Zeman Çelik

Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Steel Structures

from

ZEMAN ÇELİK YAPI SAN. VE TİC. A.Ş.

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	EPD Türkiye
EPD registration number:	**EPD-IES-0019983**
Version date:	2025-06-19
Validity until:	2030-06-18
Programme:	The International EPD® System, www.environdec.com

General information

Programme information

Programme:	The International EPD® System
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
This EPD is in accordance with EN 15804+A2 and ISO 14025:2010 standards. The EN 15804 +A2:2019 serves as the core Product Category Rules (PCR). In addition, the Int'l EPD System PCR 2019:14 Construction products, v1.3.4
PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.
Life Cycle Assessment (LCA)
LCA accountability: Eren Yaman ERKE Sustainability Consultancy www.erkeconsultancy.com info@erkeconsultancy.com ERKE 'Sustainability Consultancy'
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☒ EPD verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: *Ipek Göktas Kalkan, Göktas Kalkan Ipek TMI* Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

ZEMAN ÇELİK YAPI SAN. VE TİC. A.Ş. has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same

version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company Information

Owner of the EPD: ZEMAN ÇELİK YAPI SAN. VE TİC. A.Ş.

Location of Production Site: Zeman ÇELİK Steel Construction Company, 2.OSB. 21.Ada/ 3.Parsel/ Kargahanlıbaba köyü/ Hendek/ Sakarya

Product-related or management system-related certifications: ZEMAN Steel Structures are manufactured in accordance with the following standards: ISO 9001:2015, ISO 45001:2018, EN 1090-2:2009 EXC4 and EN 3834-2. The products bear the CE marking.

About Zeman Çelik

In 2008, the company Incorporated was merged into Zeman Engineering Construction. We were partners and changed to serve in Architecture, Engineering, Construction Business, and Steel Structures. The technical teams and their utilities are formed in this way.

Company Philosophy: To be a strong group with team spirit in every aspect that can carry on project management and service to both starting the design process of building & structures and after construction.

Mission: Besides building constructions that have high added value in social and environmental awareness, we should use technology brilliantly to increase the welfare level of society.

Vision: To be respectable to humanity, innovative, strong, and permanent, and to care about sharing.

Product Information

Product name: Zeman Steel Structures

Product identification: The manufactured metal structures comply with the requirements of the European Union (EU), health and environmental protection and are marked with the CE mark.

Geographical scope: The geographical scope of this EPD is global.

UN CPC code: 421

Product description: Steel structures are innovative engineering solutions that are extensively utilized in the construction sector for their outstanding strength, durability, and adaptability. ZEMAN Steel Structures are crafted with precision, featuring galvanized or painted finishes to ensure superior corrosion resistance, and are designed for quick and efficient on-site assembly.

In addition to their performance benefits, steel structures offer significant sustainability advantages. Their high recyclability minimizes environmental impact, contributing to greener construction practices. Their inherent flexibility ensures resilience against dynamic forces like earthquakes and strong winds, while their compatibility with modern architectural designs makes them an ideal material for contemporary construction. Combining durability, design versatility, and expedited building processes, steel structures have become the cornerstone of modern engineering and architectural innovation.

Application: Their applications are remarkably diverse, ranging from industrial facilities and commercial complexes to bridges and airports. They are particularly favored in projects demanding high load-bearing capacity, structural reliability, and rapid construction timelines.

LCA information

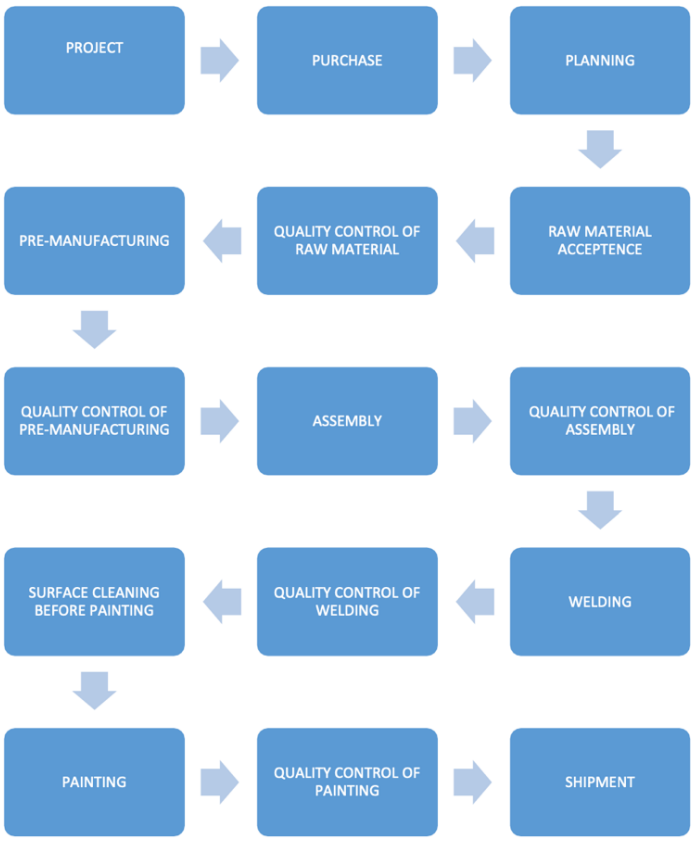
Declared unit: 1 ton of Steel Structures

Estimated service life: The estimated service life is set at 50 years, based on a conservative estimate provided by the manufacturer.

Time representativeness: Goal of the study is to determine the actual environmental loads for 12 consecutive months, so data for the time period is the year 2024.

Database(s), EPDs and LCA software used: Ecoinvent v3.10, EPD of Çolakoğlu Metalurji, EPD of Izmir Demir Celik Sanayi A.S. and OpenLCA v2.2.0 based on EF 3.1

System Diagram:



Description of system boundaries: Cradle to gate with options. The LCA was carried out considering the Product stage phases (A1, A2, A3), Assembly (A4, A5) and End of life (C1, C2, C3, C4), Potential environmental benefits (D) in accordance with EN 15804.
Excluded lifecycle stages: Modules B1-B7

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
SYSTEM BOUNDARY	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	x
Geography	EUR, GLO	EUR	TR	EUR	EUR	-	-	-	-	-	-	-	EUR	EUR	EUR	EUR	EUR
Specific data used	≥90 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared)

Cut-off: All inputs and outputs for a (unit) process are included in the calculation, provided that data are available. The applied cut-off criteria are 1% for both renewable and non-renewable primary energy usage and 1% of the total mass input for a unit process in cases of insufficient input data or data gaps.

The total neglected input flows are limited to a maximum of 5% of energy usage and mass. Additionally, the total neglected input and output flows do not exceed 1% of energy usage or mass, as specified in the Product Category Rules (PCR).

The product stage (A1-A3) encompasses the provision of raw materials, transportation, and manufacturing. The end-of-life stage includes the recycling and disposal of final waste, while Module D addresses the benefits of reuse, recovery, and recycling. However, infrastructure, transportation of products to storage at the manufacturing site, the production of manufacturing equipment, and

personnel-related activities, which are considered cut-off criteria, are not included in this LCA study. Infrastructure and capital goods for upstream, core, and downstream processes are excluded. Waste streams arise from the packaging materials of raw materials, auxiliary materials, and raw material losses during production. These losses are sent to recycling facilities. To account for potential environmental effects from recycling, the waste masses are added to the relevant raw materials in Module A1 using economic allocation. No other deductions are made within the scope of this study.

Exceptions apply for substances on the REACH candidate list, whereby a cut-off of 0,1 % applies.

In the context of the analysis, factors such as sandblasting, grinding of parts, contaminated packaging, and contaminated waste are modelled as output in A3. However, input flows such as sand, grinding stones, packaging of raw materials etc. are considered negligible due to their minimal impact on the results in A1.

Since the product is produced in accordance with project-specific dimensions, there is no loss during the installation process.

Losses and used O2 from air are assumed as they are balanced out.

CO has been converted to CO2, O3 has been neglected.

Allocation: The allocation process was conducted by fixing the product output to one unit, with the corresponding product quantity used in the calculations.

An average breakdown was applied based on the total weight of the product in relation to annual production. Accordingly, the total energy and raw materials used in product manufacturing were divided by the total annual production. Raw material inputs, energy inputs, and waste outputs were allocated according to the total annual mass production and calculated for one unit of the product.

Annual production percentages were considered when allocating energy consumption. Given that electricity is used in the production of other products within the factory, the energy share was calculated in proportion to the production quantity.

Economic allocation was applied for co-product. The inherent properties such as biogenic carbon content, energy content and secondary material are allocated based on the actual quantity of the flows.

Calculation assumptions:

The calculation methodology adheres to the specified standards and PCR requirements. Life cycle impacts are characterized in OpenLCA using EN 15804 guidelines, with EF 3.1 factors. Where data gaps exist, or future operations need to be projected, assumptions have been made. In the absence

of primary data, conservative assumptions are applied to ensure reliability. The representativeness of secondary data is dependent on the available datasets in OpenLCA.

The study's background documentation details all assumptions, data limitations, and justifications for transparency and clarity.

Product Stage

- **Module A1-A3:**

The product is assembled from components manufactured by various suppliers. Component production includes processes such as raw material extraction and processing, energy and water consumption, transportation, waste management, and emissions. After modeling the components, their transportation to the Zeman production facility is incorporated.

The assessment of Zeman Steel Structures's production is based on data from the 2023 production year. The included operations are logistics, assembly at Zeman's production facility, packaging, and waste management. Zeman utilizes diesel trucks for internal logistics.

Scrap steel is considered as a co-product as it is sent for recycling.

Emissions from welding gases used during production are considered in module A3.

The energy source from openLCA

The inventory data for the generation of electricity used in A1-A3 has been modelled based on the residual electricity mix on the market. GWP-GHG of the used electricity data is 0.97 kg CO2e / kWh. Since there is no residual electricity mix data for Türkiye in the data list, renewables have been removed from the consumption mix.

- **Module A4-A5:**

Transportation to users is calculated as a weighted average of different distribution routes based on the proportion of sales in specific regions ‘several countries in Europe’. Accordingly, Euro5 diesel-powered heavy-duty trucks and container ships are considered for delivery of the product. Based on the assumed scenario, 15% of the product is carried by truck only, and 85% of the product is carried by ship and truck. The weighted average distances are 1500 km and 5500 km for trucks and ships, respectively. Transport is modelled according to the average usage conditions defined by the Ecoinvent 3.10 database.

In module A5, the installation consumes 10 kWh of energy to assemble 1 tonne of product.

Due to the uncertainties about the packaging waste such as wood and packaging film in the market, a conventional scenario landfilling has been assumed. Packaging waste is assumed to be transported with a Euro5 diesel-powered heavy-duty truck over 100 km.

Losses during installation are negligible since the product is pre-ordered in certain dimensions and therefore there is no need for cutting.

- **Module C1-C4:**

Module C1 models the demolition process. It is assumed that the demolition process consumes 10 kWh/t of product, just as the installation process does. The energy source is diesel fuel used by construction machines.

Module C2 accounts for the waste transportation for the steel structures. The default transportation distance is 100 km, and the vehicle used is a Euro 5 diesel truck. While actual waste transportation routes and vehicles may vary depending on the location of the use phase, they cannot be precisely tracked in advance.

Module C3 covers the sorting process of steel. Due to the lack of representative Ecoinvent datasets, data for the recycling process has been sourced from various references. The methodology applied in Module C3 is detailed in the "Recycling and Disposal" section of this report. Based on the World Steel Association LCA eco-profile STRUCTURAL STEEL SECTIONS (2022), it is assumed that 90% of the steel is sorted to be recycled.

Module C4 addresses landfill processes for steel that cannot be recycled. Existing Ecoinvent datasets were used for the steel. Based on the recycling scenario considered in C3, it is assumed that the rest of the steel is landfilled.

Accordingly, 90% of steel in Module C3 is sorted for recycling, and 10% is landfilled in Module C4.

- **Module D:**

Potentially avoidable loads from waste recovery are assessed in Module D. The scope of this assessment includes steel recovered in Module C3.

Module D addresses the benefits of recycling steel. The benefits of recycling secondary materials input to the system are avoided.

Avoiding double counting Module D does not account for the 29% of recycled steel from the Ecoinvent background data.

There are no benefits from allocated by-products.

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material	
			weight-%	kg C/kg
Steel	988	66,4%	0%	0
Paint	12	0,0%	0%	0
TOTAL	**1000**	**66,4%**	**0%**	**0**
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C/kg**	
Composite strap	0,4	0,04%	0	
Stretch	0,2	0,02%	0	
Wood dunnage	15,0	1,50%	0,45	
TOTAL	**15,6**	**1,56%**	**0,43**	

There are no SVHC substances in the product, or their amounts are below EU regulation limits.

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	1,88E+03	1,30E+02	3,55E+00	3,61E+00	1,94E+01	5,90E+01	6,25E-01	-4,81E+02
GWP-biogenic	kg CO_2 eq.	-1,81E+01	4,04E-02	2,57E+01	3,94E-04	1,33E-02	9,36E-03	8,62E-05	1,45E+00
GWP-luluc	kg CO_2 eq.	7,03E-01	5,21E-02	3,13E-04	3,13E-04	6,33E-03	8,26E-03	3,22E-04	-1,18E-02
GWP-total	kg CO_2 eq.	1,86E+03	1,30E+02	2,92E+01	3,61E+00	1,94E+01	5,90E+01	6,26E-01	-4,79E+02
ODP	kg CFC 11 eq.	1,50E-05	2,31E-06	5,37E-08	5,52E-08	3,85E-07	8,82E-07	1,81E-08	-1,31E-06
AP	mol H^+ eq.	1,04E+01	1,68E+00	3,28E-02	3,26E-02	6,06E-02	5,23E-01	4,43E-03	-1,86E+00
EP-freshwater[1]	kg P eq.	5,63E-01	6,97E-03	2,16E-04	1,05E-04	1,29E-03	2,78E-03	5,19E-05	-2,09E-01
EP-marine	kg N eq.	2,10E+00	4,41E-01	2,04E-02	1,51E-02	2,04E-02	2,39E-01	1,69E-03	-4,08E-01
EP-terrestrial	mol N eq.	1,98E+01	4,88E+00	1,67E-01	1,65E-01	2,22E-01	2,61E+00	1,84E-02	-4,47E+00
POCP	kg NMVOC eq.	6,38E+00	1,47E+00	4,99E-02	4,93E-02	9,49E-02	7,80E-01	6,60E-03	-1,52E+00
ADP-minerals&metals[2]	kg Sb eq.	1,82E-03	3,14E-04	7,28E-07	1,32E-06	6,34E-05	3,51E-05	9,97E-07	-4,35E-03
ADP-fossil[2]	MJ	1,97E+04	1,74E+03	4,68E+01	4,72E+01	2,72E+02	7,72E+02	1,53E+01	-4,28E+03
WDP[2]	m^3	5,51E+02	7,14E+00	1,13E-01	1,16E-01	1,31E+00	2,37E+00	4,29E-02	-7,96E+01
Acronyms	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								

[1] Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e.
[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.

Additional mandatory and voluntary impact category indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	1,89E+03	1,30E+02	4,71E+00	3,61E+00	1,94E+01	5,90E+01	6,26E-01	-4,79E+02
PM	Disease inc.	1,36E-04	7,83E-06	9,29E-07	9,25E-07	1,52E-06	1,46E-05	1,01E-07	-3,10E-05
IRP[2]	kBq U-235 eq	5,36E+01	1,74E+00	1,96E-02	2,11E-02	3,49E-01	6,68E-01	9,78E-03	1,95E+01
ETP-fw[3]	CTUe	5,13E+04	4,08E+02	7,83E+00	6,69E+00	7,30E+01	1,13E+02	2,10E+00	-3,83E+04
HTP-c[3]	CTUh	1,86E-04	7,73E-07	1,30E-08	1,41E-08	1,35E-07	2,26E-07	2,83E-09	-1,45E-04
HTP-nc[3]	CTUh	1,61E-05	8,86E-07	8,42E-09	6,43E-09	1,75E-07	1,25E-07	2,76E-09	-5,81E-06
SQP[3]	dimensionless	4,92E+03	7,25E+02	9,83E+00	3,32E+00	1,62E+02	7,11E+01	3,02E+01	-1,17E+03
Acronyms	GWP-GHG = Global Warming Potential greenhouse gases, PM = Particulate Matter emissions, IR = Ionizing radiation, human health, SQP = Land use related impacts/Soil quality, HTTP-C = Human toxicity, cancer effects, HTTP-NC = Human toxicity, non-cancer effects								

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.
[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.
[3] 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.

Resource use indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	2,18E+03	2,38E+01	2,75E-01	2,90E-01	4,61E+00	9,03E+00	1,42E-01	-2,89E+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
PERT	MJ	2,18E+03	2,38E+01	2,75E-01	2,90E-01	4,61E+00	9,03E+00	1,42E-01	-2,89E+02
PENRE	MJ	2,05E+04	1,74E+03	1,51E+02	4,72E+01	2,72E+02	9,73E+02	3,77E+01	-4,22E+03
PENRM	MJ	3,28E+02	0,00E+00	-1,04E+02	0,00E+00	0,00E+00	-2,01E+02	-2,24E+01	-5,47E+01
PENRT	MJ	2,09E+04	1,74E+03	4,68E+01	4,72E+01	2,72E+02	7,72E+02	1,53E+01	-4,28E+03
SM	kg	-5,01E+02	1,68E+00	2,62E-02	2,79E-02	3,07E-01	5,14E-01	7,16E-03	2,95E+02
RSF	MJ	2,84E+01	4,00E-01	2,49E-03	3,30E-03	8,59E-02	9,16E-02	1,47E-03	7,38E+00

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
FW	m^3	1,71E+02	1,91E-01	-5,52E-02	3,07E-03	3,61E-02	6,40E-02	1,59E-02	-1,00E+00
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Note: Option A based on the Annex 3 of the PCR is followed for the balance of the indicators that are primary energy resources used as raw materials

Waste indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,18E+02	1,74E+00	4,15E-02	4,09E-02	2,66E-01	7,51E-01	1,14E-02	-1,25E+02
Non-hazardous waste disposed	kg	1,28E+03	1,69E+01	7,77E+01	3,06E-01	2,95E+00	5,05E+00	1,66E-01	-4,33E+02
Radioactive waste disposed	kg	5,65E-02	4,30E-04	4,78E-06	5,19E-06	8,66E-05	1,64E-04	2,38E-06	5,06E-03

Output flow indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	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
Material for recycling	kg	1,61E+02	1,56E+00	2,08E-02	2,30E-02	2,78E-01	9,00E+02	5,91E-03	-7,13E+01
Materials for energy recovery	kg	1,28E-02	1,80E-04	1,12E-06	1,48E-06	3,86E-05	4,11E-05	6,62E-07	3,31E-03
Exported energy, electricity	MJ	7,32E+00	2,19E-01	1,75E-03	2,10E-03	4,57E-02	6,27E-02	9,19E-04	4,30E+00
Exported energy, thermal	MJ	6,04E+00	2,91E-01	5,50E-04	1,12E-03	6,47E-02	1,94E-02	5,95E-04	-4,45E+00

Mass balance approaches (MBAs), to claim, for example, biobased, renewable, and/or recycled product content, are not applied.
The use of the results of modules A1-A3 without considering the results of module C is not encouraged.
The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

References

• General Programme Instructions of the International EPD® System. Version 5.0.
• PCR 2019:14 Construction products v1.3.4
• EN 15804:2012+A2:2019: Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction product
• ISO 14040: 2006 Environmental management - Life cycle assessment - Principles and framework
• ISO 14044: 2006 Environmental management - Life cycle assessment - Requirements and Guidelines
• ISO 14020: 2002 Environmental labels and declarations- General principles
• ISO 14025: 2006 Environmental labels and declarations - Type III environmental declarations - Principles and procedures
• The International EPD® System; www.environdec.com
• The International EPD® System / The General Programme Instructions; http://www.environdec.
com/tr/The-International-EPD-System/General-Programme-Instructions
• openLCA Software, ecoinvent 3.10 database; https://www.openlca.org/openlca
• EPD of Çolakoğlu Metalurji - Hot rolled flat steel (Secondary production route-scrap) - with BREG EN EPD No: 000078
• EPD of Izmir Demir Celik Sanayi A.S - Non-Alloy Structural Steel (Secondary production route-scrap) - with BREG EN EPD No: 000182

Contact Information

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