

Environmental Product Declaration



In accordance with ISO 14025, EN 15804: 2012+A1:2013 and PCR 2012:01 for:

HOT-DIP GALVANISED STEEL ELEMENTS

From:

Cipriani Profilati SRL



Programme:
Programme operator:
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Programme information

Programme:	<p>The International EPD® System</p> <p>EPD International AB Box 210 60 SE-100 31 Stockholm Sweden</p> <p>www.environdec.com info@environdec.com</p>
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Product category rules (PCR): PCR 2012:01 (Construction products and construction services) Version 2.33 of 2020-09-18
PCR review was conducted by: The Technical Committee of the International EPD® System. Chair: Massimo Marino. Contact via info@environdec.com
<p>Independent third-party verification of the declaration and data, according to ISO 14025:2006:</p> <p><input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification</p>
Third party verifier: Marcus Wendin from Miljögiraff
Approved by: The International EPD® System
<p>Procedure for follow-up of data during EPD validity involves third party verifier:</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Company information

Owner of the EPD:
Cipriani Profilati SRL

Description of the organisation:

Cipriani Profilati is a family-owned business company, already at its fourth generation and yet it steadily maintains the market leadership in the production of metal systems for plasterboard and suspended ceilings.

Product information

Product name:

Hot-dip galvanised steel elements, including drywall metal systems and T-grid metal frame for false ceilings.

Production site:

Via Pineta 31, 38068 Rovereto (TN) Italy

UN CPC code:

412 – Products of iron or steel

Geographical scope:

Europe

Application

The products include studs, tracks and T-profiles. These are typically used for mounting of drywall and ceiling systems in general.

Technical Data

The products are manufactured to comply with the applicable NF, DIN, UNI, BS and SS standards, more specifically:

- EN 14195
- EN 13964

Manufacturing of the product:

The hot dip galvanised is procured from the supplier, then roll formed and moulded to the desired form in elements that vary between 0,3 and 2mm thickness. The products are 99% composed of hot-dip galvanised steel, with a recycled material content of around 7% in weight. The product does not contain any chemicals included in the SVHC list of substances of very high concern for authorisation.

Packaging

The product is packaged using film in polyethylene terephthalate (PET), polyethylene (LDPE) and polypropylene (PP); as well as pine wood casing.

Reference service life

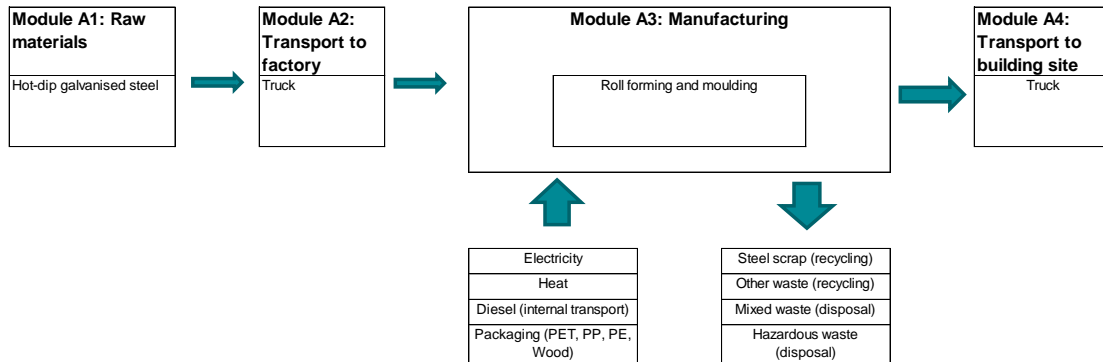
The expected service life is estimated to be between 50 and 100 years.

LCA information

Declared unit:

1 ton of steel elements

System diagram:



Description of system boundaries:

Cradle-to-gate

Life cycle stages included:

The table below presents an outline of the life cycle modules declared and not declared. An “X” means that the stage is included and MND (Module Not Declared) means it is not.

Life cycle stage	Information module	Cradle to gate with options, modules C1-C4 and module D	Included in this study (X)
A1) Raw material supply	Product stage	Mandatory	X
A2) Transport			X
A3) Manufacturing			X
A4) Transport	Construction process stage	Optional	X
A5) Construction installation			MND
B1) Use	Use stage	Optional	MND
B2) Maintenance			MND
B3) Repair			MND
B4) Replacement			MND
B5) Refurbishment			MND
B6) Operational energy use			MND
B7) Operational water use			MND
C1) Deconstruction, demolition	End of life stage	Optional	MND
C2) Transport			MND
C3) Waste processing			MND
C4) Disposal			MND
D) Reuse, recovery, recycling potential	Benefits and loads beyond the system boundary	Optional	MND

Time representativeness:

The data used to model product manufacturing corresponds to 2018-2019. The upstream data from EPDs and generic databases are from 2011 – 2018. No data used is older than 10 years.

Database(s) and LCA software used:

The data used is mainly from supplier EPDs in terms of contribution to the total environmental impacts. Generic data is also used, mostly from Sphera's database 2020.2 and Ecoinvent 3. The LCA software used is GaBi 10.

Allocation:

No allocation was necessary in this study.

Scenarios:

The analysis is carried out using factory-specific data for use of energy and utilities and waste generation, as well as product-specific data for use of raw materials. Therefore, the results represent the product system and no other scenarios were applied.

Data used:

Site-specific production data has been retrieved for 2018-2019 from the production site.

Cut-off:

The study applies a cut-off criterion of maximum 1% of the material and energy inputs of the system. This means that the sum of excluded material inputs does not exceed 1% of the total material inputs. No exclusion was made to the knowledge of the authors of the LCA study.

Transportation:

The transport of the raw materials to the production site is carried out by trucks (Truck, 20-26 t tot weight, MPL 17 t, Euro 6) and vans (Truck, up to 7.5 tot weight, MPL 3 t, Euro 6). Empty returns are mostly avoided.

Energy utilities at the manufacturing site:

Only heat and electricity are used at the production site. The company purchases electricity from Alperia, who provided a specific electricity mix. The data used to model electricity generation has been obtained from the Thinkstep database. The heat is produced by a methane-powered boiler and photovoltaic panels. Generic data has been used to model heat production.

Direct emissions from production site:

The only direct emissions from the production site come from a methane-powered boiler and diesel-powered internal transports.

Content declaration

Material content:

The material content (in % weight, before curing) for the product is more than 99% hot-dip galvanised steel.

No substances that appear in the REACH candidate list of SVHC (Candidate List of Substances of Very High Concern) are present or used in the product concerning this EPD.

Recycled material:

The product contains about 7% recycled material.

Environmental performance

Potential environmental impact per ton of steel element

Indicator	PRODUCTION				CONSTRUCTION
	Raw material supply (A1)	Transport (A2)	Manufacturing (A3)	Sum of A1-A3	Transport (A4)
Global warming potential – fossil (GWP) [kg CO ₂ eq.]	2.88E+03	2.27E+01	1.37E+00	2.91E+03	4.17E+01
Depletion potential of the stratospheric ozone layer (ODP) [kg CFC-11 eq.]	1.09E-08	3.73E-15	7.44E-14	1.09E-08	6.81E-15
Acidification potential (AP) [kg SO ₂ eq.]	5.42E+00	1.99E-02	2.86E-03	5.45E+00	3.13E-02
Eutrophication potential (EP) [kg (PO ₄) ³⁻ eq.]	5.30E-01	3.84E-03	5.50E-04	5.35E-01	5.70E-03
Formation potential of tropospheric ozone (POCP) [kg C ₂ H ₄ eq.]	9.53E-01	-1.12E-03	-2.80E-04	9.52E-01	3.10E-04
Abiotic depletion potential (ADP-elements) for non-fossil resources [kg Sb eq.]	1.97E-01	1.67E-06	1.24E-07	1.97E-01	3.05E-06
Abiotic depletion potential (ADP-fossil fuels) for fossil resources [MJ]	2.75E+04	3.09E+02	2.23E+01	2.79E+04	5.65E+02

Use of resources per ton of steel element

Indicator	PRODUCTION				CONSTRUCTION
	Raw material supply (A1)	Transport (A2)	Manufacturing (A3)	Sum of A1-A3	Transport (A4)
Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]	2.31E+03	1.74E+01	1.63E+00	2.32E+03	3.18E+01
Use of renewable primary energy resources used as raw materials [MJ]	0	0	0	0	0
Total use of renewable primary energy resources, sum of two above (PERT) [MJ]	2.31E+03	1.74E+01	1.63E+00	2.32E+03	3.18E+01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]	2.87E+04	3.09E+02	2.29E+01	2.90E+04	5.67E+02
Use of non-renewable primary energy resources used as raw material [MJ]	0	0	0	0	0
Total use of non-renewable primary energy resources (PENRT), sum of two above [MJ]	2.87E+04	3.09E+02	2.29E+01	2.90E+04	5.67E+02
Use of secondary material (SM) [kg]	7.08E+01	0	0	7.08E+01	0
Use of renewable secondary fuels (RSF) [MJ]	5.53E-12	0	0	5.53E-12	0
Use of non-renewable secondary fuels (NRSF) [MJ]	6.48E-11	0	0	6.48E-11	0
Net use of fresh water (FW) [m3]	3.30E-01	2.01E-02	1.09E-02	3.61E-01	3.69E-02

Waste production per ton of steel element

Indicator	PRODUCTION				CONS TRUCTION
	Raw material supply (A1)	Transport (A2)	Manufacturing (A3)	Sum of A1-A3	Transport (A4)
Hazardous waste disposed (HWD) [kg]	7.28E-05	1.44E-05	2.98E-07	8.75E-05	2.64E-05
Non-hazardous waste disposed (NHWD) [kg]	1.57E+01	4.74E-02	1.91E-01	1.59E+01	8.68E-02
Radioactive waste disposed (RWD) [kg]	4.71E-01	3.83E-04	2.03E-04	4.72E-01	7.02E-04

Output flows per ton of steel element

Indicator	PRODUCTION				CONS TRUCTION
	Raw material supply (A1)	Transport (A2)	Manufacturing (A3)	Sum of A1-A3	Transport (A4)
Components for re-use [kg]	0	0	0	0	0
Materials for recycling [kg]	0	0	0	0	0
Materials for energy recovery [kg]	0	0	0	0	0
Exported electrical energy [MJ]	0	0	0	0	0
Exported thermal energy [MJ]	0	0	0	0	0

Additional environmental information

All the scrap from the production is recycled. All the wood used in packaging comes from certified wood production.

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