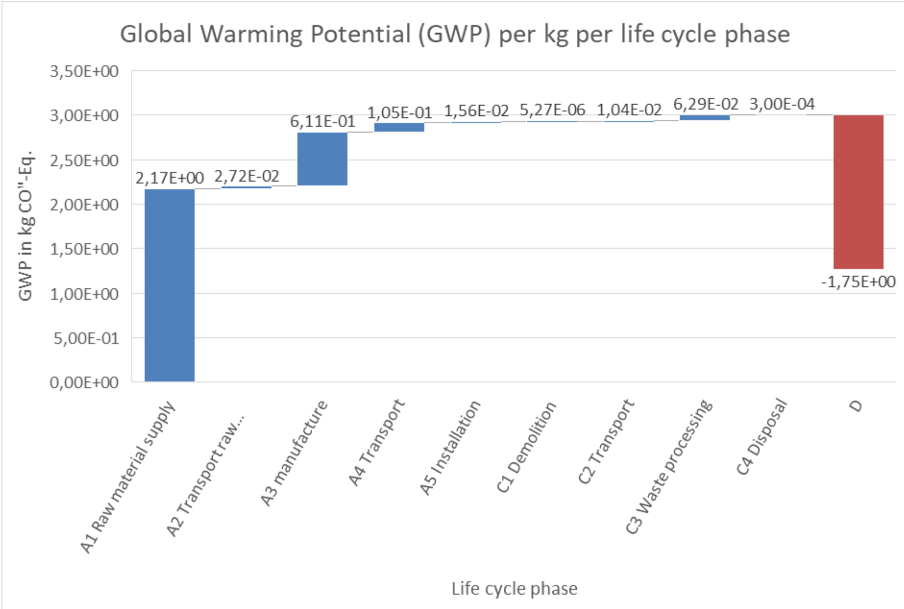



In summary, the manufacturing process of raw material steel determines almost all impact indicators. Therefore, material efficiency represents the greatest lever for reducing almost all impact indicators.

## 6.2 GLOBAL WARMING POTENTIAL

As expected, the more detailed data analysis shows that raw material production accounts for 77% of the total global warming potential of the manufacturing phase (A1–A3). The remaining share comes almost exclusively from emissions from further processing in A3.

The profile itself accounts for > 99% of the impact, while packaging material accounts for < 1%.




# 7 Requisite evidence

Electromagnetic shielding: Not applicable for the declared product. No shielding function is inherent in the material composition or intended use; therefore, no measurements according to DIN EN 61537 are required.

Other product characteristics: The product does not have a CE mark. The Pressure Equipment Directive (Directive 2014/68/EU) does not offer a possibility for conformity for this type of product.

## 8 References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**ISO 12944**

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**ISO 14040**

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**ISO 14044**

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**ISO 14025**

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

**EcoQuery - Background database**

ecoinvent EN15804 LCA database, Version 3.10.
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**EN 13480**

Metallic industrial piping. English version EN 13480-2:2017-12

**EN 13501**

Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests. Brussels: CEN. English version EN 13501-1:2018+A1:2023.

**EN 15804**

EN 15804+A2: 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

**EU Biocidal Products Regulation**

European Parliament and Council. Regulation (EU) No 528/2012 of 22 May 2012 concerning the making available on the market and use of biocidal products. Official Journal of the European Union, L 167, 27.06.2012, p. 1–123.

**European Waste Catalogue**

European Commission. European Waste Catalogue (EWC) – Commission Decision 2000/532/EC of 3 May 2000 establishing a list of wastes pursuant to Directive 75/442/EEC of the Council on waste, as amended by Commission Decisions 2001/118/EC and 2001/119/EC. Luxembourg: Official Journal of the European Communities, L226/3, 2000. Code 17 04 05 – Iron and steel.

**IBU PCR Part A**

Institut Bauen und Umwelt e.V.: Product category rules for building products Part A: Calculation rules for the life cycle assessment and requirements for the project report according to EN 15804+A2:2022-11, Version 1.4, 15.04.2024

**IBU PCR Part B, installation systems**

Institut Bauen und Umwelt e.V.: PCR Guidance-Texts for Building-Related Products and Services, from the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU), Part B: Requirements on the EPD for connection, assembly and installation systems, v11, 01.08.2024

**Pressure Equipment Directive, PED**

European Parliament and Council. Directive 2014/68/EU of 15 May 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment. Official Journal of the European Union, L 189, 27.06.2014, p. 164–259.

**REACH / SVHC Candidate List**

European Chemicals Agency (ECHA). Candidate List of substances of very high concern for Authorisation (REACH, Article 59). Helsinki: ECHA, 27 Oct 2025.

**Salzgitter Flachstahl GmbH**

Environmental Product Declaration. Salzgitter Flachstahl GmbH. Environmental Product Declaration – Unpickled hot rolled wide strip (Declaration No. EPD SAL 20230556 IBA1 EN; issued 30 Jan 2024; valid to 29 Jan 2029). Programme holder: Institut Bauen und Umwelt e.V. (IBU).

**Umberto**

iPoint-Systems GmbH. Umberto Version 11.16.1 [Software]. Reutlingen (DE): iPoint-Systems GmbH; 2026. Available at: https://www.ipoint-systems.com/software/umberto/

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