

Owner: Triplan International A/S
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3rd PARTY VERIFIED

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



Owner of declaration

Triplan International A/S
Industriskellet 12, DK-2635 Ishøj
VAT No.: 16664081



Issued:
24-06-2021

Valid to:
24-06-2026

Programme

EPD Danmark
www.epddanmark.dk



- Industry EPD
- Product EPD

Basis of calculation

This EPD is developed in accordance with the European standard EN 15804+A1.

Comparability

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

Declared product

Steel profiles and components for use in the building construction industry

Number of declared datasets/product variations: 1

Production site

Triplan International A/S, Industriskellet 12, DK-2635 Ishøj

Product use

Light steel profiles and components for use in the building construction industry, for e.g. drywalls, exterior walls, suspended ceilings, and loadbearing floor slabs

EPD type


- Cradle-to-gate
- Cradle-to-gate with options
- Cradle-to-grave

Declared unit

1 ton steel building profiles

Year of data

2018/2019

CEN standard EN 15804 serves as the core PCR
Independent verification of the declaration and data, according to EN ISO 14025
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external
Third party verifier:  <hr/> Ninkie Bendtsen, Niras A/S



Henrik Fred Larsen
EPD Danmark

Life cycle stages and modules (MND = module not declared)

Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and 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	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

Product information

Product description

The main product components of Triplan steel building profiles are shown in the table below.

Material	Weight-% of declared product
Galvanized steel	100%

Representativity

The declared unit is 1 ton of steel building profiles, based on the production at Triplans manufacturing site in Ishøj, Denmark. The calculations are based on consumption- and production data from October 2018 to September 2019.

Background data is based on the GaBi databases version 2020. The majority of datasets are <5 years old, and all the used datasets are <10 years old in accordance with EN15804:2012+A1:2013

Hazardous substances

The products covered in this EPD do not contain substances listed in the "Candidate List of Substances of Very High Concern for authorisation".

(<http://echa.europa.eu/candidate-list-table>)

Essential characteristics (CE)

Triplan steel building profiles are covered by harmonised European product standards, and all components are CE-marked products. The profiles are fire- and sound tested at danish laboratories, and MK-approved.

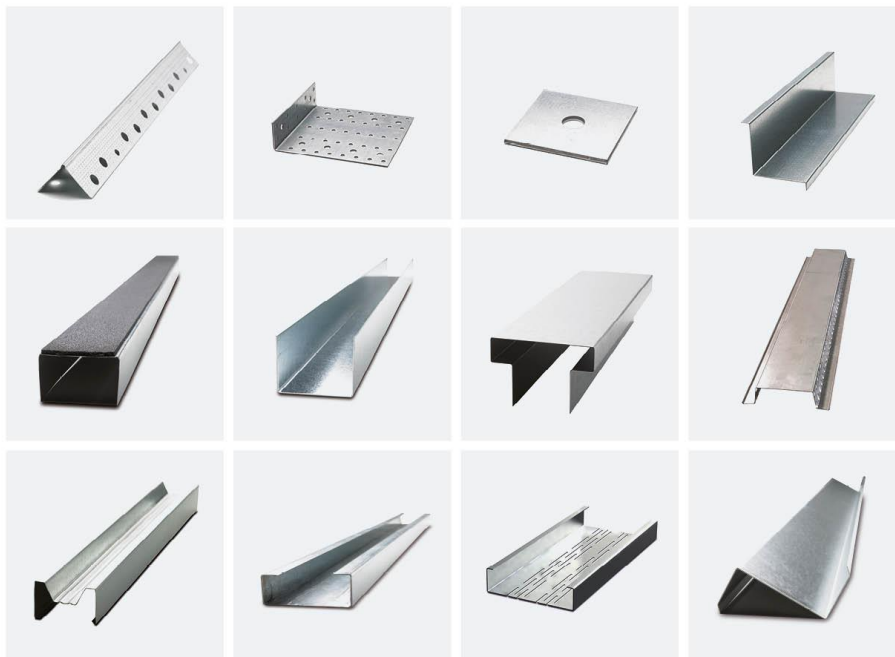
Further technical information can be obtained by contacting the manufacturer or on the manufacturers' website:

<https://www.triplan.dk/en>

Reference Service Life (RSL)

No RSL is declared, as this EPD is based on a cradle-to-gate LCA.

Picture of product(s)



LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 ton Triplan steel building profiles.

Name	Value	Unit
Declared unit	1	ton
Density	-	kg/m ³
Conversion factor to 1 kg.	0,001	-

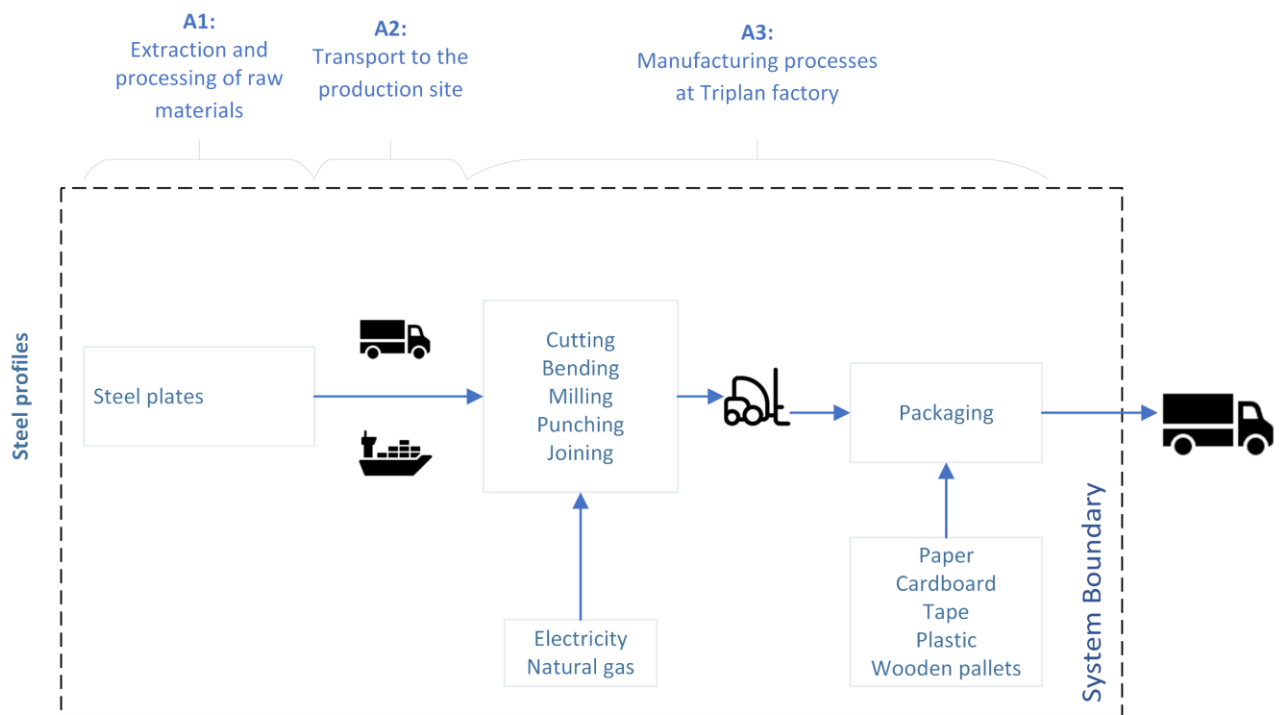
Functional Unit

Not defined.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A1:2013.

Flowdiagram



System boundary

This EPD is based on a cradle-to-gate LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

Triplan steel building profiles are manufactured at a modern mechanical industrial plant, utilizing fully automated bending- and packaging machines, robots, and machines for drywall processing. The plant produces steel in the shape of battens, rails, and posts for use in drywalls, suspended ceilings, and loadbearing floor slabs.

The plant also has the capabilities and advanced equipment to manufacture specialized steel profiles, as well as thin steel plates.

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the “end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The production of energy, resulting from the disposal of waste in municipal waste incineration, is allocated within the system boundary, and the generated thermal- and electrical energy is deducted from the consumption.

Screws and other ancillary materials are not included in this EPD, due to variations in type of materials used and manufacturer. Any such components are to be included separately.

Construction process stage (A4-A5) includes:

Modules not declared.

Use stage (B1-B7) includes:

Modules not declared.

End of Life (C1-C4) includes:

Modules not declared.

Re-use, recovery and recycling potential (D) includes:

Module not declared.

LCA results

ENVIRONMENTAL IMPACTS PER ton STEEL BUILDING PROFILE		
Parameter	Unit	A1-A3
GWP	[kg CO ₂ eq.]	3,75E+03
ODP	[kg CFC11 eq.]	6,54E-11
AP	[kg SO ₂ eq.]	1,30E+01
EP	[kg (PO ₄) ³⁻ eq.]	1,32E+00
POCP	[kg Ethen eq.]	1,69E+00
ADPE	[kg Sb eq.]	1,34E-02
ADPF	[MJ]	3,99E+04
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources	

RESSOURCE USE PER ton STEEL BUILDING PROFILE		
Parameter	Unit	A1-A3
PERE	[MJ]	2,05E+03
PERM	[MJ]	0,00E+00
PERT	[MJ]	2,05E+03
PENRE	[MJ]	4,02E+04
PENRM	[MJ]	4,36E+02
PENRT	[MJ]	4,07E+04
SM	[kg]	0,00E+00
RSF	[MJ]	0,00E+00
NRSF	[MJ]	0,00E+00
FW	[m ³]	4,34E+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 = Use of net fresh water	

WASTE CATEGORIES AND OUTPUT FLOWS PER ton STEEL BUILDING PROFILE		
Parameter	Unit	A1-A3
HWD	[kg]	4,33E-05
NHWD	[kg]	2,13E+02
RWD	[kg]	3,57E-02
CRU	[kg]	0,00E+00
MFR	[kg]	1,26E+02
MER	[kg]	3,00E-01
EEE	[MJ]	4,43E-01
EET	[MJ]	7,29E-01
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	

Additional information

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.

References

Publisher	 www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA software /background data	Thinkstep GaBi 10.0 2020 incl. databases www.gabi-software.com
3rd party verifier	Ninkie Bendtsen, NIRAS, Sortemosevej 19, 3450 Allerød https://www.niras.com/

General programme instructions

Version 2.0

www.epddanmark.dk

EN 15804

DS/EN 15804:2012 + A1:2013 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

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"