ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	Mannstaedt GmbH
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-MST-20260200-CBC1-EN
Issue date	17.04.2026
Valid to	16.04.2031

hot-rolled special profiles made of stainless steel

Mannstaedt GmbH

Institut Bauen und Umwelt e.V.

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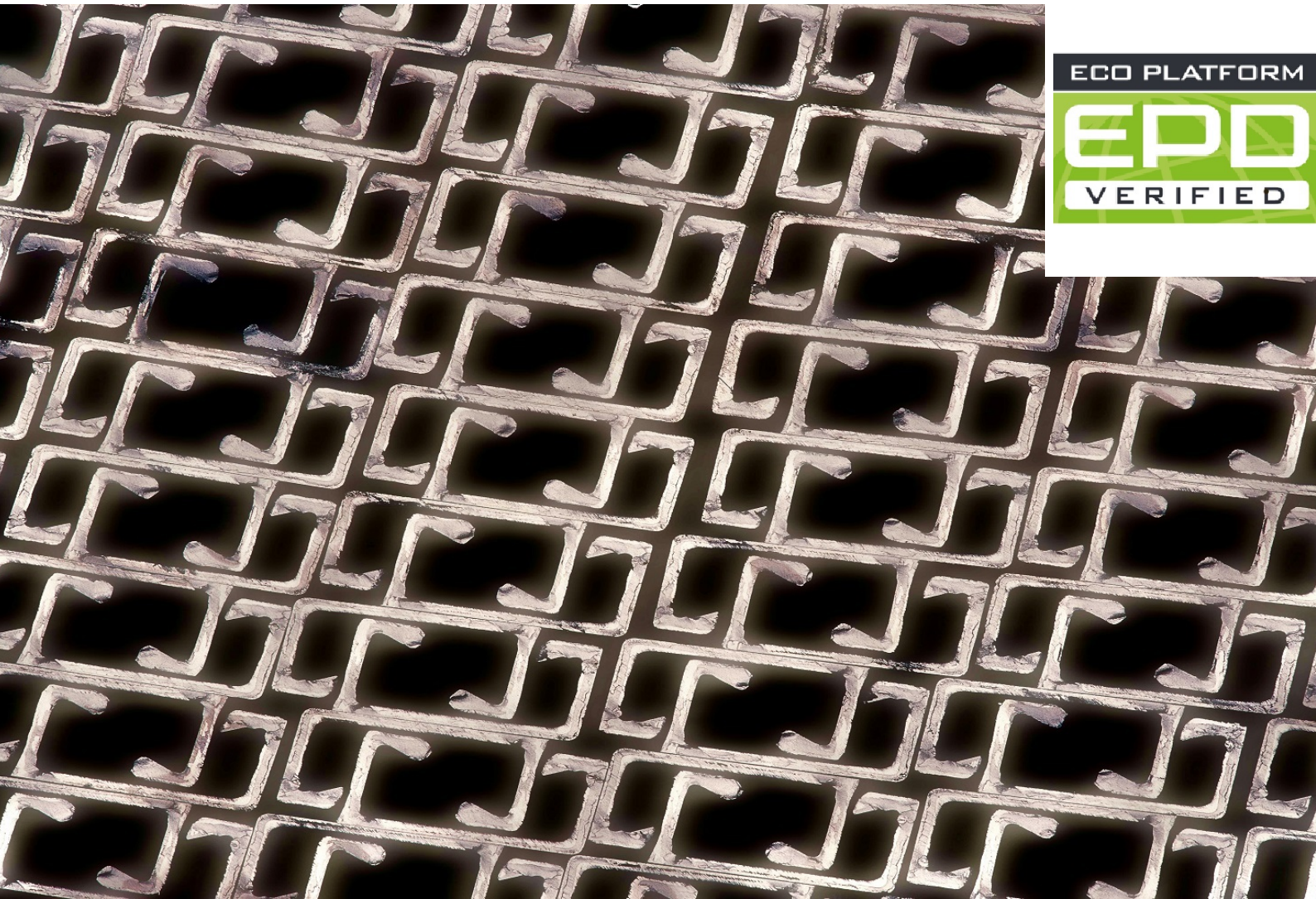


1. General Information

Mannstaedt GmbH

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-MST-20260200-CBC1-EN

This declaration is based on the product category rules:

Structural steels, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

17.04.2026

Valid to

16.04.2031

Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)

Dr. Martina Bender
(Managing Director Institut Bauen und Umwelt e.V.)

hot-rolled special profiles made of stainless steel

Owner of the declaration

Mannstaedt GmbH
Mendener Str. 51
53840 Troisdorf
Germany

Declared product / declared unit

1 t hot-rolled special profile made of stainless steel

Scope:

This average EPD declares 1 t of hot-rolled special profile made of stainless steel. The data collection relates to the year 2024 and the production site:

Mannstaedt GmbH
Mendener Str. 51
53840 Troisdorf
Germany

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

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025:2011
☐ internally ☒ externally

Manfred Russ,
(Independent verifier)

2. Product

2.1 Product description/Product definition

Mannstaedt GmbH produces hot-rolled special profiles made of stainless steel on rolling mills. These profiles are corrosion-resistant, durable and suitable for applications with high demands on precision and material quality, for example in the construction industry.
Production includes the heating of stainless steel blocks, multi-stage rolling into complex profile shapes and subsequent cooling and quality control. The profiles are adapted in length and geometry according to customer specifications.
Typical products are fine special profiles for technical and industrial applications that require high dimensional accuracy and surface quality.
Regulation (EU) No. 305/2011*(CPR*) applies to the placing on the market of the product in the EU/EFTA (with the exception of Switzerland). Certain products require a declaration of performance in accordance with *DIN EN 10088-5: 2009-07*, Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products for construction purposes. The respective national regulations apply for use.

2.2 Application

Hot-rolled special profiles made of stainless steel from Mannstaedt GmbH are used in the construction industry, for example, where corrosion resistance and high load-bearing capacity are required. Typical applications include anchor channels.

2.3 Technical Data

In accordance with the CE marking, the following structural data is relevant:

Bautechnische Daten

Name	Value	Unit
Density	7950	kg/m^3
Modulus of elasticity	200000	N/mm^2
Coefficient of thermal expansion	16	$10^{-6}K^{-1}$
Thermal conductivity	14	W/(mK)
Melting point	1450	°C

Performance values of the product according to the declaration of performance in relation to its essential characteristics according to *EN 10088* and *EN 1090-1*.

2.4 Delivery status

The profiles are supplied in standard or customer-specific dimensions. Delivery is made in pieces or in batches, depending on customer requirements. Mannstaedt GmbH can roll geometries with a minimum thickness of 2 mm, a maximum width of 400 mm and a maximum length of 24 meters. The weights per meter range from 2-180 kg/m.

2.5 Base materials/Ancillary materials

Average material composition of hot-rolled special profiles made of stainless steel:

Name	Value	Unit
stainless steel	100	%

The declared product consists exclusively of stainless steel with the steel number 1.4571 (X6CrNiMoTi).

The product/product/at least one part of the product contains Substances on the *ECHA list* of substances of very high concern (SVHC) (11.02.2025) above 0.1% by mass: no.

The product/product/at least one sub-product contains other CMR substances of category 1A or 1B that are not on the *candidate list*, above 0.1% by mass in at least one sub-product: no.

Biocidal products have been added to this construction product or it has been treated with biocidal products (it is therefore a treated product within the meaning of the Biocidal Products Regulation (EU) No. 528/2012): no.

2.6 Manufacture

Production takes place on rolling mills in Troisdorf. The process includes

1. Delivery of the raw material, mainly by truck (steel ingots)
2. Heating the blocks in the furnace to rolling temperature
3. Rolling in several forming steps to the desired profile geometry
4. Cooling
5. Customized cutting, straightening and measuring (further optional processing steps, such as external solution annealing, can follow depending on customer requirements)
6. Stacking and packaging for shipping

Quality management is carried out in accordance with *ISO 9001* and *IATF 16949*, energy management in accordance with *DIN ISO 50001* and environmental management in accordance with *ISO 14001*.

2.7 Environment and health during manufacturing

Where necessary, Mannstaedt GmbH workstations are equipped with effective extraction and filter systems.

2.8 Product processing/Installation

The hot-rolled special profiles made of stainless steel are supplied in customer or project-specific dimensions and can be moved using suitable lifting equipment.

2.9 Packaging

Delivery is bundled and secured with steel strapping. The packaging is not declared.

2.10 Condition of use

Stainless steel can corrode under certain environmental influences. During the period of use, the products retain their material composition under normal use.

2.11 Environment and health during use

There is no known cause and effect relationship between the declared product, the environment and health.

2.12 Reference service life

It is not possible to make a general statement about the service life. The service life of the declared product depends largely on the environmental conditions and the service life of the installation location. An RSL is not declared. Apart from corrosion, there are no known influences on ageing when used according to the rules of technology.

2.13 Extraordinary effects

Fire

Stainless steel is non-combustible and non-flammable. There is no smoke development, no fire spread and no burning dripping.

Water

There are no known effects on the environment when exposed to water.

Mechanical destruction

No effects on the environment or health are to be expected in the event of mechanical destruction.

2.14 Re-use phase

The hot-rolled special profiles made of stainless steel can be recycled after use.

2.15 Disposal

The stainless steel can generally be recycled.
Waste code according to the European Waste Catalogue (Waste Catalogue Ordinance - AVV):17 04 05 - Iron and steel.

2.16 Further information

https://www.gmh-gruppe.de/standorte/mannstaedt-gmbh/

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is 1 t of hot-rolled special profile made of stainless steel.

Deklarierte Einheit und Massebezug

Name	Value	Unit
Declared unit	1	t
Density	7950	kg/m^3

The average is calculated on the basis of production volumes in the 2024 financial year under review and takes into account profiles of different geometries.

3.2 System boundary

The system boundaries of the EPD take into account the following life cycle phases: from the cradle to the factory gate with modules C1-C4 and module D:

- Product stage (A1-A3)
- End of life Stage (C1-C4)
- Benefits and loads beyond the system boundaries (D)

Module A1 comprises all relevant processes that are necessary for the provision of raw materials and preliminary products. **Module A2** maps all relevant transportation processes of the raw materials and intermediate products to the production sites. **Module A3** describes the manufacture of the declared product at the production site.
Module **C1** describes the dismantling of the product using suitable lifting equipment. **Module C2** describes the transportation to waste treatment
(Module C3). **Module C3** describes the waste treatment for reuse, recovery and/or recycling. The disposal of waste from the recycling/recovery process is taken into account on the basis of the disposal of stainless steel waste **(Module C4)** at an inter-material landfill. **Module D** includes reuse, recovery and/or recycling potentials. These are indicated as net flows and benefits/burdens.

3.3 Estimates and assumptions

The electricity mix used in module A3 represents the actual procurement mix ($_{GWPtotal}$ = 0.319 kg$_{CO2-eq.}$/kWh) of Mannstaedt GmbH, taking into account guarantees of origin. The plant electricity mix at the Troisdorf site is made up of the electricity mix of the grid electricity provider EWE (60.3%) and purchased RE shares with guarantees of origin (hydropower from Austria (AT), 39.7%).

Stainless steel billets are delivered from Europe by truck. A mix of ship and truck transportation is assumed for the delivery of stainless steel billets from overseas. This includes truck transports to the overseas port, ship transport to the port of Antwerp and onward transport of the stainless steel billets by truck to the production site in Troisdorf.
For overseas transports, transport by container ship with an average total carrying capacity (dwt) of 52.134 t and a capacity utilization of 70%.

Solution annealing of the stainless steel profiles is carried out by an external service provider and includes the necessary delivery and return transport by truck. Solution annealing is mapped via the thermal energy requirement of the furnace. No information is available from the external service provider on the energy requirements of the furnace, so the following assumptions were made. Calculation of the theoretical energy requirement for heating steel from 20 °C to 1050 °C (approx. 0.5 MJ/kg). Assumption of a furnace efficiency of 40% and a further 20% in energy losses over the holding period.

It is assumed that the dismantling and return of disused hot-rolled special profiles made of stainless steel is carried out by a specialist company due to their size and mass. Due to the price of scrap and the comparatively simple sorting of the steel profiles, a collection rate of 100% is assumed. A recycling rate of 95% is assumed for the recycling/recovery process of the steel profiles (5% losses).

Due to the high mass, mechanical support is required for dismantling/removing the profile at the end of its life; depending on the application scenario, this can be done using a crane or other construction machinery. This study uses a generic excavator data set (100 kW power) from the *LCA for Experts database* to estimate the use of machinery. This takes into account a diesel consumption of 7.56E-2 kg of diesel per ton of steel product as well as the exhaust emissions generated during machine operation.

3.4 Cut-off criteria

All known inputs and outputs in connection with the product were taken into account. Packaging is not taken into account due to the challenge of determining reliable input quantities and the low masses compared to the product. Equipment, machinery and infrastructure required in production were not considered. The cut-off criteria and rules according to EN 15804, chapter 6.3.6 are fulfilled.

3.5 Background data

The LCA model is created using the *LCA for Experts software* system from Sphera Solutions GmbH (version 10.9.1.10). The database version CUP2025.2 is used. The database provides the life cycle inventory data of the raw and auxiliary materials, as well as transportation processes, which are obtained from the background system.

3.6 Data quality

When collecting data for the foreground system, it was ensured that the mass balance for the processes within the system boundary is closed. The completeness of the foreground system is therefore classified as high. The majority of the foreground data used was measured or calculated. The accuracy of the data in the foreground system can therefore be regarded as high. The completeness and accuracy of the background data, which all originate from the database version CUP2025.2, are documented in the respective data sets.
Due to the use of generic stainless steel datasets, there are no significant variances in the results of specific profiles compared

to the declared average overall results.

3.7 Period under review

The primary data of the foreground system was recorded by Mannstaedt GmbH for the production processes. The collection of data relates to the 2024 financial year. The data in the background system is also representative for the specified period.

3.8 Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product´s lifespan: Germany

3.9 Allocation

The life cycle under consideration and the associated production processes do not result in any further by-products or co-products. Therefore, no further allocations had to be made in the foreground system.
The use of secondary materials (stainless steel scrap) is represented in the model by scrap flows from modules A3 and C3. The production scrap generated during processing in module A3 and the scrap generated in module C3 are fed back into the material cycle and used as secondary raw materials in module A1. They replace corresponding quantities of primary material there.
Production scrap from module A3 is treated as recycled scrap within the same product system. The environmental impacts of the production of the metals in Module A1 are fully allocated to the declared product.
The stainless steel scrap generated in Module C3 is divided into two parts in the model: One portion is returned to Module A1 as secondary material and treated in the same way as production scrap. The remaining portion leaves the system in module D and is accounted for as an ecological benefit for the avoidance of primary material production according to the substitution approach.
As the available scrap quantity of steel scrap (required in addition to stainless steel scrap as secondary material input in A1) is not sufficient in the product system, the additional scrap requirement is accounted for in Module D as a burden due to additional scrap production in accordance with the substitution approach.

3.10 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 LCA model is created using the *LCA for Experts* software system from Sphera Solutions GmbH (version 10.9.1.10)
. The database *version CUP2025.2* is used.

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

Due to the material composition, the product has no biogenic carbon content ex works. Packaging is not declared.

Information for describing the biogenic carbon content at the factory gate

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	-	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

End of life stage (C1-C4)

Modules C1-C4 describe the end of the product's life cycle. Module C1 covers the dismantling of the product. The use of machinery for dismantling the steel profiles is estimated using the diesel consumption and emissions profile of a generic data set from the LCA for Experts database.
Module C3 maps the processing of the disused stainless steel profiles for recycling. To estimate the energy required for processing, the consumption of a shredding and pressing process is assumed (assumption of 0.21 MJ of electrical energy per kg of treated material). A recycling rate of 95% is assumed. The returned recycled steel scrap is available for use in other products and loses its waste status. For the remaining 5% process losses, it is assumed that the steel scrap is transported to an inert material landfill and disposed of. These are mapped in module C4.

Name	Value	Unit
Recycling	950	kg
Landfilling	50	kg
C1 - Use of diesel	0.0756	kg
C2 - Transportdistance per LKW	30	km
C3 - Use of energy for shredder (electrical)	210	MJ

Reuse- Recovery- Recycling- potential

Name	Value	Unit
Netflow steel scrap	167	kg

5. LCA: Results

The results of the impact assessment of selected environmental impacts, the use of resources as well as waste and other output flows for 1 t of hot-rolled special profile made of stainless steel are shown below. The bulk density is 7950 kg/m³. All declared life cycle stages are marked with an 'X' in Table 1, all undeclared stages are indicated with "MND" (modules B3, B4 and B5 are not relevant and are therefore indicated with 'MNR').

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	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	MND	MND	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 t hot-rolled special profile made of stainless steel

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO_2 eq	3.82E+03	2.87E-01	4.72E+00	5.13E+01	8.85E-01	-1.75E+03
Global Warming Potential fossil fuels (GWP-fossil)	kg CO_2 eq	3.8E+03	2.78E-01	4.58E+00	5.13E+01	8.81E-01	-1.75E+03
Global Warming Potential biogenic (GWP-biogenic)	kg CO_2 eq	1.08E+01	1.61E-03	7.93E-02	9.52E-03	-1.92E-03	6.41E+00
Global Warming Potential luluc (GWP-luluc)	kg CO_2 eq	6.57E+00	7.19E-03	6.12E-02	1.14E-02	6.13E-03	-4E+00
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	1.79E-08	7.81E-14	1.87E-10	4.21E-12	2.18E-12	-1.35E-08
Acidification potential of land and water (AP)	mol H^+ eq	3.04E+01	3.68E-03	1.87E-02	6.15E-02	5.55E-03	-9.68E+00
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	3.2E-03	5.3E-07	2.18E-05	4.4E-06	1.36E-06	-9.06E-04
Eutrophication potential aquatic marine (EP-marine)	kg N eq	2.97E+00	1.68E-03	8.06E-03	2.07E-02	1.47E-03	-1.28E+00
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	3.25E+01	1.84E-02	8.88E-02	2.26E-01	1.6E-02	-1.44E+01
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	9.53E+00	5E-03	2.08E-02	5.79E-02	4.37E-03	-3.87E+00
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	2.06E-01	3.74E-08	1.58E-06	4.09E-07	6.3E-08	-5.36E-02
Abiotic depletion potential for fossil resources (ADPF)	MJ	4.17E+04	3.62E+00	5.87E+01	5.57E+02	1.15E+01	-2.14E+04
Water use (WDP)	m^3 world eq deprived	4.85E+02	1.07E-03	8.65E-02	2.06E-01	8.29E-02	-7.01E+02

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 t hot-rolled special profile made of stainless steel

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	7.4E+03	3.12E-01	7.4E+01	2.51E+00	2.07E+00	-4.57E+03
Renewable primary energy resources as material utilization (PERM)	MJ	0	0	0	0	0	0
Total use of renewable primary energy resources (PERT)	MJ	7.4E+03	3.12E-01	7.4E+01	2.51E+00	2.07E+00	-4.57E+03
Non renewable primary energy as energy carrier (PENRE)	MJ	4.17E+04	3.62E+00	5.87E+01	5.57E+02	1.15E+01	-2.14E+04
Non renewable primary energy as material utilization (PENRM)	MJ	0	0	0	0	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	4.17E+04	3.62E+00	5.87E+01	5.57E+02	1.15E+01	-2.14E+04
Use of secondary material (SM)	kg	8.06E+02	0	0	0	0	1.67E+02
Use of renewable secondary fuels (RSF)	MJ	0	0	0	0	0	0
Use of non renewable secondary fuels (NRSF)	MJ	0	0	0	0	0	0
Use of net fresh water (FW)	m^3	1.52E+01	2.22E-04	1.49E-02	7.26E-02	2.51E-03	3.04E+00

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 t hot-rolled special profile made of stainless steel

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	1.29E-05	1.89E-10	1.61E-07	6.66E-09	2.29E-09	1.64E-05
Non hazardous waste disposed (NHWD)	kg	4.89E+02	5.38E-04	4.6E-02	1.84E-01	5E+01	-1.88E+02
Radioactive waste disposed (RWD)	kg	6.86E-01	5.24E-06	2.89E-03	8.03E-03	1.07E-04	-1.08E-01
Components for re-use (CRU)	kg	0	0	0	0	0	0
Materials for recycling (MFR)	kg	1.12E+02	0	0	9.5E+02	0	0
Materials for energy recovery (MER)	kg	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	0	0	0	0
Exported thermal energy (EET)	MJ	0	0	0	0	0	0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 t hot-rolled special profile made of stainless steel

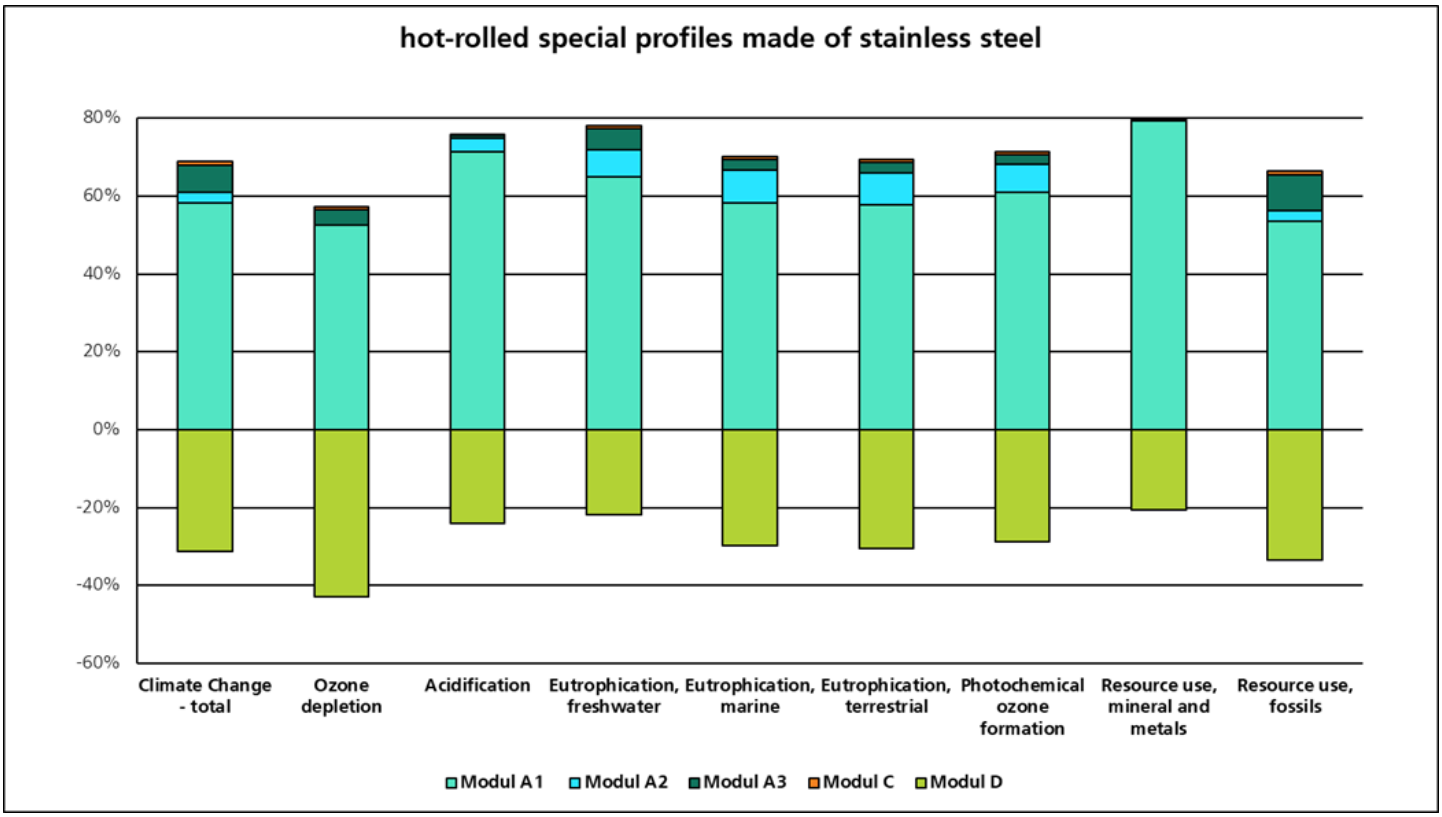
Parameter	Unit	A1-A3	C1	C2	C3	C4	D

Incidence of disease due to PM emissions (PM)	Disease incidence	5.26E-04	1.94E-07	1.81E-07	6.32E-07	6.86E-08	-1.78E-04
Human exposure efficiency relative to U235 (IR)	kBq U235 eq	6.17E+01	5.17E-04	2.27E-01	6.25E-01	1.16E-02	-2.35E+01
Comparative toxic unit for ecosystems (ETP-fw)	CTUe	2.55E+04	4.01E+00	4.23E+01	8.37E+01	1.03E+01	-9.6E+03
Comparative toxic unit for humans (carcinogenic) (HTP-c)	CTUh	2.19E-06	5.74E-11	1.86E-09	2.05E-09	1.57E-10	-3.7E-06
Comparative toxic unit for humans (noncarcinogenic) (HTP-nc)	CTUh	2.46E-05	2.26E-09	4.79E-08	1.07E-07	5.92E-09	-7.15E-06
Soil quality index (SQP)	SQP	7.46E+03	1.9E+00	6.05E+01	7.66E+00	3.36E+00	-2.99E+03

Disclaimer 1 – for the indicator 'Potential Human exposure efficiency relative to U235'. 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 or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.
Disclaimer 2 – for the indicators 'abiotic depletion potential for non-fossil resources', 'abiotic depletion potential for fossil resources', 'water (user) deprivation potential, deprivation-weighted water consumption', 'potential comparative toxic unit for ecosystems', 'potential comparative toxic unit for humans – cancerogenic', 'Potential comparative toxic unit for humans - not cancerogenic', 'potential soil quality index'.

The results of these environmental impact indicators must be used with caution, as the uncertainties in these results are high or because there is limited experience with the indicators.

6. LCA: Interpretation



The results diagram shows the significant influence of the production of the primary material (stainless steel blocks), which are purchased from external suppliers. In the area of climate change, these account for approx. 85% of the total impacts (modules A-C). Most of the stainless steel ingots come from suppliers abroad, which is reflected in the distribution of transportation in Module A2. The stainless steel billets are manufactured using the electric arc furnace (EAF) route due to the technology used, in which the environmental impact of the process electricity supply plays a central role. The electricity generation mix at the supplier's production site therefore has a significant influence on the environmental impacts caused.
In production (Module A3), the thermal energy required to operate the furnace at the production site and the optional solution annealing carried out by external service providers play an important role.
Module D describes the potential additional loads and benefits arising from the saturation of the scrap inputs in Module A1. Stainless steel production requires both stainless steel and steel scrap. Stainless steel scrap can be completely covered by the recycling flows within the product system under consideration, so that surplus quantities can be used in other products outside the system boundary. This potential is presented in the form of ecological benefits.
The additional steel scrap inputs required, on the other hand, must be sourced entirely from external suppliers outside the system under consideration and are recorded as additional environmental burdens in Module D.

7. Requisite evidence

No product-specific evidence is required for the declared products.

7.1 Weathering
Specific verification of weathering is not relevant for Mannstaedt GmbH's hot-rolled special stainless steel profiles, as these products are supplied as ungalvanized, uncoated steel profiles and therefore have no functional or declared surface coating whose removal or layer thickness would have to be assessed as part of the environmental product declaration.

8. References

EN 15804
EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works - Environmental product declarations - Basic rules for the product category of construction products.

ISO 14025
EN ISO 14025:2011, Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14001:2015
ISO 14001:2015, Environmental management systems - Requirements with guidance for use.

EN 10088-5
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ISO 50001
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ISO 9001
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IATF 16949:2016 - Quality management systems - Particular requirements for the application of ISO 9001:2015 in the automotive industry. 1st edition, Munich: Beuth Verlag, 2016.

Further literature

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LCA**for Experts**
LCA for Experts Software system and database for Holistic Assessment, Version 10.9.1.10 - CUP 2025.2. Stuttgart: Sphera Solutions GmbH, 2025.

PCR Part A
Product Category Rules for Building-Related Products and Environmental Product Declarations -
Services. Part A: Calculation rules for the life cycle assessment and
Requirements for the project report, 15.04.2024, Version 1.4. Berlin: Institut Bauen und Umwelt e.V. (ed.)
http://www.ibuepd.com

PCR Part B
PCR Guidance texts for building-related products and services. Part B: Requirements for the EPD for
Structural steels 01.08.2024, Version v11, Berlin: Institut Bauen und Umwelt e.V. (ed.),
http://www.ibu-epd.com

AVV Waste Catalogue Ordinance (AVV)
AVV Waste Catalogue Ordinance (AVV) of December 10, 2001 (BGBl. I p. 3379), which was last amended by Article 1 of the
Ordinance of 30 June 2020 (Federal Law Gazette I p. 1533)

ECHA list Candidate list
List of substances of very high concern (SVHC) for authorization
(as of 13.12.2024) in accordance with Article 59 (10) of the REACH Regulation. European Chemicals Agency

REACH
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration,
Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European
Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 of the Council, Commission Regulation (EC) No 1488/94,
Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/105/EC

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