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ECO PLATFORM EPD VERIFIED

Owner: Give Steel A/S
No.: MD-25151-EN
Issued: 07.01.2026
Valid to: 07.01.2031

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
Give Steel A/S
Sjællandsvej 14, DK-7330 Brande

CVR: 26998115

https://givesteel.com/en/

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

☐ Product specific
☒ Average
☐ Worst Case

Declared products
CO2-reduced GSY® Beam and GSY® Beam

Product Variation 1: CO2-reduced GSY® Beam, Painted
Product Variation 2: CO2-reduced GSY® Beam, Galvanised
Product Variation 3: GSY® Beam, Painted
Product Variation 4: GSY® Beam, Galvanised

Production site
Sjællandsvej 14, DK-7330 Brande (Denmark)

Use of Guarantees of Origin
☐ No certificates used
☒ Electricity covered by GO
☐ Biogas covered by GO

Declared unit
1 tonne

Year of production site data (A3)
2024

EPD version
Version 1.0.

Issued: 07.01.2026
Valid to: 07.01.2031

Basis of calculation
This EPD has been developed & verified following the European standard: EN 15804+A2.

Comparability
EPDs are not comparable unless they comply with the requirements of EN 15804+A2. Likewise, EPD data is not comparable unless the datasets comply with the requirements of EN 15804+A2 and are from the same database.

Validity
This EPD has been verified following ISO 14025. It is valid for five years from the date of issue.

Use
The purpose of this EPD is to provide scientifically based environmental information regarding GSY® Beam and CO2-reduced GSY® Beam to evaluate the environmental performance of buildings.

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☒Cradle-to-gate with options, modules C1-C4 and D
☐Cradle-to-grave and module D
☐Cradle-to-gate
☐Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

Third party verifier:

David Althoff Palm
Dalemarken AB

Martha Katrine Sørensen
EPD Danmark

System Boundary (X: Module declared in LCA - ND: Module not declared in LCA)

Product			Construc-tion Process		Use							End-of-Life				Beyond System Boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction /Demolition	Transport	Waste processing	Disposal	Reuse, Recycling, Energy Recovery
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	MD	ND	ND	ND	X	X	X	X	X

Product information

Product description

Product materials are listed below.

CO2-reduced GSY® Beam		
Material	**Amount [t]**	**Weight-% of product**
vSteel	0,00	0%
rSteel (pre)	1,00	100%
rSteel (post)	0,00	0%
TOTAL	**1,00**	**100%**

GSY® Beam		
Material	**Amount [t]**	**Weight-% of product**
vSteel	0,77	77%
rSteel (pre)	0,08	8%
rSteel (post)	0,15	15%
TOTAL	**1,00**	**100%**

vSteel: Virgin Steel
rSteel (pre): Recycled Steel, pre-consumer
rSteel (post): Recycled Steel post-consumer

The difference between GSY® Beam and CO2-reduced GSY® Beam is the use of CO2-reduced steel. In this context, CO2-reduced steel refers to steel produced with reduced environmental impacts.

Product packaging

Product packaging is listed below.

CO2-reduced GSY® Beam		
Material	**Amount [kg]**	**Weight-% of sales packaging**
Wood Beams	3,16	95,6%
Foam	0,050	1,5%
Metal Straps	0,10	2,9%
TOTAL	**3,30**	**100%**

GSY® Beam		
Material	**Amount [kg]**	**Weight-% of sales packaging**
Wood Beams	2,86	95,6%
Foam	0,045	1,5%
Metal Straps	0,086	2,9%
TOTAL	**2,99**	**100%**

Representativity

This EPD covers the declared unit:

1 tonne of GSY® Beam

This EPD covers transportation (A4), installation (A5) and End-of-Life (C1-C4) in Scandinavia.

Product-specific data is collected for the period of 01.01.2024 - 31.12.2024 and includes data from Give Steel as well as EPDs covering the purchased steel.

Background data is from the EN 15804 ecoinvent database (v.3.10). The used background datasets are of high quality, generally only a few years old and in accordance with EN 15804+A2.

Hazardous substances

The declared products of GSY® Beam do not contain substances listed on the REACH Candidate List in quantities exceeding 0,1% by weight.

http://echa.europa.eu/candidate-list-table

Product use

GSY® Beam is primarily used in multi-story buildings to minimize the thickness of floor decks. Examples include:

- Offices
- Residential buildings
- Car parks

Essential characteristics

Give Steel is certified to produce & CE label steel structures in all execution classes (EXC 1 - 4) for the European market.

Give Steel is 1090-1 certified.

Further technical information can be obtained by contacting Give Steel.

https://givesteel.com/en/

Reference Service Life (RSL)

Not defined.

Picture of product

LCA background

Declared unit

The LCI and LCIA results, presented in this EPD, refer to 1 tonne of GSY® Beam.

Name	Value	Unit
Declared unit	1	tonne

Functional unit

Not defined.

Material properties

The density of GSY® Beam is 7,85 t/m3.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804+A2 and the rules in NPCR 013 Part B for Steel and Aluminium Construction Products.

Conversion factors

The conversion factor to 1 kg is 0,001.

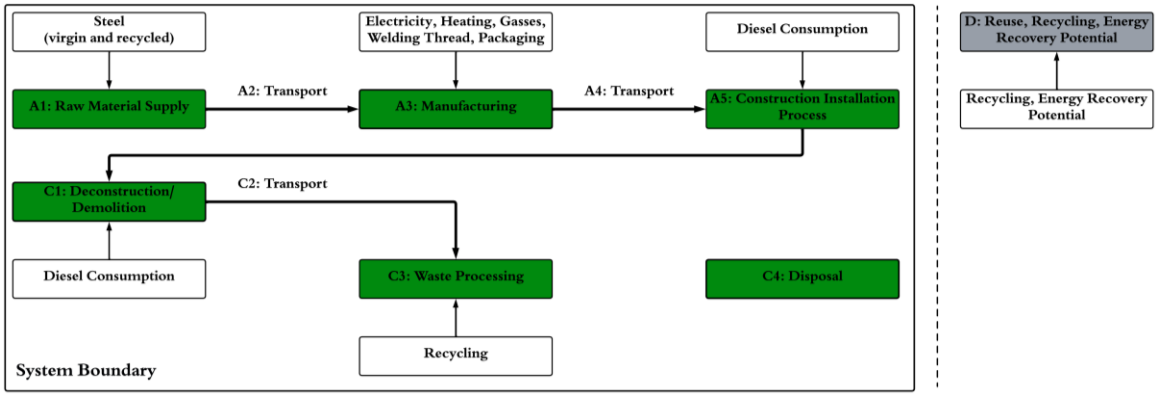
Energy modelling principles

Give Steel purchases Guarantees of Origin (GO) for European renewable energy. Consequently, the production of GSY® Beam is modelled based on European renewable energy biomass & hydro. Further details are provided in the table below.

Data	Emission Factor
Renewable Energy, EU, 2018/2024	0,055 kg CO_2e/kWh

The background system consists of aggregated ecoinvent processes that use grid mixes.

Flowdiagram



System boundary

This EPD is based on a cradle-to-gate LCA with options and modules C1-C4 & D. All relevant and significant processes are included.

The cut-off criterium per module is set at maximum 5% of energy usage and mass. The cut-off criterium per unit process is set at maximum 1% of energy usage and mass. This is in compliance with the rules stated in EN 15804+A2, 6.3.6.

Product stage (A1-A3) includes:

A1 - Extraction and processing of raw materials

A2 - Transport to the production site

A3 - Manufacturing processes

Give Steel purchases steel from a wide range of suppliers. EPDs from these suppliers are used as input in module A1. The quantity of steel purchased from each supplier is used to calculate a percentage distribution (portion), which serves as the basis for calculating module A1 results.

Module A2 covers transportation of steel from the suppliers to Give Steel's production facility in Brande, DK. Give Steel has been in direct contact with all suppliers, enabling the calculation of precise transport routes.

At Give Steel's production facility, the purchased steel is cut and welded to required dimensions. The steel is surface treated for protection and to prevent rust; either galvanised or painted.

Economic allocation is applied between the co-products and scrap steel.

Construction process stage (A4-A5) includes:

Give Steel has provided a complete list of all delivery addresses, covering the data collection period. This list is used to model transportation to customers in module A4. The customers are located in Scandinavia.

GSY® Beam is installed using truck-mounted and mobile cranes.

Sales packaging is waste treated in module A5.

Use stage (B1-B7) includes:

The use stage is not declared.

End-of-Life (C1-C4) includes:

The End-of-Life stage is modelled based on the assumption that GSY® Beam is collected separately from other construction waste and subsequently recycled. This approach reflects Scandinavian practices, following the location of Give Steel's customers.

Transport to recycling in module C2 is modelled by assuming the use of lorries.

Following NPCR 013, a sorting process is included in module C3.

Reuse, recycling and recovery potential (D) includes:

Module D includes the benefits associated with the avoided production of virgin steel. Crediting only applies to virgin materials that are recycled. Recycled materials that are recycled again cannot be credited. Consequently, only the virgin steel inputs in module A1 are credited for recycling.

Module D also includes the benefits associated with the avoided production of European electricity and heat as both the wooden beams and the foam - components of the sales packaging - are incinerated with energy recovery.

LCA results

ENVIRONMENTAL IMPACTS PER TONNE OF CO2-REDUCED GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	1,46E+03	4,39E+01	4,59E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-5,53E-01
GWP-fossil	[kg CO_2 eq.]	1,46E+03	4,39E+01	4,06E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-5,52E-01
GWP-biogenic	[kg CO_2 eq.]	-5,21E+00	0,00E+00	5,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO_2 eq.]	1,28E+00	1,47E-02	3,54E-03	4,42E-04	6,32E-03	5,59E-03	0,00E+00	-1,85E-03
ODP	[kg CFC 11 eq.]	8,11E-05	8,72E-07	6,20E-07	7,79E-08	3,78E-07	9,66E-07	0,00E+00	-1,43E-08
AP	[mol H^+ eq.]	5,48E+00	9,88E-02	3,65E-01	4,59E-02	3,96E-02	5,68E-01	0,00E+00	-4,16E-03
EP-freshwater	[kg P eq.]	6,12E-01	2,97E-03	1,20E-03	1,48E-04	1,29E-03	1,95E-03	0,00E+00	-4,96E-04
EP-marine	[kg N eq.]	1,33E+00	2,38E-02	1,69E-01	2,13E-02	9,50E-03	2,63E-01	0,00E+00	-8,01E-04
EP-terrestrial	[mol N eq.]	1,30E+01	2,57E-01	1,85E+00	2,33E-01	1,03E-01	2,88E+00	0,00E+00	-9,64E-03
POCP	[kg NMVOC eq.]	4,43E+00	1,57E-01	5,53E-01	6,96E-02	6,58E-02	8,59E-01	0,00E+00	-2,35E-03
ADPm[1]	[kg Sb eq.]	8,92E-03	1,42E-04	1,43E-05	1,77E-06	6,17E-05	3,79E-05	0,00E+00	-7,09E-06
ADPf[1]	[MJ]	2,23E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
WDP[1]	[m^3 world eq. deprived]	5,07E+02	3,47E+00	1,58E+00	1,95E-01	1,50E+00	3,83E+00	0,00E+00	-4,15E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER TONNE OF CO2-REDUCED GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,31E-04	3,22E-06	1,04E-05	1,31E-06	1,40E-06	1,61E-05	0,00E+00	-2,62E-08
IRP[2]	[kBq U235 eq.]	7,69E+01	7,98E-01	2,38E-01	2,98E-02	3,47E-01	9,91E-01	0,00E+00	-3,38E-01
ETP-fw[1]	[CTUe]	7,48E+04	1,68E+02	7,57E+01	9,43E+00	7,28E+01	1,20E+02	0,00E+00	-2,53E+00
HTP-c[1]	[CTUh]	2,26E-04	3,11E-07	1,59E-07	1,99E-08	1,35E-07	2,49E-07	0,00E+00	-1,60E-09
HTP-nc[1]	[CTUh]	5,36E-05	3,98E-07	7,75E-08	9,03E-09	1,73E-07	1,25E-07	0,00E+00	-1,23E-08
SQP[1]	-	1,85E+04	3,71E+02	3,76E+01	4,66E+00	1,61E+02	7,68E+01	0,00E+00	-2,56E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER TONNE OF CO2-REDUCED GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	3,72E+03	1,06E+01	3,26E+00	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-8,77E+00
PERM	[MJ]	4,55E+01	0,00E+00	-4,55E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,76E+03	1,06E+01	-4,22E+01	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-8,77E+00
PENRE	[MJ]	2,23E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
PENRM	[MJ]	2,12E+00	0,00E+00	-2,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,23E+04	6,17E+02	5,27E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
SM	[kg]	1,00E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	4,05E-02	3,61E-03	5,80E-04	7,23E-05	1,57E-03	9,15E-04	0,00E+00	-1,83E-05
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]	1,51E+01	8,54E-02	3,86E-02	4,76E-03	3,71E-02	1,00E-01	0,00E+00	-1,07E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNE OF CO2-REDUCED GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1,67E+01	9,00E-01	6,07E-01	7,44E-02	3,90E-01	9,42E-01	0,00E+00	-3,22E-02
NHWD	[kg]	4,62E+02	1,90E+01	1,14E+01	1,02E+00	8,23E+00	1,32E+01	0,00E+00	-2,43E+00
RWD	[kg]	1,77E-02	1,98E-04	5,84E-05	7,31E-06	8,61E-05	2,32E-04	0,00E+00	-8,67E-05
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
MFR	[kg]	1,13E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E+03	0,00E+00	0,00E+00
MER	[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
EEE	[MJ]	0,00E+00	0,00E+00	5,75E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	1,15E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER TONNE OF CO2-REDUCED GSY® BEAM, PAINTED		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0,00
Biogenic carbon content in sales packaging	[kg C]	1,42
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

ENVIRONMENTAL IMPACTS PER TONNE OF CO2-REDUCED GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	1,53E+03	4,39E+01	4,59E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-5,53E-01
GWP-fossil	[kg CO_2 eq.]	1,54E+03	4,39E+01	4,06E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-5,52E-01
GWP-biogenic	[kg CO_2 eq.]	-5,21E+00	0,00E+00	5,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO_2 eq.]	1,41E+00	1,47E-02	3,54E-03	4,42E-04	6,32E-03	5,59E-03	0,00E+00	-1,85E-03
ODP	[kg CFC 11 eq.]	8,27E-05	8,72E-07	6,20E-07	7,79E-08	3,78E-07	9,66E-07	0,00E+00	-1,43E-08
AP	[mol H^+ eq.]	5,92E+00	9,88E-02	3,65E-01	4,59E-02	3,96E-02	5,68E-01	0,00E+00	-4,16E-03
EP-freshwater	[kg P eq.]	6,53E-01	2,97E-03	1,20E-03	1,48E-04	1,29E-03	1,95E-03	0,00E+00	-4,96E-04
EP-marine	[kg N eq.]	1,42E+00	2,38E-02	1,69E-01	2,13E-02	9,50E-03	2,63E-01	0,00E+00	-8,01E-04
EP-terrestrial	[mol N eq.]	1,41E+01	2,57E-01	1,85E+00	2,33E-01	1,03E-01	2,88E+00	0,00E+00	-9,64E-03
POCP	[kg NMVOC eq.]	4,76E+00	1,57E-01	5,53E-01	6,96E-02	6,58E-02	8,59E-01	0,00E+00	-2,35E-03
ADPm[1]	[kg Sb eq.]	2,51E-02	1,42E-04	1,43E-05	1,77E-06	6,17E-05	3,79E-05	0,00E+00	-7,09E-06
ADPf[1]	[MJ]	2,34E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
WDP[1]	[m^3 world eq. deprived]	5,53E+02	3,47E+00	1,58E+00	1,95E-01	1,50E+00	3,83E+00	0,00E+00	-4,15E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER TONNE OF CO2-REDUCED GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,35E-04	3,22E-06	1,04E-05	1,31E-06	1,40E-06	1,61E-05	0,00E+00	-2,62E-08
IRP[2]	[kBq U235 eq.]	8,52E+01	7,98E-01	2,38E-01	2,98E-02	3,47E-01	9,91E-01	0,00E+00	-3,38E-01
ETP-fw[1]	[CTUe]	7,95E+04	1,68E+02	7,57E+01	9,43E+00	7,28E+01	1,20E+02	0,00E+00	-2,53E+00
HTP-c[1]	[CTUh]	2,27E-04	3,11E-07	1,59E-07	1,99E-08	1,35E-07	2,49E-07	0,00E+00	-1,60E-09
HTP-nc[1]	[CTUh]	5,77E-05	3,98E-07	7,75E-08	9,03E-09	1,73E-07	1,25E-07	0,00E+00	-1,23E-08
SQP[1]	-	1,90E+04	3,71E+02	3,76E+01	4,66E+00	1,61E+02	7,68E+01	0,00E+00	-2,56E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER TONNE OF CO2-REDUCED GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	3,82E+03	1,06E+01	3,26E+00	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-8,77E+00
PERM	[MJ]	4,55E+01	0,00E+00	-4,55E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,87E+03	1,06E+01	-4,22E+01	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-8,77E+00
PENRE	[MJ]	2,34E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
PENRM	[MJ]	2,12E+00	0,00E+00	-2,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,34E+04	6,17E+02	5,27E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,25E+01
SM	[kg]	1,00E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	4,36E-02	3,61E-03	5,80E-04	7,23E-05	1,57E-03	9,15E-04	0,00E+00	-1,83E-05
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]	1,62E+01	8,54E-02	3,86E-02	4,76E-03	3,71E-02	1,00E-01	0,00E+00	-1,07E-02
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNE OF CO2-REDUCED GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,56E+01	9,00E-01	6,07E-01	7,44E-02	3,90E-01	9,42E-01	0,00E+00	-3,22E-02
NHWD	[kg]	6,06E+02	1,90E+01	1,14E+01	1,02E+00	8,23E+00	1,32E+01	0,00E+00	-2,43E+00
RWD	[kg]	1,98E-02	1,98E-04	5,84E-05	7,31E-06	8,61E-05	2,32E-04	0,00E+00	-8,67E-05

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
MFR	[kg]	1,13E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E+03	0,00E+00	0,00E+00
MER	[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
EEE	[MJ]	0,00E+00	0,00E+00	5,75E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	1,15E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER TONNE OF CO2-REDUCED GSY® BEAM, GALVANISED		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0,00
Biogenic carbon content in sales packaging	[kg C]	1,42
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

ENVIRONMENTAL IMPACTS PER TONNE OF GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	2,58E+03	4,39E+01	4,53E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-1,31E+03
GWP-fossil	[kg CO_2 eq.]	2,58E+03	4,39E+01	4,06E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-1,31E+03
GWP-biogenic	[kg CO_2 eq.]	-4,72E+00	0,00E+00	4,72E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO_2 eq.]	9,09E-01	1,47E-02	3,54E-03	4,42E-04	6,32E-03	5,59E-03	0,00E+00	-2,74E-01
ODP	[kg CFC 11 eq.]	1,42E-05	8,72E-07	6,20E-07	7,79E-08	3,78E-07	9,66E-07	0,00E+00	-5,67E-06
AP	[mol H^+ eq.]	1,17E+01	9,88E-02	3,65E-01	4,59E-02	3,96E-02	5,68E-01	0,00E+00	-4,54E+00
EP-freshwater	[kg P eq.]	5,42E-01	2,96E-03	1,19E-03	1,48E-04	1,29E-03	1,95E-03	0,00E+00	-5,00E-01
EP-marine	[kg N eq.]	3,49E+00	2,38E-02	1,69E-01	2,13E-02	9,50E-03	2,63E-01	0,00E+00	-1,10E+00
EP-terrestrial	[mol N eq.]	2,88E+01	2,57E-01	1,85E+00	2,33E-01	1,03E-01	2,88E+00	0,00E+00	-1,18E+01
POCP	[kg NMVOC eq.]	9,81E+00	1,57E-01	5,53E-01	6,96E-02	6,58E-02	8,59E-01	0,00E+00	-4,09E+00
ADPm[1]	[kg Sb eq.]	1,32E-02	1,42E-04	1,43E-05	1,77E-06	6,17E-05	3,79E-05	0,00E+00	-7,04E-04
ADPf[1]	[MJ]	2,49E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
WDP[1]	[m^3 world eq. deprived]	3,00E+03	3,47E+00	1,58E+00	1,95E-01	1,50E+00	3,83E+00	0,00E+00	-1,04E+02
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,00000000000112.								
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER TONNE OF GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,01E-04	3,22E-06	1,04E-05	1,31E-06	1,40E-06	1,61E-05	0,00E+00	-8,94E-05
IRP[2]	[kBq U235 eq.]	6,90E+01	7,98E-01	2,38E-01	2,98E-02	3,47E-01	9,91E-01	0,00E+00	-1,58E+01
ETP-fw[1]	[CTUe]	7,32E+04	1,68E+02	7,56E+01	9,43E+00	7,28E+01	1,20E+02	0,00E+00	-1,10E+05
HTP-c[1]	[CTUh]	2,23E-04	3,11E-07	1,59E-07	1,99E-08	1,35E-07	2,49E-07	0,00E+00	-4,16E-04
HTP-nc[1]	[CTUh]	4,98E-05	3,98E-07	7,69E-08	9,03E-09	1,73E-07	1,25E-07	0,00E+00	-1,22E-05
SQP[1]	-	1,42E+04	3,71E+02	3,76E+01	4,66E+00	1,61E+02	7,68E+01	0,00E+00	-2,74E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1{,}95*10^2$ or 195, while 1,12E-11 is the same as $1{,}12*10^{-11}$ or 0,00000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER TONNE OF GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	3,69E+03	1,06E+01	3,26E+00	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-2,91E+02
PERM	[MJ]	4,12E+01	0,00E+00	-4,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,73E+03	1,06E+01	-3,79E+01	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-2,91E+02
PENRE	[MJ]	2,39E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
PENRM	[MJ]	1,91E+00	0,00E+00	-1,91E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,39E+04	6,17E+02	5,27E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
SM	[kg]	2,20E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	8,25E-02	3,61E-03	5,80E-04	7,23E-05	1,57E-03	9,15E-04	0,00E+00	-1,61E-02
NRSF	[MJ]	1,30E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m^3]	1,39E+01	8,54E-02	3,85E-02	4,76E-03	3,71E-02	1,00E-01	0,00E+00	-2,51E+00
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNE OF GSY® BEAM, PAINTED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,81E+02	9,00E-01	6,06E-01	7,44E-02	3,90E-01	9,42E-01	0,00E+00	-1,20E+02
NHWD	[kg]	3,34E+03	1,90E+01	1,11E+01	1,02E+00	8,23E+00	1,32E+01	0,00E+00	-2,57E+03
RWD	[kg]	8,47E-01	1,98E-04	5,84E-05	7,31E-06	8,61E-05	2,32E-04	0,00E+00	-3,94E-03
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
MFR	[kg]	4,98E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E+03	0,00E+00	0,00E+00
MER	[kg]	2,73E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,67E+00	0,00E+00	5,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	3,89E+00	0,00E+00	1,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.								

BIOGENIC CARBON CONTENT PER TONNE OF GSY® BEAM, PAINTED		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0,00
Biogenic carbon content in sales packaging	[kg C]	1,29
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

ENVIRONMENTAL IMPACTS PER TONNE OF GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	2,65E+03	4,39E+01	4,53E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-1,31E+03
GWP-fossil	[kg CO_2 eq.]	2,66E+03	4,39E+01	4,06E+01	5,09E+00	1,90E+01	6,30E+01	0,00E+00	-1,31E+03
GWP-biogenic	[kg CO_2 eq.]	-4,72E+00	0,00E+00	4,72E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO_2 eq.]	1,04E+00	1,47E-02	3,54E-03	4,42E-04	6,32E-03	5,59E-03	0,00E+00	-2,74E-01
ODP	[kg CFC 11 eq.]	1,59E-05	8,72E-07	6,20E-07	7,79E-08	3,78E-07	9,66E-07	0,00E+00	-5,67E-06
AP	[mol H^+ eq.]	1,21E+01	9,88E-02	3,65E-01	4,59E-02	3,96E-02	5,68E-01	0,00E+00	-4,54E+00
EP-freshwater	[kg P eq.]	5,83E-01	2,96E-03	1,19E-03	1,48E-04	1,29E-03	1,95E-03	0,00E+00	-5,00E-01
EP-marine	[kg N eq.]	3,59E+00	2,38E-02	1,69E-01	2,13E-02	9,50E-03	2,63E-01	0,00E+00	-1,10E+00
EP-terrestrial	[mol N eq.]	2,99E+01	2,57E-01	1,85E+00	2,33E-01	1,03E-01	2,88E+00	0,00E+00	-1,18E+01
POCP	[kg NMVOC eq.]	1,01E+01	1,57E-01	5,53E-01	6,96E-02	6,58E-02	8,59E-01	0,00E+00	-4,09E+00
ADPm[1]	[kg Sb eq.]	2,94E-02	1,42E-04	1,43E-05	1,77E-06	6,17E-05	3,79E-05	0,00E+00	-7,04E-04
ADPf[1]	[MJ]	2,60E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
WDP[1]	[m^3 world eq. deprived]	3,04E+03	3,47E+00	1,58E+00	1,95E-01	1,50E+00	3,83E+00	0,00E+00	-1,04E+02
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
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ADDITIONAL ENVIRONMENTAL IMPACTS PER TONNE OF GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,06E-04	3,22E-06	1,04E-05	1,31E-06	1,40E-06	1,61E-05	0,00E+00	-8,94E-05
IRP[2]	[kBq U235 eq.]	7,73E+01	7,98E-01	2,38E-01	2,98E-02	3,47E-01	9,91E-01	0,00E+00	-1,58E+01
ETP-fw[1]	[CTUe]	7,78E+04	1,68E+02	7,56E+01	9,43E+00	7,28E+01	1,20E+02	0,00E+00	-1,10E+05
HTP-c[1]	[CTUh]	2,24E-04	3,11E-07	1,59E-07	1,99E-08	1,35E-07	2,49E-07	0,00E+00	-4,16E-04
HTP-nc[1]	[CTUh]	5,39E-05	3,98E-07	7,69E-08	9,03E-09	1,73E-07	1,25E-07	0,00E+00	-1,22E-05
SQP[1]	-	1,47E+04	3,71E+02	3,76E+01	4,66E+00	1,61E+02	7,68E+01	0,00E+00	-2,74E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.								

RESOURCE USE PER TONNE OF GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	3,79E+03	1,06E+01	3,26E+00	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-2,91E+02
PERM	[MJ]	4,12E+01	0,00E+00	-4,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,84E+03	1,06E+01	-3,79E+01	4,07E-01	4,59E+00	1,74E+01	0,00E+00	-2,91E+02
PENRE	[MJ]	2,49E+04	6,17E+02	5,29E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
PENRM	[MJ]	1,91E+00	0,00E+00	-1,91E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,49E+04	6,17E+02	5,27E+02	6,66E+01	2,67E+02	8,33E+02	0,00E+00	-1,36E+04
SM	[kg]	2,20E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	8,56E-02	3,61E-03	5,80E-04	7,23E-05	1,57E-03	9,15E-04	0,00E+00	-1,61E-02
NRSF	[MJ]	1,30E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m^3]	1,50E+01	8,54E-02	3,85E-02	4,76E-03	3,71E-02	1,00E-01	0,00E+00	-2,51E+00
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNE OF GSY® BEAM, GALVANISED									
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,90E+02	9,00E-01	6,06E-01	7,44E-02	3,90E-01	9,42E-01	0,00E+00	-1,20E+02
NHWD	[kg]	3,48E+03	1,90E+01	1,11E+01	1,02E+00	8,23E+00	1,32E+01	0,00E+00	-2,57E+03
RWD	[kg]	8,49E-01	1,98E-04	5,84E-05	7,31E-06	8,61E-05	2,32E-04	0,00E+00	-3,94E-03
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
MFR	[kg]	4,98E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E+03	0,00E+00	0,00E+00
MER	[kg]	2,73E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,67E+00	0,00E+00	5,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	3,89E+00	0,00E+00	1,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,00000000000112.								

BIOGENIC CARBON CONTENT PER TONNE OF GSY® BEAM, GALVANISED		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0,00
Biogenic carbon content in sales packaging	[kg C]	1,29
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

The results are calculated using EF 3.1 characterisation factors. Some of the EPDs used as input use EF 3.0 characterisation factors. For the additional environmental impact indicators, module A1 is based on generic data rather than the EPDs used, as not all of the selected EPDs declare these indicators.

Additional information

Technical information on scenarios

Transport to the building site (A4), in order: GSY® Beam, CO2-reduced GSY® Beam

Scenario Information	Value	Unit
Fuel type	Diesel	-
	Fuel Oil	-
Vehicle type	Lorry 16-32 metric tonnes, EURO6	-
	Container Ship	-
Transport distance and load	229,76; 229,83	tkm
	26,23; 26,24	tkm

Installation of the product in the building (A5) , in order: GSY® Beam, CO2-reduced GSY® Beam

Scenario Information	Value	Unit
Energy type	Diesel	-
Energy amount	403,07	MJ
Waste materials **(sales packaging)**	2,99; 3,30	kg

End-of-Life (C1-C4)

Scenario Information	Value	Unit
Collected separately	1,00	t
For recycling	1,00	t

Reuse, Recycling and Energy Recovery Potential (D), in the order: GSY® Beam, CO2-reduced GSY® Beam

Scenario Information	Value	Unit
Displaced material **(steel)**	0,73; 0,00	t
Electricity recovery from waste incineration	5,20; 5,74	MJ
Heat recovery from waste incineration	10,45; 11,53	MJ

Data Quality Assessment

Data quality is assessed using Table E.1 (Appendix E) in EN 15804+A2 and EN 15941:2024.

Geography: Overall, Good
Technology: Overall, Good
Time: Overall, Very Good

None of the ecoinvent processes rated as *fair* contribute 30% or more to any of the core environmental impact categories.

Indoor air

The EPD does not give information on the release of dangerous substances to indoor air. The horizontal standards of the relevant measurements are not available.

Read more in EN 15804+A2, Chapter 7.4.1.

Soil and water

The EPD does not give information on the release of dangerous substances to soil and water. The horizontal standards of the relevant measurements are not available.

Read more in EN 15804+A2, Chapter 7.4.2.

References

Publisher	epddanmark www.epddanmark.dk Template version 2025.1
Programme operator	Danish Technological Institute Gregersensvej 1, DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Transition ApS Regnbuepladsen 7, DK-1550 København V https://transition.nu/ Att.: Emma Ekebjærg
LCA software / background data	SimaPro (v.10.2.0.3) / ecoinvent (v.3.10)
3rd party verifier	David Althoff Palm Dalemarken AB Verified according to Verification Checklist 1 v. 2.9.1

General programme instructions
General Programme Instructions, version 3.0, spring 2025
www.epddanmark.dk

Technical Rules and Guidelines
Technical Rules and Guidelines, version 1.0, spring 2025
www.epddanmark.dk

EN 15804
DS/EN 15804+A2:2019 - "Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products"

NPCR 013
Part B for Steel and Aluminium Construction Products, 2024, v.4.0

EN 15942
DS/EN 15942:2011 - "Sustainability of construction works - Environmental product declarations - Communication format business-to-business"

ISO 14025
DS/EN ISO 14025:2010 - "Environmental labels and declarations - Type III environmental declarations - Principles and procedures"

ISO 14040
DS/EN ISO 14040:2008 - "Environmental management - Life cycle assessment - Principles and framework"

ISO 14044
DS/EN ISO 14044:2008 - "Environmental management - Life cycle assessment - Requirements and guidelines"

EN 15941:2024
DS/EN 15941:2024 - "Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data"