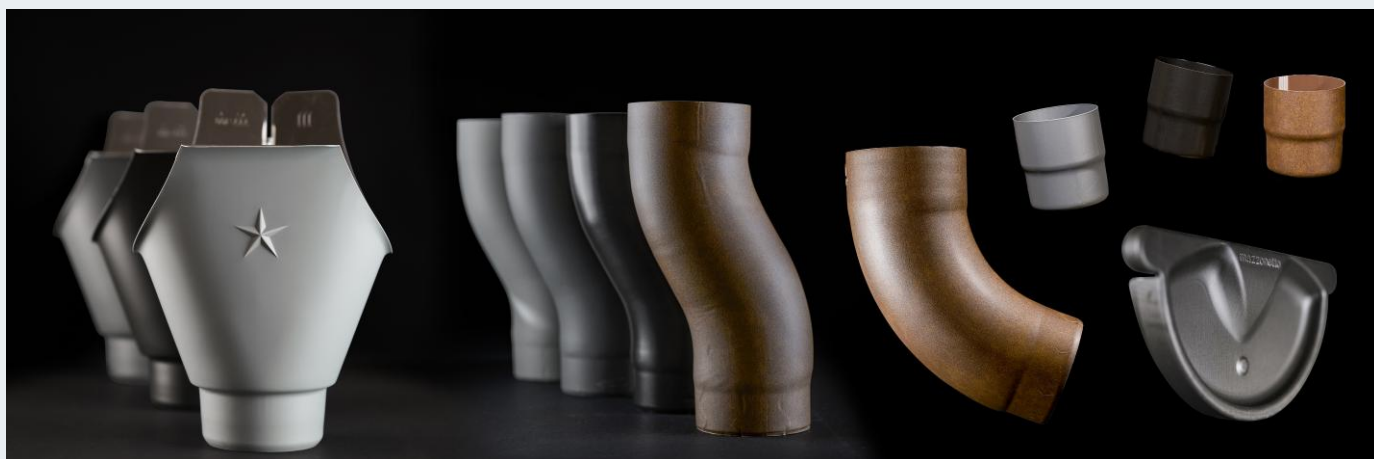


Environmental Product Declaration

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

Pre-painted aluminium sheet metal products

EPD of multiple products, based
on a representative product.



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number::	EPD-IES-0019522
Publication date:	2025-03-17
Valid until:	2030-03-16

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Programme information

Programme:	The International EPD System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 funge da Core Product Category Rules (PCR)
Product category rules (PCR): <i>PCR 2019:14 Construction Products, version 1.3.4</i>
La revisione della PCR è stata condotta da: <i>The Technical Committee of the International EPD System. See www.environdec.com/TC for a list of members. Review chair: Claudia A Pena, Univerity of Concepcion, Chile. The review panel may be contacted via info@environdec.com.</i>
Information on LCA practioner(s)
LCA accountability: S.C.F. International, via della Volta, 183, 25124 Brescia info@scfinternational.it
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification <input type="checkbox"/> LCA/EPD tool
Third-party verifier: DNV Business Assurance Italy s.r.l. Accredited by Accredia
Approved by: The International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner 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:

MAZZONETTO Spa
Via A. Ceccon, 10 - 35010 Loreggia (PD) Italy
T +39 049.9322611 - E-mail: mazzonetto@mazzonettometalli.it

Contact:

Alberto Conz; a.conz@mazzonettometalli.it

Description of the organisation:

Mazzonetto Spa (hereinafter Mazzonetto) is a company with over 40 years of experience, specialized in the production of rainwater pipes, fitting elbows and accessories for metal joinery, as well as solutions for the coating of roofs and metal facades. Our customers include companies that process thin metal for the production of gutter and roofing and facade installers. The target market is 65% Italian and 35% international customers. The company stands out for its reliable and innovative products, designed to combine quality, efficiency and environmental sustainability.

Name and location of production site(s):

Mazzonetto realizza i propri prodotti nel sito produttivo a Loreggia (PD).

Product information

Product name:

Prepainted aluminium sheet metal products

Product identification:

The pre-painted aluminium sheet metal products manufactured by Mazzonetto are characterized by a wide range of articles different in function, size and color.

The sector served is that of construction and the application mainly concerns the realization of systems for rainwater disposal for buildings.

Manufacturing process:

The production cycle begins with the arrival of aluminium coils transported by road. After arriving in the factory, the prepainted aluminium coils are subjected to common processes such as horizontal cutting (slitter) and specific processes depending on the type of product: profiling, welding, bending, calendering, stamping.

These operations are carried out at the production site of Loreggia (PD).

UN CPC code:

UN CPC 42190 Other structures (except prefabricated buildings) and parts of structures, of iron, aluminium or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, aluminium or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping.

Technical characteristics: are variable depending on the product. The most common are:

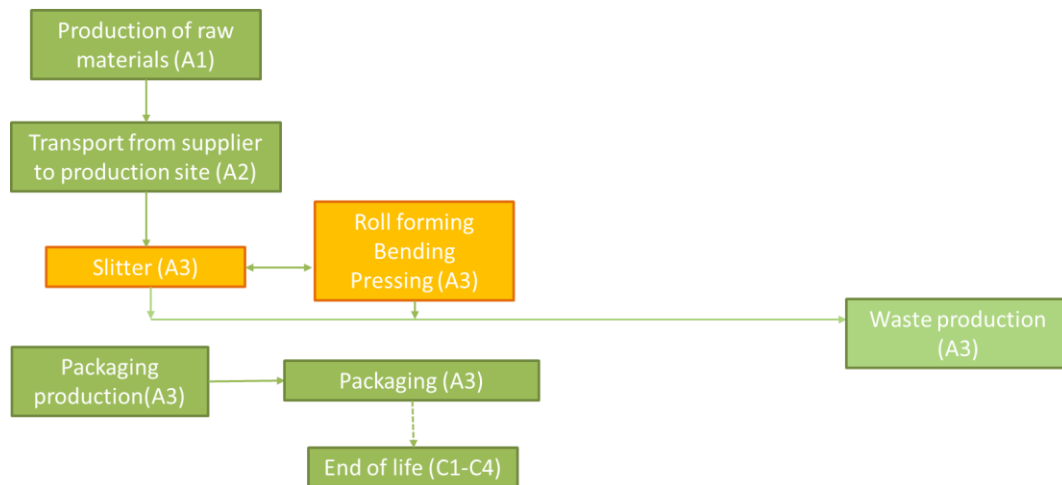
Product	Characteristic	Value	Standard
Albow	Lenght	250-280-333-400	
Gutters	Lenght	2-3-4-5-6	EN 612
	Dimention ø mm	250/18 -280/18 - 333/20 – 400/22	
Pipe	Lenght	1 - 2 - 3 - 4 - 6 m	EN 612
	Diameter	60 – 80 – 100 – 120 mm (80x80 – 100x100)	
Perforated strip	Thickness	0,55 – 0,6	
	Lenght	100 - 250 – 333 – 400 - 670 mm	
Strip	Thickness	0,55 – 0,6 mm	
	Lenght	325 – 670 mm	

For detailed information on the product, please refer to the datasheets (www.mazonettometalli.it).

LCA information

<u>Declared unit:</u>	1 kg of pre-painted aluminium products weighed on 2023 production (including packaging).
<u>Reference service life:</u>	no specific RSL.
<u>Time representativeness:</u>	2023.
<u>Geographical scope:</u>	Europe, Global
<u>Database e software LCA utilizzato:</u>	Ecoinvent 3.10 and SimaPro 9.6.0.1
<u>LCA study:</u>	S.C.F. International Via della Volta, 183, 25124 Brescia E-mail: info@scfinternational.it Tel: +39 030 3532593

Description of system boundaries: *Cradle to gate* with modules C1–C4 and module D



The Upstream phase (A1) includes the supply of raw materials and specifically:

- the extraction and processing of raw and auxiliary materials;

The Core phase comprises the following processes:

- external and internal transport to the core phase processes (A2);
- Trimming and folding and processing of waste from production (A3).

The Downstream phase comprises the following phases:

- Dismantling and demolition (C1);
- Transport of waste to the treatment process (C2);
- waste treatment for reuse, recovery and/or recycling (C3);
- Disposal (C4).

Process	Scenario
Collection process specified by type	1 kg collected with mixed construction waste
	0 kg for reuse
Recovery system specified by type	0,75 kg for recycling
	0 kg for energy recovery
Disposal specified by type	0,25 kg of product or material for final disposal
Assumption for scenario development	100 km from disposal site

The results also include phase D, benefits and environmental burdens beyond the system boundaries, which can be identified in the avoided production of new material.

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
	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	IT, SA	EU	IT	-	-	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Specific data	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

X Module included; ND: Module not declared.

Data quality assessment: The specific site data related to the processing of coils at Mazzonetto, therefore concerning packaging of finished products, consumption of auxiliary products for processing and energy consumption, are relative to 2023 and were provided by Mazzonetto. Upstream processes are derived, for the supplied coils, from the EPDs published by the suppliers; these processes account for more than 90% of the impacts of the final product. The downstream processes have been modelled on data from the Ecoinvent 3.10 database. Infrastructure and administrative activities are excluded, as described in the PCR.

The contribution of proxy data to final results is less than 1% for each impact category.

Other informations : All raw materials used for the production of the products under study, energy required, auxiliaries and waste generation were considered in the LCA. Electricity consumption, auxiliary products, packaging and waste produced were allocated to the total production of the company. The impact on the climate change indicator of electricity in Italy is 0.173 kg CO₂ eq/kWh (residual mix from Association of Issuing Bodies, European Residual Mixes 2022, Version 1.0, 2023-06-01).

Further information: www.mazzonettometalli.it

Content information

Product components	weight, kg	Post-consumer material, weight-%	Biogenic material, kg C/product or declared unit
Pre-painted aluminium	1,00E+00	8%	0,00E+00
TOTALE	1,00E+00	8%	0,00E+00
Packaging materials	Weight, kg	Weight-% (versus the product)	
Pallet	1,37E-02	0%	6,04E-03
Cardboard	1,10E-02	0%	7,54E-04
PE Film	7,73E-05	0%	0,00E+00
TOTALE	2,48E-02	0%	6,78E-03

Note: 1 kg of biogenic carbon is equal to a 44/12 kg CO₂.

None of the substances on the current version of the Candidate List of European Regulation 1907/2006/EC (REACH Registration, Evaluation, Authorisation and Restriction of Chemicals) is present in concentrations higher than 0.1% by weight in the declared products.

Conversion factors

	Conversion factor, 1 piece
Elbow	0,22 kg/piece
EU-Round	0,62 kg/piece
S-Elbow	0,16 kg/piece
	Conversion factors, 1 m
Gutter	0,62 kg/m
Pipe	0,62 kg/m
Perforated strip	1,29 kg/m
	Conversion factors, 1 kg
Strip	1,00 kg/kg

Results of the environmental performance indicators

The EN 15084 method, based on the EF 3.1 method, was used for the assessment of the environmental impacts of prepainted aluminium coils.

Mandatory Indicators According to EN 15804

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Acidification	mol H ⁺ eq	8,45E-02	1,46E-04	6,58E-05	5,86E-04	6,49E-09	-1,41E-01
Climate change	kg CO ₂ eq	1,22E+01	1,77E-02	1,96E-02	2,00E-01	7,15E-07	-1,45E+01
Climate change - Biogenic	kg CO ₂ eq	-2,13E-02	1,65E-04	6,42E-06	1,87E-03	2,41E-10	-2,89E-03
Climate change - Fossil	kg CO ₂ eq	1,20E+01	1,75E-02	1,96E-02	1,98E-01	7,14E-07	-1,45E+01
Climate change - Land use and LU change	kg CO ₂ eq	1,77E-01	1,32E-05	4,82E-07	1,42E-04	2,92E-11	-1,55E-03
Eutrophication, marine	kg N eq	1,07E-02	6,26E-05	2,77E-05	1,25E-04	2,95E-09	-1,82E-02
Eutrophication, freshwater	kg P eq	6,03E-04	3,77E-06	1,42E-07	3,33E-05	2,16E-11	-7,57E-03
Eutrophication, terrestrial	mol N eq	1,23E-01	6,77E-04	3,03E-04	1,34E-03	3,23E-08	-1,84E-01
Ozone depletion	kg CFC11 eq	8,22E-07	2,75E-10	4,00E-10	1,96E-09	1,06E-14	-4,96E-08
Photochemical ozone formation	kg NMVOC eq	3,98E-02	2,02E-04	1,08E-04	4,36E-04	9,77E-09	-5,58E-02
Resource use, fossils*	MJ	1,25E+02	7,26E-02	2,59E-03	3,63E-01	4,13E-07	-1,19E+02
Resource use, minerals and metals*	kg Sb eq	9,48E-05	8,14E-10	6,48E-10	2,43E-06	2,82E-14	-7,49E-07
Water use	m ³ depriv.	3,54E+00	1,20E-03	1,10E-04	1,00E-02	8,31E-09	-9,35E-01

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Disclaimer: Use of results from modules A1-A3 without considering results from module C is discouraged.

Disclaimer: 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.

Additional Mandatory and Voluntary Indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	1,22E+01	1,75E-02	1,96E-02	1,98E-01	7,14E-07	-1,45E+01
Acronyms	GWP-GHG = Global Warming Potential total excl. biogenic carbon following IPCC AR5 methodology						

Resource use indicators

Indicatori	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	6,10E+01	2,34E-02	9,16E-04	1,34E-01	4,35E-08	-1,52E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	6,10E+01	2,34E-02	9,16E-04	1,34E-01	4,35E-08	-1,52E+00
PENRE	MJ	1,28E+02	7,25E-02	2,59E-03	3,64E-01	4,13E-07	-1,19E+02
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,28E+02	7,25E-02	2,59E-03	3,64E-01	4,13E-07	-1,19E+02
FW	m ³	3,24E-01	8,65E-05	6,64E-06	6,43E-04	3,17E-10	-2,74E-02
SM	kg	3,94E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+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						

Waste Indicators

Indicatore	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,98E-03	1,34E-06	1,72E-06	4,87E-03	6,07E-11	-2,26E-04
Non-hazardous waste disposed	kg	2,87E-03	5,92E-05	7,70E-06	1,36E-02	2,63E-04	-1,57E-01
Radioactive waste disposed	kg	3,32E-06	7,21E-07	2,43E-08	2,89E-06	5,62E-13	-1,85E-04

Output Flows Indicators

Indicatore	Unit	A1-A3	C1	C2	C3	C4	D
Materials for energy recovery	kg	5,87E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	2,46E+00	0,00E+00	0,00E+00	7,37E-01	0,00E+00	6,75E-01
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Bibliography

General Programme Instructions of the International EPD System. Version 4.0.

PCR 2019:14 Construction products; version 1.3.4 valid until 2025.06.20

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

UNI EN ISO 14040:2021 Environmental management – Life cycle assessment - Principles and Framework

UNI EN ISO 14044:2021 Environmental management – Life cycle assessment – Requirements and provides guidelines for life cycle assessment (LCA)

Association of Issuing Bodies, European Residual Mixes 2022, Version 1.0, 2023-06-01

Rapporto LCA. *Rapporto LCA coils e prodotti di lattoneria Mazzonetto*, Rev.01 del 30/01/2025, eseguito da S.C.F. International S.r.l.



